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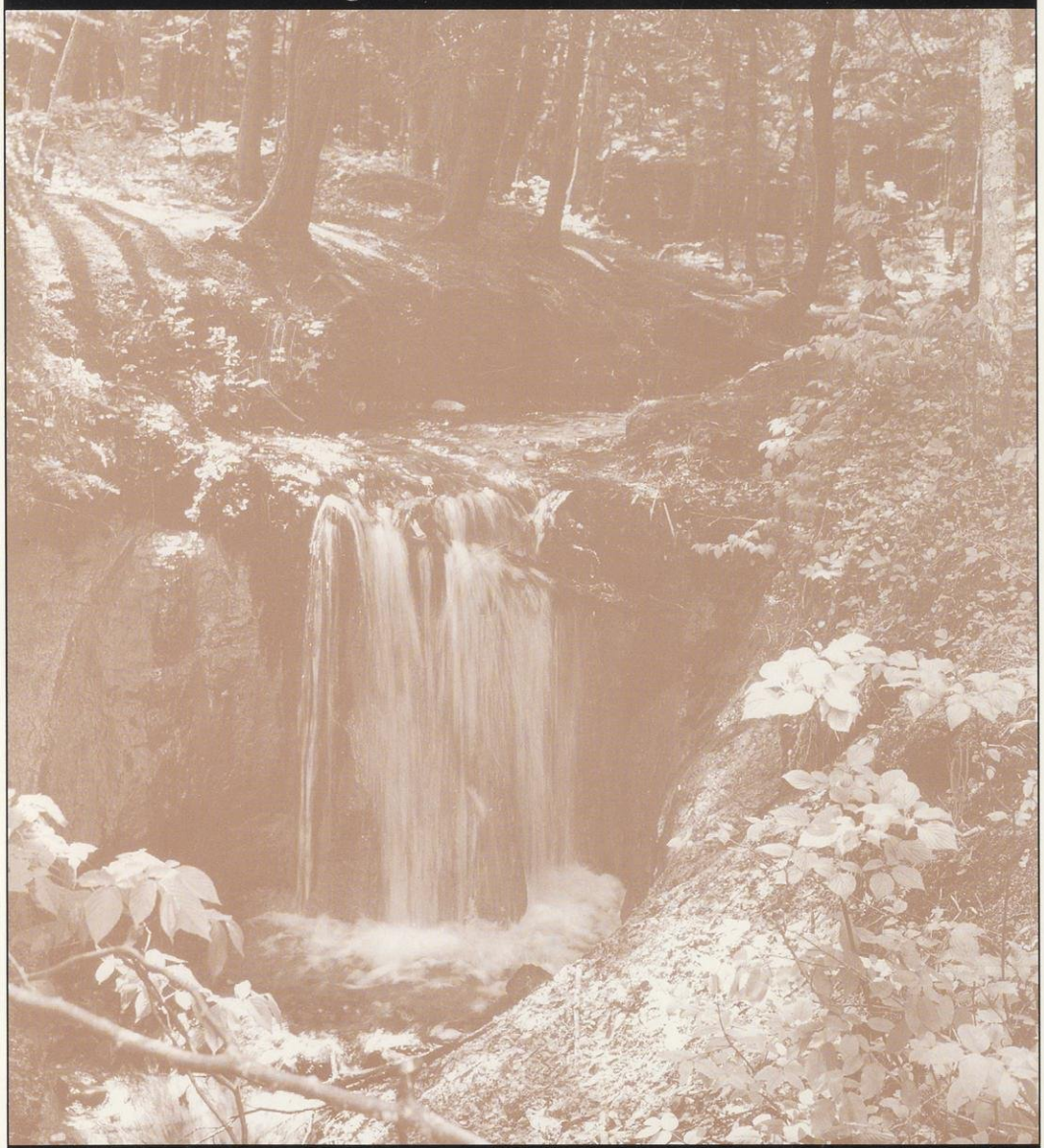
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Report of the Forest Service

Fiscal Year 1998

Conserving America's natural resources...



...the legacy continues

USDA

United States Department of Agriculture

USDA Forest Service

The Forest Service, U.S. Department of Agriculture, provides leadership in the management, protection, and use of the Nation's forests and rangelands. The agency takes an ecological approach to the implementation of multiple-use management, providing sustained yields of renewable resources such as water, forage, wildlife, wood, and recreation. The Forest Service has embraced ecosystem management as its operating philosophy and is committed to the preservation of wilderness, biodiversity, and landscape beauty as well as the protection of the basic resources of soil, water, and air quality.

The Forest Service is responsible for the 191.8-million-acre National Forest System, with its 155 national forests and 20 grasslands in 44 States, Puerto Rico, and the Virgin Islands. Also, the agency works with State land management organizations to help private landowners apply good natural resource management practices on their lands. The International Forestry program of the Forest Service enables the agency to share and receive technical expertise and managerial skills with other nations. The Research and Development (R&D) program of the Forest Service provides the best scientific information and management tools to maintain and restore ecosystem health and enhance productivity on all of America's forests for the long term. The R&D mission also includes a leadership role in international conservation by disseminating state-of-the-art knowledge and technology.

Key laws guiding Forest Service programs and activities are:

- Organic Administration Act of 1897.
- Clarke-McNary Act of 1924.
- McSweeny-McNary Act of 1928.
- Multiple-Use Sustained Yield Act of 1960.
- The Wilderness Act of 1964.
- National Environmental Policy Act of 1969.
- Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974, as amended.
- National Forest Management Act (NFMA) of 1976.
- Forest and Rangeland Renewable Resources Research Act of 1978, as amended.
- Cooperative Forestry Assistance Act of 1978.
- Chief Financial Officer's Act of 1990.
- Food, Agriculture, Conservation, and Trade Act of 1990 (Farm Bill).
- International Forestry Cooperation Act of 1990.
- Government Performance and Results Act of 1993.
- Federal Agriculture Improvement and Reform Act of 1996.

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REPORT of the FOREST SERVICE

Fiscal Year 1998



USDA Forest Service . Washington, DC . May 1999

Selected FY 1998 Statistics

National Forest System	191.8 Million Acres
National Scenic Byways	7,700 Miles
National Wild and Scenic Rivers System	4,348 Miles Within National Forests
Insect and Disease Suppression	800,000 Acres
Wilderness	34.7 Million Acres
Watershed Improvements	38,497 Acres
Wildlife, Fish & TES Habitat Restored/Enhanced	378,855 Acres
Reforestation	287,900 Acres
Livestock Grazing Permitted	9.3 Million Head Months
Grazing Allotments Administered to Standard	4,113 Allotments
Energy Operations Processed	544 Operations
Bonded Non-energy Operations Processed	803 Operations
Timber Volume Offered	3.4 Billion Board Feet
Timber Harvested	3.3 Billion Board Feet
Road System	383,000 Miles
Landline Boundary System	249,058 Miles
Heritage Sites protected	6,795 sites
Special Use permits	27,000
State and Private Forestry	
Forest Health Surveys & Evaluations	787.5 Million Acres (all ownerships)
Nonfederal Forestlands in the U.S.	487.6 Million Acres
Private Forestlands in the U.S.	393.0 Million Acres
Private Forestland Owners	9.9 Million
Woodland Owners Assisted	146,746
Rural Communities Using Local Strategic Plans	690
Participating Urban Communities	9,635
Hazardous Fuel Reduction	1,489,293 Acres
Research and Development Accomplishments	2,718 papers and reports (includes books, papers, articles, reports, audio-visual materials, and other technical documents.)
Senior, Youth, and Volunteer Programs	125,698 Persons Served

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☒ Change Office of the Chief Financial Officer to Chief Financial Officer

☐ Natural Resources agenda items need to be articulated in intro.

Mention importance of Urban Forestry 60 million acres.

Chief's Message

America's public land legacy is the envy of the world. These hundreds of millions of acres of land and water are the source of opportunity for unparalleled outdoor recreation, drinking water, vast expanses of wildlife habitat, and environmentally responsible economic activity. As land stewards, Forest Service employees throughout the Nation work hand-in-hand with a wide variety of partners to sustain the health, productivity and diversity of these valuable resources.

About half way through the fiscal year, in March 1998, I introduced the agency's natural resource agenda. Resource specialists and managers throughout the agency responded enthusiastically and began to implement the concepts and principles of this vision within the existing framework. In future years we will continue to make more direct links between agenda priorities, budgets, and accomplishments.

Our natural resource agenda helps us focus on the spirit of the Forest Service mission, "Caring for the Land and Serving People." This includes an emphasis on watershed protection and restoration, sustainable forest management, improved management of the National Forest road system, and recreation. The first section of this report sets the stage by summarizing the existing situation, and describing how we intend to manage for healthy, diverse, and productive lands and waters.

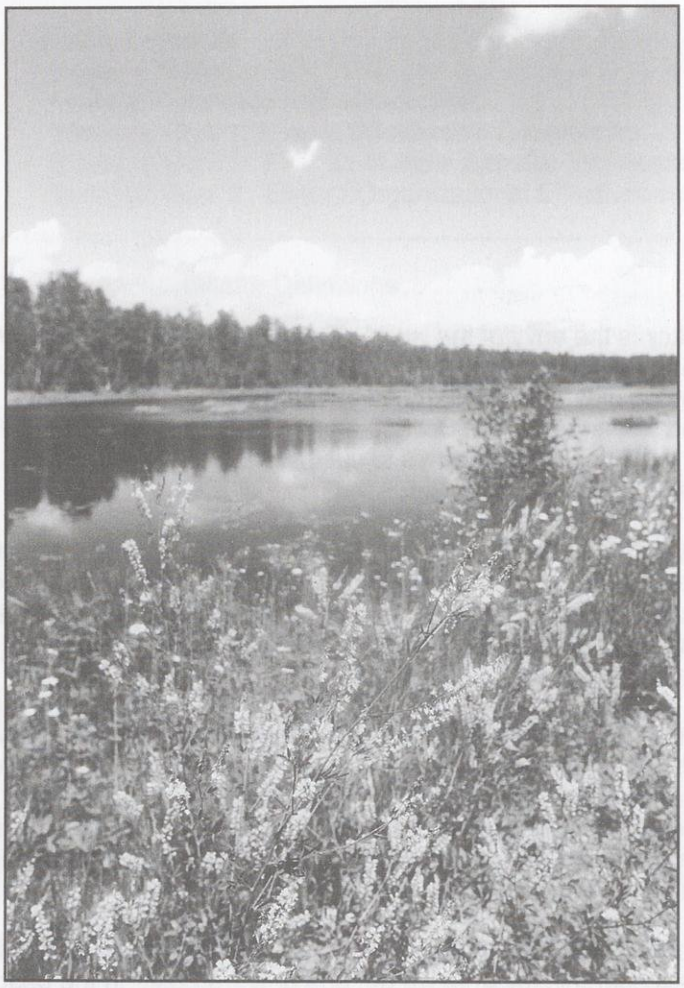
Along with other agencies throughout the Federal Government, the Forest Service is striving to become more accountable for what we do, and how we do it. In the past year we continued to make progress in improving our financial and business operations, which in turn contributes to better resource management.

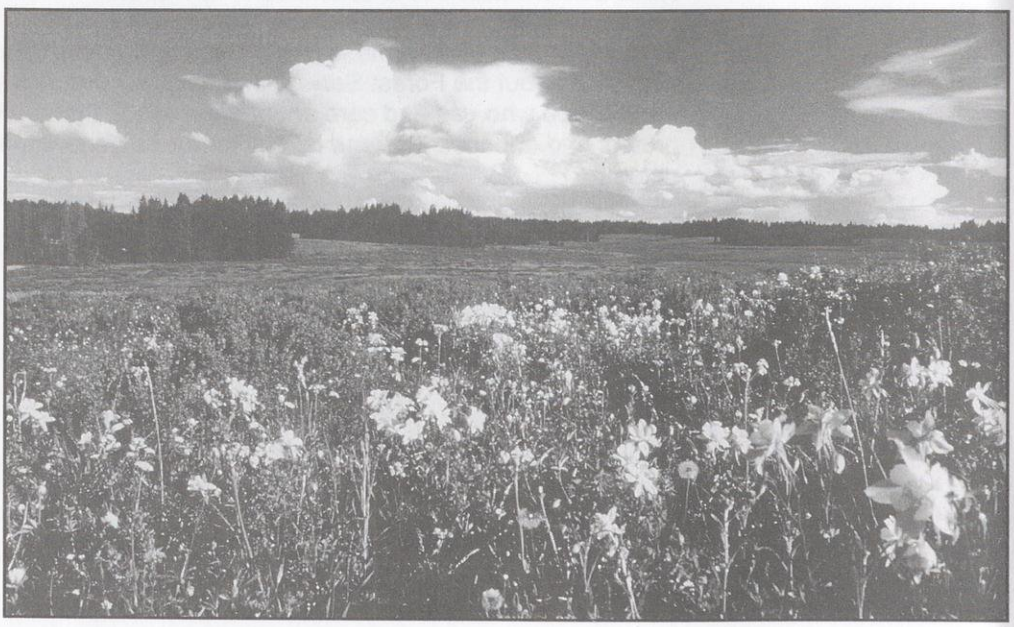
The Government Performance and Results Act is the mechanism by which we are implementing the natural resource agenda in an efficient, effective, and customer-service-driven manner. Our progress in implementing a variety of resource restoration and enhancement activities is described in the report.

In all we do, our effectiveness is improved by working in a collaborative manner with all who care about the Forest Service and its many programs and services. I commit to each of you who use and care about these lands that our guiding principle will be to protect and enhance this land legacy for future generations. Let us know how we are doing.

Mike Dombeck

MIKE DOMBECK
Chief





OVERVIEW

Introduction

In 1881, the Division of Forestry was established by Congress in response to growing public concern over the future of America's forests. In 1901, the Division was upgraded to a Bureau within the U.S. Department of Agriculture (USDA). In 1905, the Bureau of Forestry was given management responsibility for the National Forest System (NFS), which now encompasses 191.8 million acres of forest, grass, and shrub lands. These lands are distributed among 46 States, commonwealths, and territories, as shown in Table 1 of the Statistical Appendix.

The Forest Service provides leadership in the protection, management, and use of the Nation's forest, grassland, and aquatic ecosystems. The agency's approach to natural resource management integrates ecological, economic, and social factors to maintain and enhance the quality of the environment to meet current and future needs of Americans. Through implementation of land and resource management plans, the agency ensures sustainable ecosystems and provides recreation, water, timber, minerals, fish, wildlife, wilderness, and aesthetic values on NFS lands for current and future generations.

Through technical and financial assistance, the Forest Service assists States, tribes, and private landowners in promoting good stewardship, rural economic development, and the improvement of the natural environment of cities and communities. The agency conducts research and development, providing the scientific information and technology that support the development of values, products, and services to maintain and enhance ecosystem health at home and abroad.

Mission and Organization

The agency's mission is to ensure, for present and future generations, the long-term health, diversity, and productivity of the land. The phrase "Caring for the Land and Serving People" captures the essence of this mission. To accomplish this, the Forest Service employed about 40,000 people in 1998.

The Chief of the Forest Service reports to the Under Secretary for Natural Resources and Environment, USDA. Primary program responsibilities are divided among six Deputy Chiefs who report to the Chief, including: Research and Development (R&D), State and Private Forestry (S&PF), the National Forest System (NFS), Programs and Legislation (P&L), the Office of the Chief Financial Officer (OCFO), and Operations (OPS).

The National Forest System is managed for a wide variety of purposes and values. Activities include resource protection, restoration, and use. Management policies provide direction for land use intensities that range from wilderness preservation to intensive wood production and developed recreation.

The largest forest research organization in the world, R&D covers four broad areas: Vegetation Management and Protection, Wildlife, Fish, Watershed, and Atmospheric Sciences, Resource Valuation and Use, and Forest Resources Inventory and Monitoring. Each day, field foresters, land managers, farmers, ranchers, urban foresters, public interest groups, and many others apply the know-how developed by Forest Service scientists and partners in academia and industry. Long-term scientific research provides many of the tools used to monitor ongoing management practices and identifies new techniques.

The Forest Service is also responsible for maintaining and improving, through collaborative stewardship, the health and productivity of the Nation's urban and rural forests. This is accomplished through the S&PF programs which provide technical and cost-sharing assistance to help assure sound stewardship and use of the vast State and private forest lands. Utilizing nonregulatory approaches, S&PF also helps States, local, and tribal governments and small nonindustrial private forest landowners manage forest resources to meet economic, social, and environmental goals. Funds are leveraged through cost-sharing arrangements to provide increased on-the-ground project funding.

The Forest Service is also engaged in international collaborative activities to promote sustainable forest management domestically and throughout the world by increasing the sharing of knowledge and technology.

Three Deputy areas (Operations, Programs and Legislation, and the Office of the Chief Financial Officer) provide support services essential to accomplishing the agency's mission. The primary contribution of these Deputy areas is to ensure organizational effectiveness by providing legislative, financial management, and human resource support for the Washington Office and the field.

The Government Performance and Results Act

The strategic and performance plans prepared under the Government Performance and Results Act (GPRA or Results Act) use a common set of goals, outcomes, and objectives that reflect the agency's mission and priorities. Both the Strategic and Annual Performance Plans were developed from the 1995 Draft Forest and Rangeland Renewable Resources Planning Act (RPA) Program. The following goals form the basis for these plans:

- Ensure Sustainable Ecosystems
- Provide Multiple Benefits for People Within the Capability of Ecosystems
- Ensure Organizational Effectiveness

These goals provide the basis for developing the program objectives and performance measures for the Annual Performance Plans. Within the agency's business model, the annual performance plan is intended to be the basic management tool for directing resources and budgets to specific programs and activities that move towards the longer-term goals or outcomes.

Although agency goals have not changed since the strategic plan was approved (September 30, 1997), the organizational structure of the objectives in all versions of the Fiscal Year (FY) 1999 and FY 2000 Performance Plans has been modified to reflect the latest agency thinking on how best to portray its mission. These modifications, while minor in scope, do constitute an interim adjustment to the strategic plan and previous versions of agency performance plans. Current efforts to identify, develop, and refine outcome-based land health performance measures will result in further evolution of the structure and content of the agency's revised strategic plan (due by September 30, 2000) and subsequent performance plans.

FY 1999 will be the first year the agency is required to submit an annual performance report under the Results Act. FY 1998 is considered a transition year and an opportunity to work towards a more comprehensive product for FY 1999.

PERFORMANCE HIGHLIGHTS OF THE NATURAL RESOURCE AGENDA

Background and Introduction

FY 1998 found the Forest Service at a pivotal point. The first Strategic Plan required by the Results Act had just been submitted to Congress at the close of FY 1997. The agency's 4-year experiment as a pilot in the reinvention effort was drawing to a close, with the first required performance plan not due until FY 1999.

Chief Dombeck celebrated his first year in office in 1998 by announcing what would become known as the agency's Natural Resource Agenda. While funding levels and program mixes had already been established for the fiscal year, line officers, program managers, and employees throughout the Forest Service began to consider and incorporate elements of the Natural Resource Agenda wherever possible. These elements are summarized in the following sections.

Watershed Protection and Restoration

Watershed protection and restoration is vital to ecosystem health. Watersheds absorb rain and recharge underground aquifers. They serve as habitat for thousands of species of fish, wildlife, and rare plants. Properly functioning watersheds can minimize damage to lives, property, and streams from severe storms by absorbing runoff. Downstream communities depend on the clean water that flows from healthy watersheds for domestic use, food production, employment, power generation, and recreation.

Most national forest and grassland watersheds are functioning properly, supporting a variety of thriving ecosystems. In some areas, however, watersheds are deteriorating at alarming rates. Symptoms of poor health include declining water quality, alternating periods of flooding and drought, forests increasingly susceptible to insect and disease outbreaks, and decreasing populations of native fish and wildlife species.

Prior to 1897, 40 million acres of national forest were established primarily for watershed protection. In the Organic Administration Act of 1897, Congress directed that:

> *"No national forest shall be established, except to improve and protect the forest within the boundaries, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States."*

Over the years (primarily 1948-95) the focus on the Organic Act's provision for timber production has been clear. Less well understood by the public has been the agency's focus on watershed protection. The emphasis on watershed protection was both prophetic and well deserved. Today, the national forests contain over 1,000 municipal watersheds, and about 20 percent of the Nation's freshwater sources originate on national forest land.

The Natural Resource Agenda builds on this historical and legal foundation by making the maintenance and restoration of healthy ecosystems and watersheds a top priority. Based on sound science, the Forest Service will implement policies and strategies for restoring, protecting, and maintaining healthy ecosystems at the watershed level.

The critical issues now facing the Nation's watersheds include: invasion of exotic species, risk of severe and extensive wildfire, undesirable changes in vegetation, loss of species viability, degradation of aquatic ecosystems, excessive roading and poor road maintenance, air pollution, development on private land, and abandoned mines.

Under the premise that society's commodity needs cannot be met without securing the health of land and water resources, current and future generations depend on agency policies that address these issues. Watershed protection and ecological restoration will receive high priority in all decisionmaking processes, including budget and program planning, land management planning, project implementation, and watershed assessments for forest and interagency plans. Forest Service policy goals are to:

- Understand the relationship between land and water uses, watersheds, and ecosystem health within the context and limitations of applicable laws and existing treaties.
- Complete ecosystem analyses of NFS lands at the watershed level to determine existing conditions and potential landscape capability.
- Make land use allocations and project-level decisions based on sound scientific analyses and priorities for watershed restoration.
- Collaborate with all relevant parties and stakeholders to achieve healthy watersheds and ecosystems for current and future generations.

To realize this vision for healthy watersheds, the Forest Service will implement a nine-point strategy, using the best available science, in collaboration with States, local communities, other Federal agencies, and interest groups. Each point in the strategy will have quantifiable, measurable goals that will serve to focus our activities and keep the Forest Service accountable to the American people. Restoration needs assessments will determine the type, amount, location, and time of restoration work. In particular, the agency will involve local communities, generating ownership in the outcomes. The nine points include:

1) Making watershed management, including necessary watershed restoration, maintenance, and the acquisition of water rights in accordance with Federal and State laws, the highest priority in land management plan revisions.
2) Completing assessments of watershed conditions.
3) Restoring degraded ecosystems and attaining desirable vegetative conditions.
4) Working with other agencies, such as the Animal and Plant Health Inspection Service (APHIS), to prevent exotic organisms from entering or spreading in the United States, and to control existing pests.
5) Reconstructing, relocating, and decommissioning roads to help restore degraded watersheds.
6) Restoring degraded riparian areas.
7) Fully implementing by 2003 the Forest Health Monitoring Program established by Federal and State agencies to collaboratively monitor and report on the Nation's forest health.

8) Rebuilding populations of threatened, endangered, and sensitive species and conserving or restoring their habitats.

9) Encouraging communities to restore and maintain healthy watersheds through community programs.

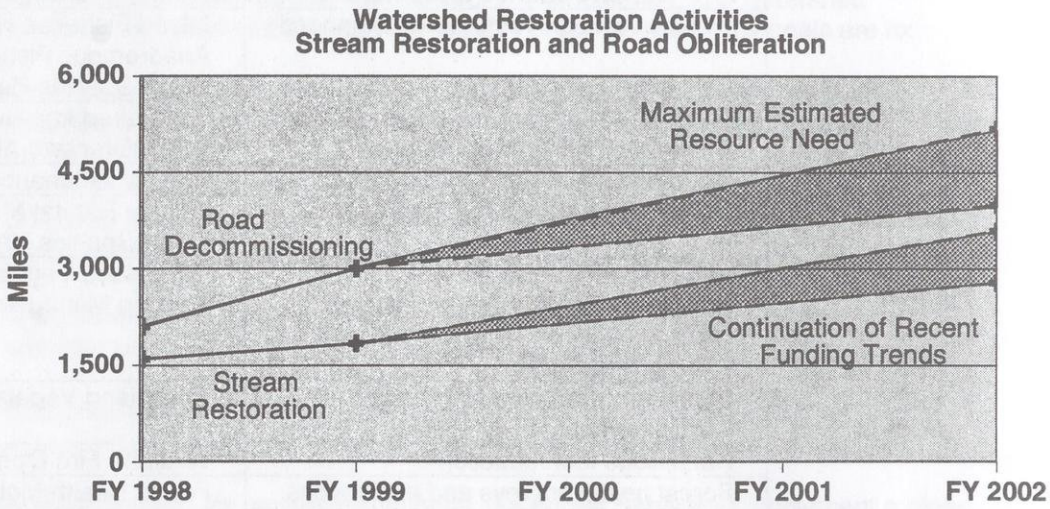
Results Act annual performance indicators and budget line items that most closely relate to these issues, concerns, and policy goals include:

Performance Indicators	Budget Line Items
Streams & lakes restored or enhanced	Inland Fisheries Habitat Management Anadromous Fisheries Habitat Mgt TE&S Species Habitat Mgt (aquatic)
Soil and water resource improvements Abandoned mine lands restored	Watershed Improvements Soil, Water and Air Operations
Road decommissioning and stabilization	Road Maintenance & Decommissioning
Wildlife habitat restored or enhanced	Wildlife Habitat Management TE&S Species Habitat Mgt (terrestrial)
Noxious weeds treated Nonstructural range improvements Grazing allotments analyzed & NEPA decisions signed	Rangeland Vegetation Management Grazing Management
Forestlands maintained by stand improvement	Forestland Vegetation Management
Hazardous fuel reduction	Wildland Fire Operations, Fuels Trtmt
Forest health surveys and evaluations Forest health monitoring	Forest Health Mgt, Federal Lands Forest Health Mgt, Cooperative Lands
Conservation agreements and strategies completed Recovery plans approved and implemented	TE&S Species Habitat Management TE&S Species Habitat Management

Over time, the Forest Service's policy goals for healthy watersheds on the national forests will be attained when the short-term actions and programs described above collectively and cumulatively result in:

- Healthy, diverse, and resilient aquatic systems supporting a variety of conditions and benefits.
- Forest and grassland systems supporting all biological and physical components, functions, and interrelationships and their capability for self-renewal.
- Rangeland systems including robust riparian systems and a variety of conditions and benefits.
- Wildlife and fish populations that are abundant and thriving, rather than threatened, endangered, or sensitive.
- Watersheds providing the timing, quality, and quantity of water needed for beneficial uses and to sustain desired conditions.
- Soil that is productive enough in the long term to support healthy, diverse, and resilient terrestrial and aquatic ecosystems.

One of the primary purposes of this report is to monitor the agency's annual accomplishments in activities that lead toward these longer term outcomes. The following graph illustrates a range of possible performance levels for several key indicators. To address total resource needs in a timely fashion, the Forest Service should be operating at the upper levels shown in FY 2002. The lower line for each indicator illustrates what might be expected given recent Congressional appropriations. Future agency budget proposals will request funding that allows implementation at the higher (FY 2002) level as quickly as possible.



Sustainable Forest Management

Sustainable forest management (SFM) has been a Forest Service goal, worded in one form or another, for decades. The concern today is to be more effective in the accomplishment of that goal by building a sustainable forest management framework into all phases of the agency's business.

Both the area of forestland and total volume of forest inventories (biomass) in the United States have stabilized and rebounded from their 1920 lows. Although the Nation's forests are generally healthy and productive, there are several areas of concern:

Hazardous fuel buildups (combustible forest materials)	Biodiversity loss	Exotic pests
Air pollution effects	Disturbance patterns	Riparian areas
Wildland-urban interface	Forest fragmentation	

The Natural Resource Agenda addresses the Forest Service commitment to sustainable forest management, including the specific concerns listed above. SFM refers to the management of the National Forest System and all of the Nation's forests in a way that meets the social, ecological, and cultural needs of people today without compromising the needs of people in the future.

Sustainable forest management requires the integration of environmental, social, and economic considerations in forest management. Taken as a whole, the agency's mission is designed to accomplish this. The Forest Service, however, is addressing sustainable forest management in several completely new ways. These are:

- promoting a common understanding of the 7 national-level criteria and 67 supporting indicators for sustainable forest management developed by the United States and 11 other countries, and endorsed in Santiago, Chile in 1995;
- working with partners to measure and assess trends in the social, biological, and economic condition of forests at the local, regional, and national levels, and making that information available to the public and decisionmakers;
- working in a collaborative stewardship way with other agencies (State and Federal), and nongovernmental organizations, to use resource condition trends and apply an ecosystem management philosophy.

To ensure accountability to the American people, the Forest Service will link performance by Forest Service managers to the framework of sustainable forest management. Specifically, the Forest Service will:

- Integrate SFM criteria and indicators into resource assessments, strategic plans, and associated analyses.
- Use indicators in annual performance plans that measure performance in terms of sustainable forest and rangeland ecosystems.
- Establish annual performance contracts so that top Forest Service managers are held accountable to the Chief for healthy ecosystems and link these contracts to our annual performance plans.

A majority of America's forests are privately owned (393 million acres). In addition, urban and rural communities depend on the national forests for a wide range of values and services. Both commodity and aesthetic resources are important to the quality of life in rural communities. Increased integration of economic, social, and ecological concerns is needed to enable rural communities and the Forest Service to work together on goals for sustainable development.

Results Act annual performance indicators and budget line items that most closely relate to urban and rural issues, concerns, and policy goals include:

Performance Indicators	Budget Line Items
NIPF lands under approved Stewardship Management Plans	Forest Stewardship
Multiresource practices implemented on NIPF lands	Stewardship Incentives Program
Participating communities	Urban and Community Forestry
Communities working under broad-based local strategic plans	Economic Action Programs
Communities and/or volunteer fire departments assisted	Cooperative Fire Protection

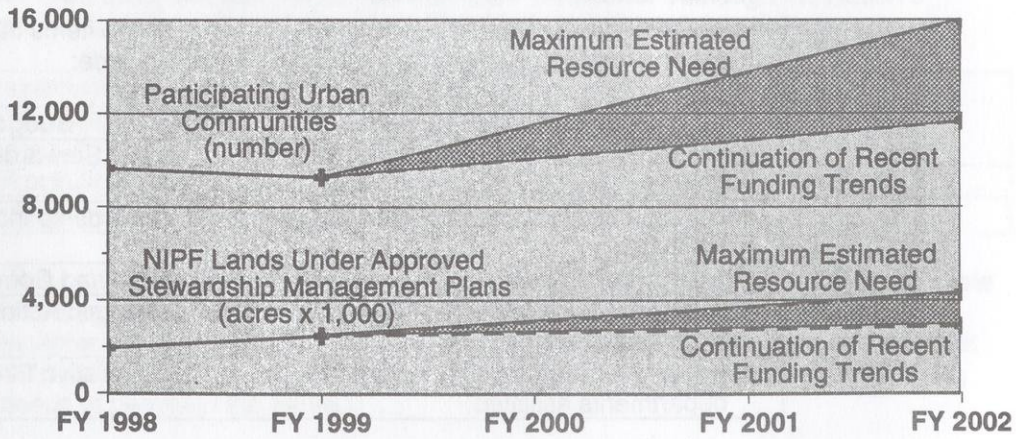
Ensuring sustainable forests requires the involvement of communities that benefit from, and care for, these forests. Aside from the traditional commodity and recreation jobs resulting from healthy, productive forests, efforts to restore healthy forests can help to sustain rural communities by providing new job opportunities. The Forest Service will work with these communities to make sustainable forest management real in the lives of those who live and work in them. Specifically, the Forest Service will:

- Provide technical assistance to communities in the areas of locally based planning and stewardship.
- Encourage and assist individuals and communities to accomplish resource stewardship and conservation on an areawide or watershed basis.
- Promote environmentally sensitive economic development and jobs based on forest resources.
- Expand information, education, and outreach efforts to increase public awareness and understanding of SFM.

An additional concern is how to share with partners and communities the stewardship responsibility of SFM of both NFS lands and the Nation's private forest lands. New and different kinds of collaborative efforts are required at State, Federal, and local levels. Perhaps the most challenging task is helping to build diverse and stable communities while addressing concerns about the health of America's forests.

A main purpose of this report is to monitor the agency's annual accomplishments in activities that lead toward these longer term outcomes, including those on State and privately owned lands. The following graph illustrates a range of possible performance levels for several key indicators. To address total resource needs in a timely fashion, the Forest Service should be operating at the upper levels shown in FY 2002. The lower line for each indicator illustrates what might be expected given recent Congressional appropriations. Future agency budget proposals will request funding that allows implementation at the higher (FY 2002) level as quickly as possible.

Rural and Urban Stewardship Planning and Community Participation



National Forest Road System

"There are few more irreparable marks we can leave on the land than to build a road... Our overriding objective is to work with local people to provide a forest road system that best serves the management objectives and public uses of national forests and grasslands while protecting the health of our watersheds."

-- Forest Service Chief Mike Dombeck, 1998

Almost all visitors to the national forests use forest roads. Roads not only provide access, but they also influence the type of experience for most forest visitors by determining where they will go and what they will see. Without roads leading to trailheads, even wilderness areas would be far less accessible.

Much of the existing forest road system was built over the last 50 years for timber harvest access. In the decades following World War II, traffic associated with timber harvest peaked about 1990. When timber harvests on the national forests declined in the 1990s logging traffic plunged to 1950 levels. Logging traffic now accounts for only one-half of 1 percent of all forest road use. By contrast, recreational road use has soared to 13 times its 1950 level.

Vehicles Per Day on Forest Roads

	1950	1990	1996
Timber harvest	14,000	42,000	15,000
Recreation	137,000	1,315,000	1,706,000

Driving for pleasure is the single largest recreational use on Forest Service managed lands, constituting 36 percent of all recreation there in 1996. In summer, recreational drivers on the national forests account for 13.6 million vehicle-miles per day. The outlook is for recreational road use to grow by 64 percent by the year 2045.

Few natural resource issues in recent years have attracted as much public scrutiny as the management of the forest road system. Though less costly to build and maintain than most public highways, forest roads can have adverse impacts on watersheds, especially if poorly maintained. Yet roads are needed for the goods and services that Americans expect from their national forests. Managers today must wrestle with several complicated issues:

Funding shortfalls. Roads that were originally built to accommodate logging trucks are increasingly carrying people seeking outdoor recreation opportunities. Eighty percent of system roads are not maintained to these higher public safety and environmental standards associated with the new type of use, primarily due to lack of funding.

Environmental damage. Poorly maintained roads can contribute to erosion and landslides, degrading riparian and wetland habitat through sedimentation and changes in streamflow and water temperature. Roads can also block fish and wildlife passage, and modify animal behavior.

Substandard roads. Many roads on the national forests do not meet the latest standards for safety and environmental protection. A complete inventory of substandard roads is needed to prioritize roads for improved maintenance, reconstruction or decommissioning.

Roadless areas. Of the 62 million acres of national forest land classified as roadless in the 1970s, 22 million acres have since been designated as wilderness, with 6 million acres still recommended for wilderness, pending Congressional designation. Of the

remaining 34 million acres released for other uses in Land and Resource Management Plans, about 9 million acres are suitable for timber harvest. One million of those acres have since been entered for timber harvest, and by definition are no longer roadless.

Because of the complex issues and strong public opinion regarding this subject, in FY 1998 the agency developed an Interim Rule for an 18-month suspension of road reconstruction and new construction in the remaining roadless areas, pending scientific study, agency review, and public comment.

Clearly a new approach to managing forest roads is needed. Sufficient funding is needed to restore necessary roads to a safe, environmentally sound condition, and/or to close and stabilize unnecessary roads and those that cannot be maintained. Any proposed activities in the relatively few remaining roadless lands need to be carefully evaluated. This new forest road emphasis in the Natural Resource Agenda will improve access for all forest road users while protecting healthy ecosystems through four primary actions:

- Determine the most effective way to provide all Americans with access to the national forests.
- Accelerate the pace of decommissioning unneeded and substandard roads that damage the environment.
- Selectively upgrade forest roads.
- Seek additional funding sources for the transportation system.

Results Act annual performance indicators and budget line items that most closely relate to these issues, concerns, and policy goals include:

Performance Indicators	Budget Line Items
System roads maintained to standard	Road Maintenance and Decommissioning
Roads reconstructed with appropriated funds	Roads Reconstruction and Construction

Recreation

America's national forests and grasslands offer some of the greatest outdoor recreation opportunities in the United States. From downhill skiing at Vail, to backcountry expeditions into the Frank Church River of No Return Wilderness, to family outings on the national forests that surround California's 20 million residents, national forests provide an incredible range of outdoor opportunities.

Americans are visiting their national forests in growing numbers for life-enriching recreational experiences and for the spiritual renewal that accompanies them. In 1997, the Forest Service hosted an estimated 800 million recreation visits, more than any other jurisdiction or agency. Including skiing, hiking, camping, hunting, fishing, and pleasure driving, the national forests offer visitors:

- 4,348 miles of the National Wild and Scenic River System.
- One-third of the National Wilderness Preservation System.
- National Recreation Areas such as Mt. St. Helen and Hells Canyon.

- About 7,700 miles of Scenic Byways.
- About 133,000 miles of trails.
- Over 23,000 recreation facilities, including campgrounds, trailheads, boat ramps, picnic areas, and visitor centers, in addition to privately owned facilities on NFS land.
- 2.3 million acres of fishable lakes, ponds, and reservoirs.
- The window through which millions of Americans experience their wildland heritage and learn about the land.

Recreation on the national forests has an important economic dimension. The agency estimates that by 2000, economic activity associated with national forest recreation, including wildlife and fish related activities such as viewing, hunting, and fishing, will generate $110.7 billion annually. In 1996, recreational fishing alone generated $8.5 billion worth of economic value.

The Forest Service must also meet the Nation's growing need for outdoor recreation in a manner that protects the health, diversity, and productivity of the land. Over the next 50 years, demand is expected to go from 800 million to 1.2 billion visits to the national forests per year. In addition, people are asking for an ever broader spectrum of benefits and services to enrich their experiences. As the next millennium approaches, the agency will focus on several key areas:

1) improving the settings for outdoor recreation and enhancing visitor experiences,

2) guaranteeing visitor satisfaction with services and facilities,

3) reaching out to rural and urban communities to capitalize on the social and economic opportunities associated with recreation on the national forests,

4) improving access to information about recreation on NFS lands,

5) strengthening relationships with those who cooperate with the agency to improve outdoor recreation for all Americans, and

6) ensuring that recreation use does not impair the land's health.

A priority of the Natural Resource Agenda is to protect and restore the settings for outdoor recreation experiences that millions of Americans have come to expect and enjoy. The substantial facility maintenance backlog must be reduced while preserving and expanding the spectrum of outdoor recreation opportunities available.

Better coordination among program areas and better application of existing research will allow the agency to anticipate recreation trends and to identify the settings and experiences most valued by national forest visitors. For example, research can improve the accuracy of visitor estimates, identify changing patterns of demand, values, behavior, and satisfaction. This will be especially useful in locations with changing ethnicity, and in issues related to rapid technological advances. Research on barriers and conflicts in outdoor recreation will help managers improve environmental justice, reduce user conflicts, and enhance overall satisfaction. Specifically, the Forest Service will:

- Better utilize existing tools, such as the Recreation Fee Demonstration Program and partnerships to manage facilities.
- Prepare a land management planning guide for recreation, heritage, wilderness, and tourism.
- Select models and laboratories of excellence.
- Improve professional recreation management skills.

Today, information technology offers innovative ways of telling Americans about the rich recreation opportunities available. The Forest Service will tailor services to meet visitor needs, using tools such as the Internet to effectively reach targeted audiences, and improve the availability of information so visitors can better plan trips. The agency will also develop strategies to reach non-traditional audiences, such as inner-city youth.

The Forest Service will work closely with partners to give people recreational information and services when and where they want. Through cooperative projects such as the National Recreation Reservation Service, people will be able to obtain information and make reservations for a variety of locations and facilities from a single source or contact. Specifically, the Forest Service will:

- Use a strong marketing and research-based approach.
- Continue using the customer report card, third-party assessments, and other tools for continuous improvement.
- Improve agency presence on the World Wide Web.
- Establish an advisory group to the regional recreation directors.
- Charter a public-private consortium to help match information needs and resources.

Rural communities are diversifying their economic base and expanding their uses of the national forests and grasslands. Communities once solely dependent on timber production are now capitalizing on a wider range of goods and services. Research on communication tools, interpretive services, and environmental education, as well as on visitor spending patterns, will better describe and increase the contribution of recreation and tourism to rural development in and near national forests. Heritage and recreation tourism is also important to urban and suburban areas. The Forest Service will pay increasing attention to the needs of urban Americans and to their impact on the national forests, while providing a wide range of services, education, and experiences. Specifically, the Forest Service will:

- Collaborate with communities, the private sector, and other agencies.
- Encourage efficient delivery of recreation services.
- Showcase outstanding partnerships.

The key to success in outdoor recreation lies in strengthening and expanding working relationships. The Forest Service has long relied on partnerships to provide recreation opportunities. Just as the private sector has found ways to get the job done at a lower cost, the agency is learning that these partnerships enhance the quality of services.

Social science research will help identify ways that such partnerships can be improved and expanded. Closer ties with natural resource schools for curriculum development and continuing education partnerships will help maintain a cadre of professional and technical leaders at all levels of the agency. Cooperative efforts will also be expanded through our technology and development centers. Specifically, the Forest Service will:

- Help develop tourism conferences.
- Reestablish regional tourism program links.





RESULTS ACT PERFORMANCE AND ACCOUNTABILITY REPORT

The performance indicators described in the following sections represent activities that contribute to understanding, restoring, and maintaining ecosystem health and biological diversity within the National Forest System (NFS), on State and nonindustrial private forest (NIPF) lands in the United States, and throughout the world. In most cases they are the same set of indicators listed under the corresponding objectives in the FY 1998-2000 annual performance plans. For ease of reference and consistency they are shown in the same order. Definitions of the performance indicators are included at the end of this report.

In most cases, annual progress toward longer term outcomes is portrayed by short-term output indicators. Final output levels for the associated performance indicators in FY 1998 are summarized along with a 3-year historical average. More detailed displays of funding and performance are shown in the Statistical Appendix. Indicators that most closely represent the four emphasis areas of the Natural Resource Agenda are highlighted in bold. Output and outcome indicators are being developed and refined in the context of *Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests.* Established as part of an international dialogue, this effort has since become known by the name of its host city as the Montreal Process.

Goal 1: Ensure Sustainable Ecosystems

Objective 1.1: Healthy, biologically diverse and resilient aquatic ecosystems restored and protected to maintain a variety of ecological conditions and benefits.

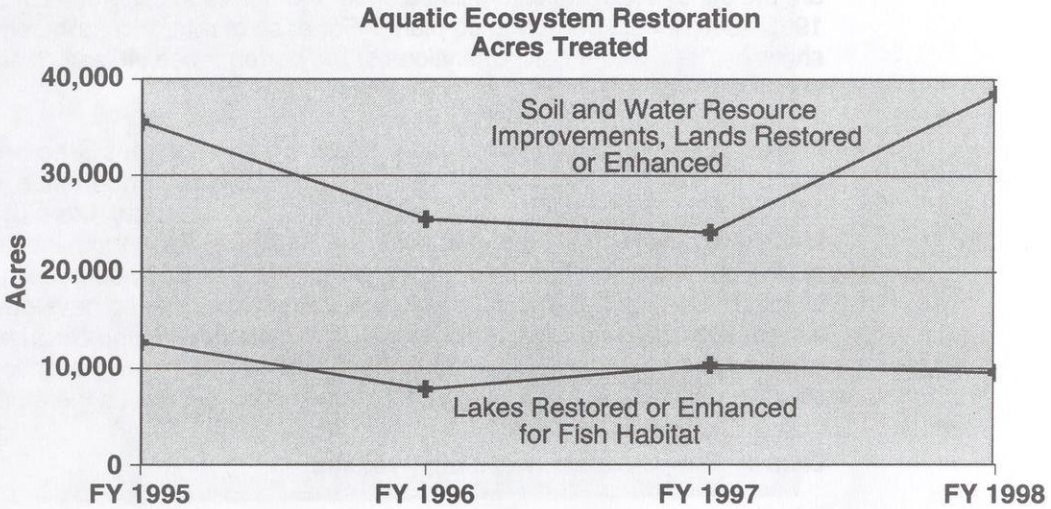
Aquatic ecosystems are dynamic, biological systems. The restoration and protection accomplishments under this objective show progress toward longer term objectives of resiliency and stability. Current conditions are known for about 60 percent of the aquatic ecosystems on NFS lands. Additional inventories of resource conditions conducted in FY 1998 will contribute to the accomplishment of management and restoration objectives.

Collectively these efforts help determine the best mix of investments and activities to employ in restoration work. This in turn leads to healthier aquatic ecosystems capable of providing quality water, biological diversity, quality recreation opportunities, and sufficient fish populations to meet subsistence and commercial needs.

Restoring watersheds improves ecosystem health in the immediate project area as well as downstream. Runoff control structures and revegetated areas on NFS lands (see following graph) help improve water quality and control erosion, leading to healthier, more diverse aquatic ecosystems. Stewardship planning and management practices implemented on nonindustrial private forestlands (NIPF) in FY 1998 also helped ensure that aquatic ecosystems were maintained and restored across all boundaries (see Table 10 in the Statistical Appendix).

Performance objectives for these NIPF lands focused on coordination and cooperation with similar efforts conducted by State forestry agencies, the Natural Resources Conservation Service, the Farm Service Agency, and the Cooperative State Research, Education, and Extension Service. Refer to Tables 5, 6, and 31 in the Statistical Appendix for related information. Stewardship Management Plans, based on landowners' objectives, were prepared by State forestry personnel or private forestry consultants, and then implemented by the landowners. Close coordination assures consistency between programs without overlap.

As an example of international cooperation, the Forest Service recently entered into a unique partnership with Ducks Unlimited to acquire, conserve, and restore wetlands and riparian habitat for migratory birds, waterfowl, and wetland wildlife in North America, Mexico, and Latin America.



The majority of fish habitat restoration and enhancement and soil and water improvement projects were completed by agency employees in FY 1998 (see Table 14). However, challenge cost-share agreements and other partnerships with State agencies and private groups such as Trout Unlimited greatly increased total accomplishments while improving relationships.

In the arid Southwestern United States, riparian habitats in the Middle Rio Grande Valley are stopover hotspots for birds such as the Wilson's Warbler as they migrate to and from the neotropical zone. Migration is extremely energy demanding and poses very high risks for the survival of these bird species. Research efforts now underway will help answer why bird populations are declining, and evaluate quality of the riparian areas as habitats for migration.

Resource managers need ways to assess watershed and forest health. However, it is costly and impractical to survey all species of plants and animals. Scientists are working on species of amphibians that are excellent indicators of ecosystem health. For the redwood forest of northern California, scientists found that the tailed frog and the southern torrent salamander are very sensitive to fine sediment infusions and may be excellent indicators of sediment impacts on streams.

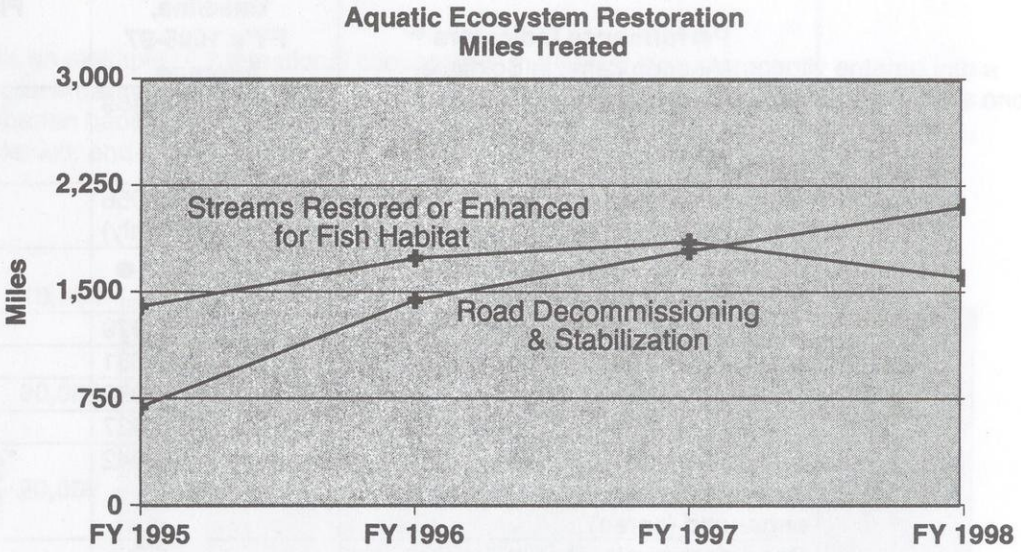
Another bioindicator was developed by the Forest Service Southern Research Station to diagnose water quality based on the appearance of aquatic insects. The filamentous bacteria that normally colonize the gills and body of aquatic insects are stimulated into a bloom stage of growth when excess nutrients are present. In this stage, the bacteria can kill these aquatic insects. Field survey of this growth can be done with a 10-15X hand lens.

Performance Indicators # (Agenda Items in Boldface)	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
NIPF lands under approved Stewardship Management Plans (acres)	109,459	107,199	96,576
Multiresource practices implemented on NIPF lands (acres)	12,056 (FY1997 only)	12,056	12,500
Streams and lakes restored or enhanced for fish habitat:			
a) inland stream miles	979	950	911
b) anadromous stream miles	681	900	689
c) inland lake acres	6,958	6,631	8,452
d) anadromous lake acres	3,337	3,713	1,086
Soil and water resource improvements - lands restored or enhanced (acres)	28,342	* 24,092	38,497
Road decommissioning (miles)	1,306	1,787	2,099
Bonded nonenergy/energy operations administered to standard:			
a) number of operations	7,586	7,833	7,651
b) percent of operations	50	50	72
Abandoned Mine Land (AML) watershed initiative activities (non-CERCLA, see Objective 1.4)	NA	NA	NA
Land adjustments to improve National Forest management and protect natural resource values (acres)	66,697	104,152	53,241

Sources include Annual Reports of the Forest Service (FY's 1995-97); final Management Attainment Reports (MAR) for FY's 1995-98.
* Does not include approximately 22,000 acres of restoration/improvement associated with emergency supplemental funding received for floods/hurricanes in 1996-1997.

Substantial funding to implement the Abandoned Mine Lands (AML) Watershed Cleanup Initiative has been appropriated over the past 2 years. In FY 1998, $4.6 million of agency watershed improvement funds were dedicated to the interdepartmental AML initiative. Over 38,000 abandoned and inactive mine sites exist on NFS lands. A great deal of planning and coordination with other Federal agencies, States, tribes, and interested stakeholders is needed to implement AML cleanups on a watershed basis. In FY 1998, inventory and assessment work was completed on the Animas River watershed in Colorado and a $1.7 million contract was awarded to implement reclamation work at the Silver Crescent Mine on the Coeur d'Alene River watershed in Idaho. Other regions have initiated partnerships with the States and initiated inventory activities to develop information and proposals for projects in FY's 1999 and 2000.

In FY 1998 the multi-agency Natural Resources Performance Measurement Forum was formed and began to identify common outcomes and performance measures for physical and biological resources. The Forest Service and other Federal natural resource management agencies, such as the BLM, Fish and Wildlife Service (FWS), National Park Service, and EPA, began to identify roles, strategies, and responsibilities related to larger, Government-wide goals. One of the Forum's first efforts was to develop and recommend a set of outcome-based, agency-wide goals for clean water in support of the President's Clean Water Action Initiative.



In addition to decommissioning about 2,100 miles of road in FY 1998 (see Table 13), the agency also developed an Interim Rule for an 18-month suspension of road construction and reconstruction in many NFS roadless areas. After conducting 30 public meetings and reviewing over 60,000 public comments, an environmental assessment with 6 alternatives was completed and used to set the stage for a long-term roads policy.

Acquisition of land, either through exchange or by purchase, can provide protection for important resource values, such as critical habitat for TES wildlife species, and allow for more effective watershed management. Depending on the nature of the lands involved, acreages are also reported under Objectives 1.2 and 1.3. Opportunities to acquire important lands can occur with little advance notice, and willing sellers often expect a rapid response. To accommodate the needs of all parties, the agency has worked with conservation groups such as the Trust for Public Lands and the Nature Conservancy. In FY 1998, these efforts resulted in the acquisition of over 50,000 acres, including the following highly visible and significant sites:

The New World Mine (Montana) - Located within the Gallatin NF, this site was purchased to prevent development of a gold mine just outside the boundary of Yellowstone National Park. This acquisition helps ensure the sustainability of a highly significant ecosystem, and permits cleanup of past mine wastes.

The Columbia River Gorge National Scenic Area (Oregon and Washington) - Over 200 acres were added to this 115,000-acre national treasure which attracts nearly 5 million visitors each year. This continuing implementation of the comprehensive Land Acquisition Strategic Plan helps ensure that highly sensitive and vulnerable resources are identified and acquired.

The White Mountain Scenic Area (New Hampshire) - In FY 1998 Land and Water Conservation Funds were used to purchase 1,900 acres encompassing a large contiguous block of undeveloped lakeshore along four lakes and a nationally significant landmark involving the Appalachian Trail. Associated river and lake ecosystems are very sensitive, and with this purchase development pressures have been prevented.

Objective 1.2: Ecological integrity of forested ecosystems restored or protected to maintain biological and physical components, functions and interrelationships, and the capability for self-renewal.

The extent and severity of forest health problems are subjects of ongoing inventory, monitoring, and research across all ownerships (Tables 5-6). In the past few years, improved information has allowed the agency to refine treatment priorities, including efforts to reduce the build-up of combustible forest materials on NFS and private lands, reduce insect and disease threats, replant and improve forest stands, and prevent soil erosion. Around the world the Forest Service is working with developing countries such as Mexico, Brazil, and Indonesia to share understanding and knowledge of forest ecosystem restoration, thereby protecting the watersheds of which they are a part.

To help achieve a more integrated approach to this objective, the Ecosystem Management Corporate Team (EMCT) was created to address issues that cross deputy and program areas, such as sustainable development, invasive species, and the Clean Water Action Plan. In one of its many coordination efforts, the EMCT played a key role in the agency's hosting of the 1998 Sustainable Forest Management Roundtable in Washington, DC. Attended by Cabinet-level representatives of all Federal land management agencies and over 30 State, tribal, and county agencies and national industry and environmental organizations, this roundtable generated a commitment to sustainable forest management and the use of the Montreal Process Criteria and Indicators as the basis for common measures and protocols.

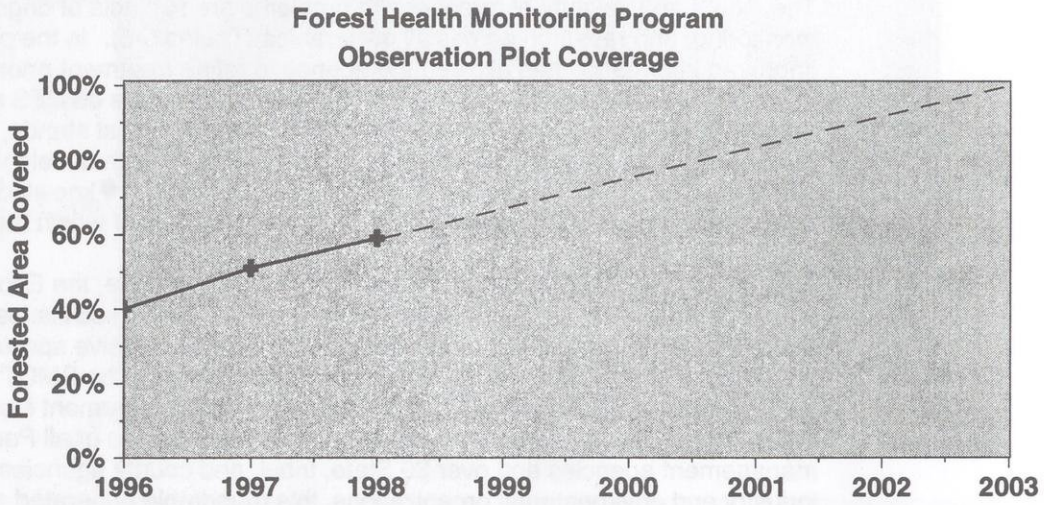
The Forest Inventory and Analysis (FIA) program is the agency's premier program for tracking ecological integrity and sustainability of all of the Nation's forests. Forest Service employees completed measurement of 6 percent of the existing 120,000 sample locations, and produced 87 publications documenting status and trends in land use change, species diversity, growth, mortality, removals (harvest), and ownership patterns. An annual inventory approach was implemented in 7 States in 1998, with the goal of implementing it in all States by the year 2003.

Long-Term Soil Productivity (LTSP) sites were recently established in Idaho and Oregon by the agency's Pacific Northwest, Intermountain, and Northern Regions at the Priest River Experimental Forest; Payette National Forest; Boise National Forest (tentative); and the Umpqua National Forest (satellite plots). These LTSP sites are the latest additions to an existing system of over 100 sites at 36 locations in the U.S. and Canada, and fill critical gaps in the national network. The LTSP is designed to develop monitoring protocols to help the national forests comply with the monitoring provisions of the National Forest Management Act of 1976 and ensure the sustainability of a basic component of forest ecosystems.

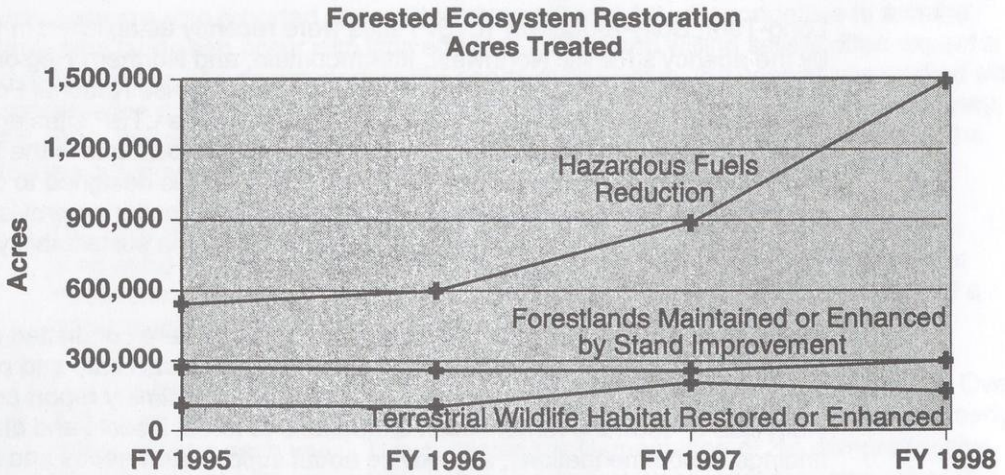
Insect and Disease detection and evaluation surveys were conducted on 213 million acres of Federal lands and 575 million acres of nonfederal State and private lands (see Table 5). These surveys provide a more complete and timely report on regional instances of declining forest health attributable to forest insects and diseases. Survey findings, recommendations, and advice about suppression needs and available alternatives were provided to land managers. The goal of 675 million acres was exceeded due to increased acres reported in the East on State and private lands.

The Forest Health Monitoring Program's network of permanent observation plots was expanded to include the States of Illinois, North Carolina, Pennsylvania, South Carolina, Utah, and Wyoming. Fifty-nine percent of the forested area of the lower 48 States was monitored as part of this program, compared to 51 percent in 1997. This program,

conducted in cooperation with State forestry agencies, provides long-term trends in forest health for early detection and diagnosis of changes in conditions. Full coverage is expected by 2003.



Nearly 1.5 million acres of prescribed burning and other fuel reduction treatments in 1998 enhanced forest health and diversity by reducing wildfire intensity, protected vulnerable urban-wildland interface areas, promoted forage productivity, and restored fire-dependent ecosystems. Also in 1998 the Forest Service and Department of the Interior started the Joint Fire Science Program to provide better scientific support for fuel management activities.



Stand improvements (nearly 300,000 acres in FY 1998, see Table 20), such as precommercial thinning, have improved forest health by reducing stand density and allowing the remaining stand to grow more vigorously. More vigorous stands reduce the potential for insect and disease outbreaks and high-intensity fires, both of which impair forest health.

Wildlife habitat restoration and protection projects also contribute to healthy forests, and help ensure continued availability of those lands for terrestrial wildlife species. In the past year, using appropriated funds alone, the agency restored over 167,000 acres of terrestrial habitat, including the nearly 42,000 acres within rangeland ecosystems (see Objective 1.3). These efforts were enhanced by challenge cost-share efforts with groups such as the National Wild Turkey Federation (see Table 14 for total acreages).

Commercial timber harvests can be another tool used to improve and restore forest health. In FY 1998 the Forest Service removed and treated southern pine beetle infested forests through properly designed regular program and salvage timber sales. These efforts helped restore affected ecosystems to a healthy, vigorous condition.

Promptly reforesting NFS lands after timber harvest (nearly 290,000 acres in FY 1998, see Table 15) helps retain soil in place, prevents harmful stream sedimentation, provides cover for wildlife, and improves the resilience of ecosystems. Reforestation needs have declined in recent years, paralleling the decline in timber harvest over the same period.

Regeneration of longleaf pine in the Southern United States is a important productivity and biological diversity issue. At the time of early settlement by Europeans, this ecosystem covered an estimated 90 million acres. Less than 3 million acres still exist today. Over 30 plant and animal species associated with the longleaf pine ecosystem are threatened or endangered. Scientists recently published *Practical Guidelines for Producing Longleaf Pine Seedlings in Containers* (General Technical Report SRS-14, 1998), which will help achieve successful restoration of this tree species.

Performance Indicators [#] (Agenda Items in Boldface)	**Performance Baseline, FY's 1995-97 Average**	**FY 1997 Final**	**FY 1998 Final**
Forest health surveys and evaluations, Federal and cooperative lands (acres)	696,700,000	772,000,000	787,500,000
NIPF lands under approved Stewardship Management Plans (acres)	1,313,512	1,286,382	1,158,908
Multiresource practices implemented on NIPF lands (acres)	120,556	120,556	125,000
Terrestrial wildlife habitat restored or enhanced (acres)	104,797	154,550	125,413
Forestlands maintained or enhanced by stand improvement (acres)	263,290	257,881	296,800
Hazardous fuels reduction (acres)	675,978	887,100	1,489,293
NIPF Stewardship Management Plans (number)	16,708	15,357	16,759
Lands restored by reforestation (acres)	355,358	321,498	287,900
Treatment of harvest related woody fuels - brush disposal (acres)	156,345	131,254	115,503
Land adjustments to improve National Forest management and protect natural resource values (acres)	88,929	138,869	70,911

[#] Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

Natural events, such as insect infestations and catastrophic fires, can have profound effects on ecosystem health. The impacts of future occurrences can be mitigated to varying degrees with appropriate prevention and control measures such as prescribed fire. In some cases, as with the American chestnut, mitigation may never be found. Several interagency efforts are successfully protecting forests and habitat from introduced insects and diseases.

The Forest Service, USDA's Animal and Plant Health Inspection Service (APHIS), and the Department of Commerce are working to prevent outbreaks and infestations by ensuring that logs, chips, and other wood products imported from overseas are not carrying insects, such as the Asian gypsy moth and Asian long-horned beetles. These insects can spread quickly in the United States because they have few natural predators, and cause significant economic, social, and ecological damage to urban, rural, and forest lands in North America, especially in areas adjacent to the east and west coasts.

Gypsy moth, southern pine beetle, dwarf mistletoes, and other insects and diseases were suppressed on 0.8 million acres of Federal and non-Federal land in FY 1998. The total acres treated decreased because of a drastic gypsy moth decline in the East and a decline in the southern pine beetle population in the South. The Slow-The-Spread pilot project in Michigan, North Carolina, Virginia, and West Virginia demonstrated that gypsy moth spread can be reduced by more than 60 percent along the leading edge of the infested area.

Financial assistance for implementation of Slow-The-Spread projects was provided to Federal agencies, including the Forest Service, Department of the Interior, Department of Defense, and to States for treatments that were shown to be economically, biologically, and environmentally sound. These suppression actions protected trees and timber, wildlife habitat, water quality, and recreation values as well as human health and safety.

Thirty-six Special Technology Development Projects (STDP) and National Agricultural Pesticide Impact Assessment Program (NAPIAP) projects were funded to develop, improve, and demonstrate new technologies, materials, methods, and strategies to improve the efficiency of forest pest management. These projects included the use of biological controls to limit the spread of noxious weeds and exotic insects, pest risk modeling, enhanced aerial surveys technology, and data visualization technology.

As detailed in Table 26 of the Statistical Appendix, 200,357 acres of national forests and grasslands were treated with pesticides in the past fiscal year. This acreage represents a decrease of 33 percent in the treated acreage from the previous year. The majority of the pesticides applied were for the management of forest vegetation (conifer and hardwood release and control), disease control in tree nurseries, native and exotic weed management, and predator control on rangeland.

Pesticide Treatments - Fiscal Years 1996-98

Fiscal Year	1996	1997	1998
Acres Treated	220,290	297,880	200,357

Nonindustrial private forest landowners control nearly 60 percent of productive forest land in the United States, but less than 10 percent of them have written forest management plans (see Table 10). By providing assistance in multiresource planning and management on non-Federal forest lands, the Forest Service is enhancing forest health across the entire landscape.

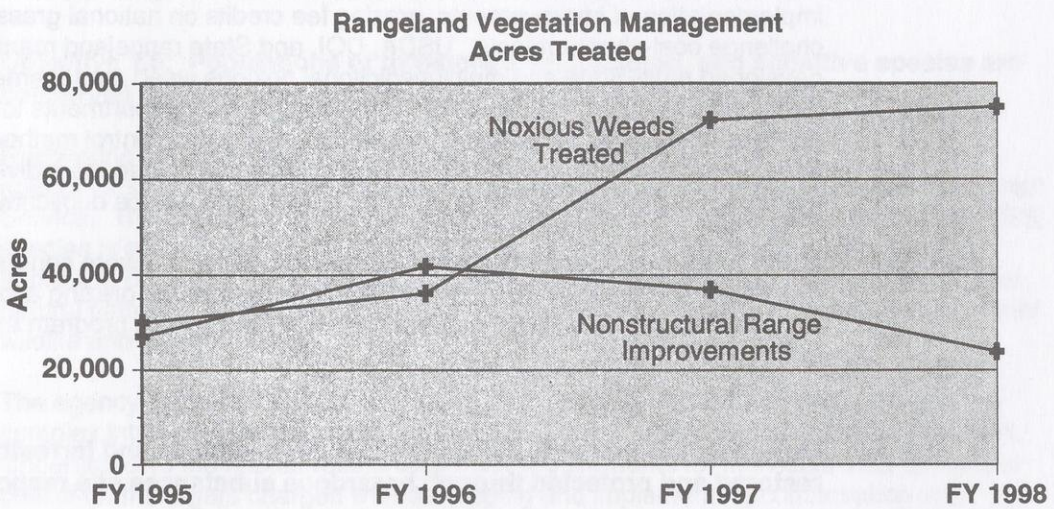
The Cooperative Forestry programs involve close coordination with Federal, State, local, and tribal government organizations and private landowners. Since Federal dollars are matched by State contributions, even small increases in Federal funds result in important on-the-ground accomplishments. For example, the Forest Service contributed $2 million to the Mountains to Sound Greenway project in which the State, environmental and industry groups, and other Federal agencies are working to acquire conservation easements from Seattle across the Cascades to ensure that the lands are protected.

The majority of the 30 areas purchased with Land and Water Conservation Funds in FY 1998 are forested lands with a wide variety of significant resource values. Depending on the nature of the lands involved, acreages are also reported under Objectives 1.2 and 1.3. One example is a 550-acre purchase along the Big Sur coastline located in the Los Padres National Forest of California. This parcel is one of the most scenic along the world-reknowned coastline, and complements the nearly 5,000 acres acquired over the past 5 years. The area also provides habitat for 12 wildlife species identified on Federal or State threatened or endangered lists.

Objective 1.3: Healthy, diverse, and resilient rangeland ecosystems restored and protected to maintain robust riparian systems, a variety of ecological conditions and benefits, and biodiversity.

Healthy rangelands provide habitat for many plant and wildlife species and forage for commercial use. Where they adjoin streams, rangelands support riparian species--including many listed as threatened or endangered. Although public rangelands are in better condition than they were at the turn of the century, an estimated 20 million acres of NFS rangelands do not meet forest plan standards or require further analysis to determine their status.

In FY 1998, the agency restored about 1 percent of those areas needing improvement, thus allowing them to support native and desirable nonnative plant species. The Forest Service improved approximately 24,000 acres of rangeland with nonstructural treatments such as seeding, fertilizing, and liming.



Approximately 6-7 million acres of NFS lands are now infested with noxious weeds such as Russian thistle, salt cedar, leafy spurge, and kudzu. These invasive species are spreading at a rate of 8-14 percent annually, for a conservatively estimated increase of 480,000 acres each year. Through the Invasive Alien Species Noxious Weed Strategy, the agency developed an action-oriented control program in conjunction with adjacent landowners and managers, and other stakeholders. In compliance with environmental analyses and decisions, over 75,000 acres were treated in FY 1998.

The agency's objectives for managing rangelands are diverse, ranging from enhancing grassland bird habitat to maintaining forage for domestic livestock. These objectives rely on research to guide location of range fencing to help restore riparian habitat or native vegetation. Research also focuses on the factors affecting rangeland health, including timing and duration of grazing by livestock and wildlife, recreation use, weather patterns, and development of gas, oil, and mineral resources.

Performance Indicators # (Agenda Items in Boldface)	**Performance Baseline, FY's 1995-97 Average**	**FY 1997 Final**	**FY 1998 Final**
Noxious weeds treated (acres)	46,136	72,357	75,138
Nonstructural range improvements completed (acres)	35,186	36,856	23,817
Rangelands monitored for progress toward desired condition in AMP's (acres)	8,290,266	7,351,098	5,632,233
Terrestrial wildlife habitat restored or enhanced (acres)	34,932	51,517	41,804
Land adjustments to improve National Forest management and protect natural resource values (acres)	66,697	104,152	53,241

Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR reports for FY's 1995-98.

The agency leverages funds through programs such as grazing permittee construction or implementation of improvements, grazing fee credits on national grasslands, and challenge cost-share projects. USDA, DOI, and State rangeland managers have developed multi-State and multijurisdictional noxious weed management plans (e.g., the Greater Yellowstone Area), worked with local highway departments to spray road rights-of-way across jurisdictions, researched biological control methods, and prepared educational materials and training courses. This has helped the individual partners use funds more efficiently, leverage other resources, and reduce duplicative efforts.

In FY 1998, four program reviews related to Objective 1.3 were conducted in five regions. The key findings related to the NEPA analysis process for grazing allotments, grazing resource management planning and inventory, and wildlife program accountability.

Objective 1.4: Healthy, diverse, and resilient aquatic and terrestrial resources restored and protected through hazardous substances site response.

Through the agency's work and cooperative efforts, land and water resource conditions were restored and protected through hazardous substance site responses under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

HAZMAT site cleanup improves water quality, increases recreation opportunities, and restores fish and wildlife habitat. The Forest Service estimates there are 1,800 HAZMAT sites on NFS lands that will require cleanup action. Last year, the agency completed 68 response actions at hazardous substance sites, a 30-percent increase over FY 1997.

Performance Indicators # (Agenda Items in Boldface)	**Performance Baseline, FY's 1995-97 Average**	**FY 1997 Final**	**FY 1998 Final**
Hazardous substance sites *	57 (FY97 only)	57	
- Sites characterized			43
- Cleanups completed			25
Watershed or major Abandoned Mine Land (AML) site cleanup actions initiated under CERCLA (see Objective 1.1 also)	NA	NA	1

Sources include Annual Reports of the Forest Service (FY's1995-97); final MAR for FY's 1995-98.

* Prior to FY 1998 site characterizations/cleanups were reported as a combined total.

Preservatives used to prolong life of wood used in outdoor applications can eventually end up in soils and streams. To prevent future problems, Forest Products Laboratory scientists are using preservative-tolerant fungi and bacteria as biotreatment of waste wood to reduce the volume going to landfills, and to recover wood fibers for recycling. Research and Development (R&D) also works to identify microorganisms that can help remediate polluted soils and wastewaters.

The agency is developing partnerships and securing additional funds by leveraging resources from Federal, State, tribal, and local governments; nongovernmental organizations; and potentially responsible parties. The Forest Service has worked with these partners to implement a multiagency abandoned mine lands initiative. In FY 1998, they prioritized the sites that need remediation, and they accelerated efforts to clean up and reclaim sites. This has been successful in western watersheds where CERCLA and non-CERCLA sites pose ecological and safety dangers.

Objective 1.5: Populations of threatened, endangered, and sensitive species are conserved through recovery and management efforts.

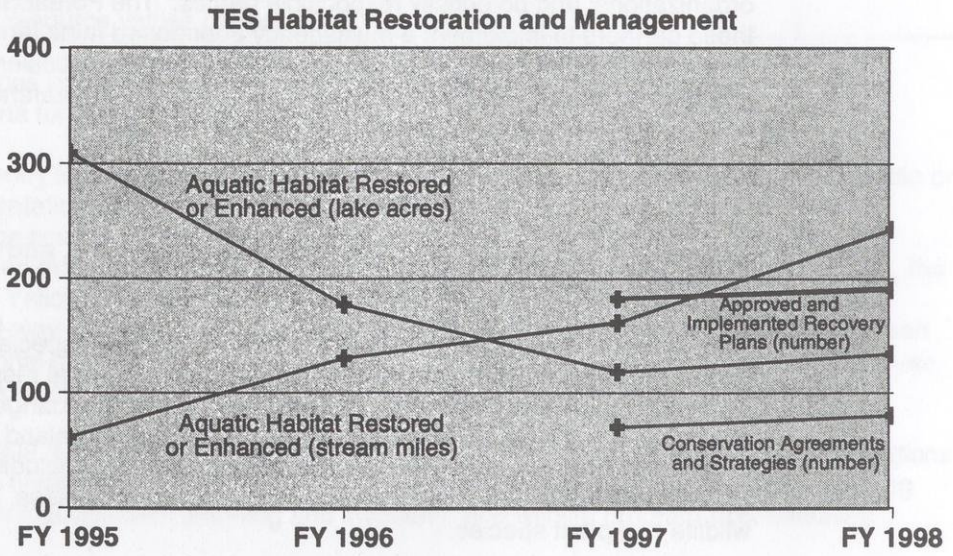
Recovering and conserving federally proposed and listed species, and agency-designated sensitive species are fundamental, legal responsibilities of the Forest Service. The existing and future welfare of threatened, endangered, and sensitive (TES) species is a key indicator of NFS aquatic, forest, and rangeland ecosystem health. Improving conditions for these plant and animal species, including the reintroduction of natural patterns of disturbance and other ecological processes, also benefits many other wildlife and plant species.

The agency supports R&D programs to better understand TES habitat needs and the complex interrelationships within the biotic and abiotic components of the environment. Understanding the habitat relationships and requirements for individual TES species is critical for managers charged with developing and implementing conservation and restoration projects. Monitoring TES populations and habitat components in project areas is essential to understanding impacts and revising practices to be more effective.

In FY 1998, about 3 percent of the identified sensitive species had a conservation agreement and/or strategy completed to guide resource management efforts. Approved threatened and endangered species recovery plans were implemented for 190 species. The Forest Service continues to restore TES habitat and ensure that agency actions do not jeopardize federally listed species or their critical habitat.

Performance Indicators # (Agenda Items in Boldface)	**Performance Baseline, FY's 1995-97 Average**	**FY 1997 Final**	**FY 1998 Final**
Terrestrial TES habitat restored (acres)	83,948	122,280	201,966
Aquatic TES habitat restored or enhanced			
a) stream miles	117	161	245
b) lake acres	201	118	134
Conservation agreements and strategies (number of sensitive aquatic and terrestrial species)	70 (FY97 only)	70	80
Approved and implemented recovery plans (number of listed aquatic/terrestrial species)	182 (FY97 only)	182	190

Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98; Wildlife, Fish and Rare Plants Database, 1998. Refer to Table 14 in the Appendix for accomplishments by region.



Red-cockaded woodpeckers, an endangered species, are found in open pine forests of the Southeast. The Forest Service, Department of Defense, FWS, State agencies, tribal governments, and private individuals are jointly protecting and enhancing critical habitat in these coastal plain and piedmont ecosystems.

Since Hurricane Hugo in 1989, recovery has focused on reestablishing birds in abandoned habitats. Working with the Department of Energy and Savannah River Natural Resources Management and Research Institute, agency scientists have developed a mobile aviary to allow "soft" release of captured birds into target habitats.

In February 1998, a severe windstorm on the Angelina and Sabine National Forests in Texas damaged critical habitat. Rapid consultation with the FWS and response from local groups helped the agency rehabilitate the blowdown area quickly.

Objective 1.6: Better ecosystem management decisions based on the best available scientific and management information.

In FY 1998 the R&D program continued to develop and provide managers with scientific and technical information needed to manage and sustain the forest and range lands of the Nation. Activities emphasized values, products, and services that would maintain and enhance ecosystem health at home and abroad.

Development of the Natural Resource Information System (NRIS) continued under auspices of the Ecosystem Management Corporate Team (EMCT) and the Interregional Ecosystem Management Coordination Group. Key milestones included production and testing of corporate data base prototypes for air, vegetation, and terrestrial modules of NRIS. Planning was initiated for water, fauna, and human dimension modules. Common data standards and delivery systems are being developed to generate information for planning, analysis, decisionmaking, and management of forests and grasslands. Key indicators are shown in the following table.

Forest Service R&D has a diverse portfolio that addresses the key land management issues of Federal lands and provides intellectual leadership worldwide. The Criteria and Indicators for Sustainable Forest Management provide a framework necessary to assess resource conditions over multiple ownerships. A multiagency group is developing common data standards and protocols to ensure consistent implementation and use. By completing integrated inventories and ecological assessments, researchers provide managers with the latest information about existing forest and rangeland conditions, potential resource capabilities, and demand.

The year 1998 also marked the 50th anniversary of the H.J. Andrews Experimental Forest in Oregon. A historical analysis of continuous research, including 700 scientific citations from the last decade, showed many long-term benefits to understand how "healthy" ecosystems function as well as results that help land managers make near-term decisions. This collaborative research effort has included the Willamette National Forest and Oregon State University.

The publication of *Fire's Effects on Ecosystems* (John Wiley and Sons, Inc.) in 1998 has already helped scientists, managers, and decisionmakers evaluate the impacts of fire on soil, water, vegetation, riparian, air, and social components of ecosystems. This book synthesizes information from the last 20 years of research into a format accessible as a reference to planners, decisionmakers, managers, and technicians.

As described in Objective 1.2, the gypsy moth continues to be a serious exotic invasive pest. In 1998 agency scientists published their work leading to the discovery and patent of a strain of virus that attacks the gypsy moth, but that is benign to humans and other organisms, setting the stage for commercial production. Compared to chemical and biological agents currently used to control gypsy moth, this new method has little or no environmental impact.

Performance Indicators #	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
Scientific papers (number)	2,089	1,872	1,192
Ecological Assessments Completed			
Ecoregion (Domain/Division/ Province) Scale		3	3
Eco-subregion (Section)/ RiverBasin/SubBasinScale		22	15
Landscape/Watershed Scale		142	105
Terrestrial Ecologic Unit Inventories			
Eco-subregion (Section, Subsec) Scale (acres x 1000)		1,993	166,652
Landscape Scale (acres x 1000)		8,262	52,497
Land Unit Scale (acres x 1000)		4,747	7,660
Aquatic Ecologic Unit Inventories			
Riverine Valley Segment Scale (miles)		16,461	13,824
Riverine Stream Reach/Channel Unit (miles)		2,810	2,369
Lacustrine Lake Type Scale (acres)		5,659	16,088
Lacustrine Lake Zone/Site Scale (acres)		1,117	9,352
Biological Inventories			
Forest Resource Inventory (acres x 1000)		34,961	13,802
Rangeland Resource Inventory (acres x 1000)		1,906	735
Wildlife Habitat Inventory (acres x 1000)		1,968	2,113
TES Species Habitat Inventory (acres x 1000)		3,300	2,679
Human Dimensions			
Heritage Inventory (acres x 1000)		1,178	816
Air Quality Related Values Inventoried/Monitored (AQRVs)		521	809

Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

For more than 70 years, the Forest Service has conducted an inventory and analysis of forested lands in the United States (FIA). This data base is routinely used by Federal land managers, States, private industry, and international groups. The natural resource information developed through research and the status information developed by inventory and monitoring efforts are crucial in the development of Forest Service policy, programs, and revision of land and resource management plans, helping to ensure that ecosystem health and productivity are maintained.

An annual inventory system is being implemented for the 13 States in the South. The annual forest inventory system provides the basis for integrating the Forest Health Monitoring and the FIA programs. Components of this system include: plot strategies, field logistics, use of remote sensing, models, quality assurance, and data base management.

Objective 1.7: Naturally functioning wilderness ecosystems where conditions are determined primarily by natural forces.

With almost 20 percent of NFS lands designated as wilderness, the National Wilderness Preservation System plays a key role ensuring sustainable ecosystems. The major purpose of the congressional wilderness designation is to protect and preserve the natural, "wilderness" character of the designated area while allowing opportunities for solitude and primitive and unconfined outdoor recreation (see Objective 2.1). As much as possible, natural ecological processes are allowed to operate without intervention. As such, wildernesses serve as laboratories where conditions are determined primarily by natural forces, providing a basis for assessing the effects of changes induced by land management practices, pollution episodes, and other human-induced events.

The Forest Service ensures that NFS lands with congressionally designated wildernesses and their associated ecosystems are influenced primarily by natural processes and protected from human-caused degradation. To help ensure this, in FY 1998 the agency acquired four parcels within existing wildernesses totaling over 300 acres in the States of Colorado, Minnesota, New Mexico, and Utah.

Performance Indicators #	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
Wilderness covered by approved fire plans (acres)	50,000 (FY97 only)	50,000	45,000

Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

Increasing use of wilderness areas, together with human activities and development pressures outside of wilderness, creates stresses that threaten the enormous biological and societal benefits derived from these areas. Managers struggle to understand these threats, and to protect and restore natural conditions and opportunities for wilderness experiences. To do so they rely on the results of rigorous research on wilderness ecosystem character, the biological and social impacts of human activities, the role of wilderness in larger social systems, and the impact of different policy and management alternatives.

There continues to be broad support among natural resource agencies for this type of wilderness training, education, and research. In FY 1998 the Forest Service, BLM, National Park Service, and FWS jointly trained employees and conducted research at the Arthur Carhart National Wilderness Training Center and the Aldo Leopold Wilderness Research Institute.

A recent product of the Institute, *Stewardship Across Boundaries* (Island Press, 1998), presents a framework for understanding administrative boundaries and effects. It deals with human, ecological, social, legal, and institutional aspects of boundaries around wilderness, private, recreation, and public lands. This book helps managers become more involved with users and individuals beyond their own boundaries.

In FY 1998, the Forest Service also continued its work with the Department of Defense, Federal Aviation Administration, and DOI to address overflight issues that may threaten wilderness values and resources. This effort is coordinated through the Interagency Airspace/Natural Resources Coordination Group.





Goal 2: Provide Multiple Benefits for People within the Capabilities of Ecosystems

Objective 2.1: Quality recreation experiences with minimal impacts to ecosystem stability and condition.

Americans cherish their public lands for values that the Forest Service manages--wilderness, clean water, forest products, protection of rare species, old-growth forests, and a connection with their history. Americans also want a great deal from the agency in terms of recreation settings, experiences, activities, facilities, and services, and they will expect even more in the future. FY 1998 saw recreation continue to emerge as the fastest growing use on the national forests and grasslands.

This national heritage of forests and grasslands has provided special places for generations of Americans. With help from partners and through revenue enhancement tools, the Forest Service offered a rich array of activities and adventures unparalleled in scope and diversity. Although spanning the entire Recreation Opportunity Spectrum, the agency's unequaled recreational niche continued to be the "wild" end of "wildlands" experiences. It managed 63 percent of the National Wilderness Preservation System in the contiguous United States and a much larger percentage of wilderness experiences. It administered 4,348 miles of the Wild and Scenic Rivers System; 412 units of the National Wilderness Preservation System; 133,000 miles of trails; more than 250,000 heritage sites; and over 23,000 campgrounds, picnic areas, trailheads, boat ramps, and visitor facilities.

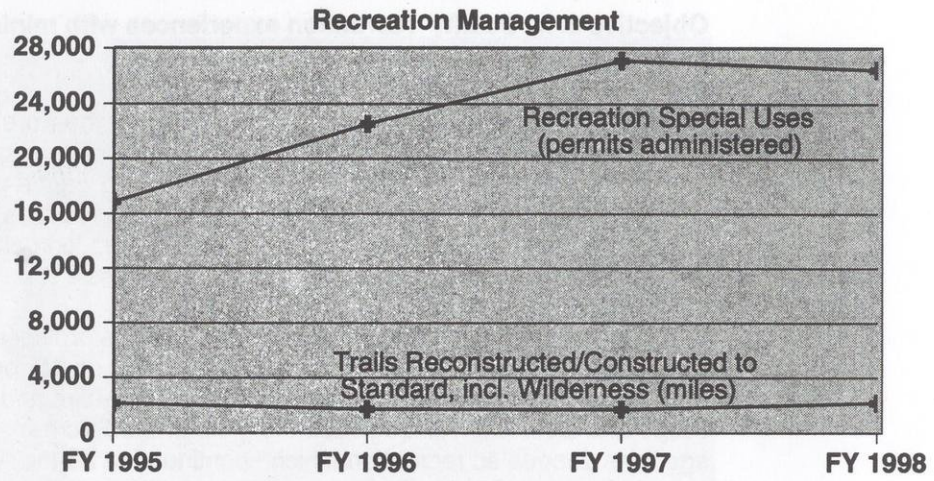
Recreation is one of four emphasis areas in the Natural Resource Agenda, which also highlights recreation benefits and four critical focus areas: settings and experiences, service and satisfaction, community connections, and relationships. In FY 1998, the agency developed *A Strategy for Recreation* that tiered from the Natural Resource Agenda and began to implement the focus area items.

The enjoyment of scenery is central to recreation experiences--people come for the natural settings and quality landscapes found in the NFS. The agency began development of the *Built Environment Image Guide* to further enhancement of settings and experiences and establish a Forest Service brand of recreation.

Through the use of expanded technology, delivery of high-quality service and satisfaction was addressed through implementation of the interagency National Recreation Reservation Service (NRRS). The service featured "one-stop shopping" for more than 20,000 Forest Service and U.S. Army Corps of Engineers recreation facilities and activities at 700 locations nationwide.

The agency began development of sustainable and community-supported tourism opportunities that support natural and cultural resources stewardship. Community connections improved as the agency worked at becoming a better partner through use of customer satisfaction surveys to evaluate Forest Service efforts and the satisfaction realized by communities.

Recreation special uses, including outfitter, guide, and concessionaire operations, add diversity to the Forest Service's recreation program. Activities provided under special use permit are often those that the agency does not otherwise offer. In 1998, the Forest Service enhanced relationships and focused on steering rather than rowing through successful efforts to reengineer and streamline the recreation special uses application process. Eighty percent of program delivery at campgrounds and other recreation facilities was accomplished through private sector concessionaires. The agency administered more than 26,000 recreation special use permits in 1998.



While use at developed recreation sites is increasing, the condition of recreation facilities has continued to decline. During 1998, the agency reviewed and assessed the total backlog of recreation deferred maintenance for developed sites, trails, heritage structures, and water systems. Meaningful measures provided the Forest Service with consistent quality data to determine the 1998 deferred maintenance backlog of $1.7 billion. Reconstruction and repair of this backlog better serves national forest recreation users. Fees generated through the Recreation Fee Demonstration Program helped slow the rate of backlog growth. On NIPF lands, the agency helped to meet demands by helping owners complete stewardship management plans.

Performance Indicators # (Agenda Items in Boldface)	**Performance Baseline, FY's 1995-97 Average**	**FY 1997 Final**	**FY 1998 Final**
NIPF lands under approved Stewardship Management Plans (acres)	109,459	107,199	96,576
Multiresource practices implemented on NIPF lands (acres)	12,056 (FY97 only)	12,056	12,500
Seasonal capacity available (million PAOT-days*)	171.1	193.8	201.0
Annual wilderness & "Leave No Trace" education contacts (total number)	500,000 (FY97 only)	500,000	500,000
Trails reconstructed to standard:			
a) wilderness	367	335	430
b) nonwilderness	1,469	1,339	1,720
Recreation special uses administered (permits)	22,171	27,130	26,459

Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

* PAOT-days are calculated by multiplying site capacity times the number of days per year the site is open to the public.

Volunteers in the Senior, Youth, and Volunteer Programs contributed work valued at $25.2 million on recreation-related projects in FY 1998. This represents 66 percent of the total work contributed by the 98,271 volunteers in the program.

On Forest Service and DOI lands, the "Leave No Trace" program provides users with guidance on respecting nature and how to enjoy recreation and wilderness values while preserving them for future users. This information is consistent across agency boundaries, and meets the Year 2000 National Performance Review goal of "one-stop shopping" to provide better service to the public.

In FY 1998, the WO Recreation, Heritage, and Wilderness Resource Staff conducted three program reviews of the Recreation Fee Demonstration Program in Regions 5, 6, and 9. In Region 5, major findings included the need for more effective communications with recreation users to address low compliance and fee protests. The key Region 6 finding related to the number of fee projects in the Region and the public confusion with so many different fees--a team is now working on better fee coordination. In Region 9, major findings related to employee safety and cash security, and both issues have since been addressed.

Objective 2.2: Protected and restored heritage resources that are available for the education and use of current and future generations.

Heritage resources located on national forest lands provide many benefits to the American people, including key connections to the Nation's historic and prehistoric past. These resources include the physical remains of prehistoric and historic cultures, locations of cultural or religious significance, written records, and oral histories. Public interest in heritage tourism is increasing through public educational experiences and opportunities. Heritage sites have been and will continue to be instrumental in helping researchers and managers answer questions about changes in climate, vegetation, society, and ecosystems over time.

Collaborative efforts have been critical to the success of the Forest Service's Heritage Resource Program. Close coordination with individual State Historic Preservation Offices (SHPO), tribal governments, and the Advisory Council on Historic Preservation will continue to occur at the national forest level.

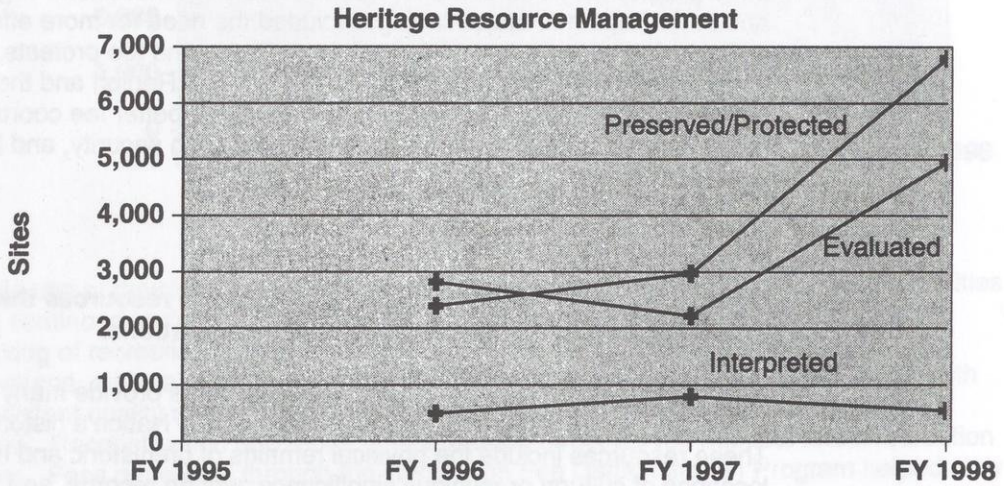
Heritage inventories of NFS lands continued to identify sites for future scientific evaluation, protection, and interpretation efforts.

Performance Indicators #	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
Heritage sites preserved/protected	2,681 (FY96-97)	2,968	6,795
Heritage sites evaluated	2,518 (FY96-97)	2,219	4,945
Heritage sites interpreted	717	793	538

Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

In FY 1998, volunteers contributed 70,000 hours of work in evaluating and interpreting heritage sites. Volunteer programs allow the agency to leverage limited funds and complete important projects. University partnerships and Passport in Time (PIT) volunteer outreach projects continue to build support for the Heritage Resources Program and an awareness of the inherent value of heritage resources.

Designating sites on the *National Register of Historic Places* requires collaboration and coordination between individual SHPO offices, the Forest Service, and the National Park Service. In FY 1998, a total of 887 sites were so designated.



Objective 2.3: Improved urban environments and enhanced community livability through healthy landscapes.

S&PF's Urban and Community Forestry (U&CF) program provides leadership in protecting, managing, and improving urban forest ecosystems for nearly 80 percent of the Nation's population, who live in 45,000 towns and cities. The U&CF program helps local communities recognize the value of their forests, builds capacity to manage community forest resources, and supports community vitality through public involvement, commitment, and action.

The Forest Service, in partnership with State forestry agencies, provides technical and financial assistance to local governments and nonprofit organizations. In doing so, the program is an effective link between an array of governmental and private resources and grassroot organizations to raise and address natural resource related environmental issues at community, county, State, regional, and national levels. Intense public interest in the program is evidenced by the annual participation of approximately 10,000 communities and people from 7,000 volunteer organizations in the program. The number of requests for Federal assistance and grants is eight times greater than the capacity of the existing program.

Performance Indicators # (Agenda Items in Boldface)	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
Participating communities (number)	10,110 (FY97 only)	10,110	9,635
Technical assists to communities (number)	NA	NA	10,325
Training provided (hours)	NA	NA	1,455,000
Volunteer assistance generated (hours)	NA	NA	2,319,000

Sources include Annual Reports of the Forest Service (FY's 1995-97); final PMAS for FY's 1995-98.

Volunteer involvement is helping to accomplish urban forest management projects while expanding public knowledge of agency programs. Private sector support and involvement is another strategy that holds promise for expanding and improving the urban forestry program. In any given community, many organizations need to be contacted to determine their interest in participating or funding urban forestry activities. These education efforts build support for the program, and are directed at community members as well as within the Forest Service and State forestry agencies.

The U&CF program is an integral part of the Administration's Urban Resources Partnership (URP) Initiative. Involving six Federal agencies, State and local governments, and non-profit organizations in the underserved communities of large urban areas, this initiative has allowed the Forest Service to provide funding and technical assistance to urban forest education and restoration efforts in Atlanta, Chicago, New York, Seattle, Denver, East St. Louis, Las Vegas, Los Angeles, Philadelphia, San Francisco, Buffalo, Boston, and South Florida. The Federal Government has invested $9.5 million since 1994, and leveraged an additional $14 million in funding and community labor. Federal and local agencies provided 26,000 hours of technical assistance to 310 projects.

The URP program also provides national leadership in delivering and demonstrating state-of-the-art urban ecological assessments, using GIS and other new technologies. Grants which allow towns and cities to develop their own capacities for protecting and improving their natural environments have recently been awarded to Atlanta, Canton/Akron, Chesapeake Bay (MD/VA), and Puget Sound (WA) communities, Los Angeles, New York City, and the Highlands region of New Jersey and New York.

In FY 1998 one field review was conducted of the URP program. Key recommendations resulting from that review include:

- Improve evaluation and documentation of projects or their components to ensure full compliance with authorities of the funding agencies;
- Improve consistency of matching costs, i.e., the valuation and appropriateness of costs for type of service rendered;
- Eliminate cash advances outstanding beyond the 30-day maximum time limit;
- Improve the project field data and supporting information to enable better decisionmaking;

- Improve project file documentation;
- Guard against situations that could be perceived as conflicts of interest; and
- Provide additional training in program authorities and administration of grants and agreements to URP coordinators and Forest Service/NRCS representatives to local steering committees.

Objective 2.4: Economically healthy and diversified rural communities operating under strategic plans for sustainable development.

Through the Economic Action Programs (EAP's) of S&PF, the Forest Service strengthens rural communities and increases investments in sustainable development. Rural community assistance programs target resource-dependent rural areas experiencing economic problems, enabling them to diversify their economies and enhance their quality of life. The Forest Service helps to bring communities together to develop broad-based local strategic plans and solve resource, economic, and social challenges.

In the past year, the Forest Service provided technical and financial assistance to help more than 2,500 rural communities strengthen, diversify, and expand their local economies, improve transportation networks, and increase access to technology. Examples are summarized in Tables 30-32.

The Forest Service has shared technologies, programs, and funding with the USDA's Natural Resources Conservation Service (NRCS) for many years. Last year both agencies worked with the National Endowment for the Arts to provide rural communities with Forest Service landscape architects to support Resource Conservation Development areas. Landscape architects worked with rural communities on projects ranging from locating bicycle trails to designing recreation sites and improving aesthetic values.

Performance Indicators [#] (Agenda Items in Boldface)	**Performance Baseline, FY's 1995-97 Average**	**FY 1997 Final**	**FY 1998 Final**
Communities working under broad-based local strategic plans (number)	496	538	690
Communities using locally based measurements systems (number)	151 (FY97 only)	151	269
Assistance to tribal & minority communities (number)	150	132	175

[#] Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

In FY 1998, a joint review was conducted of EAP's in Region 9 and the Northeastern Area. The review found that these units are effectively combining financial assistance to help communities and organizations generate positive economic and social outcomes. Several States have demonstrated innovative and effective mechanisms to document project outcomes.

More involvement is needed among groups representing nonconsumptive and nonwood forest products, and rural and urban communities are being encouraged to network more. Coordination between State and Federal natural resource planners and State economic development planners needs to be strengthened. Title VI civil rights compliance and outreach should be improved. Sustainability measures should be linked with criteria and indicators in monitoring EAP outcomes.

Objective 2.5: A sustainable yield of forest products that contributes to meeting the Nation's demands and to restoring, improving, or maintaining forest ecosystem health.

National forests are the primary source of timber from Federal lands. They supplement the role of private lands, and reduce potential fluctuations in the Nation's timber supply. Today, national forest timber sales are designed to incorporate multiple objectives, including insect and disease prevention and control, wildlife habitat management, fuels treatment, and reconstruction or construction of roads needed for long-term access.

Performance Indicators # (Agenda Items in Boldface)	**Performance Baseline, FY's 1995-97 Average**	**FY 1997 Final**	**FY 1998 Final**
NIPF lands under approved Stewardship Management Plans (acres)	656,756	643,191	579,454
Multiresource practices implemented on NIPF lands (acres)	96,445 (FY97 only)	96,445	100,000
Timber volume offered (million cubic feet)	682.1	761.8	645.8
Timber volume sold (million cubic feet)	613.1	790.6	591.6

Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

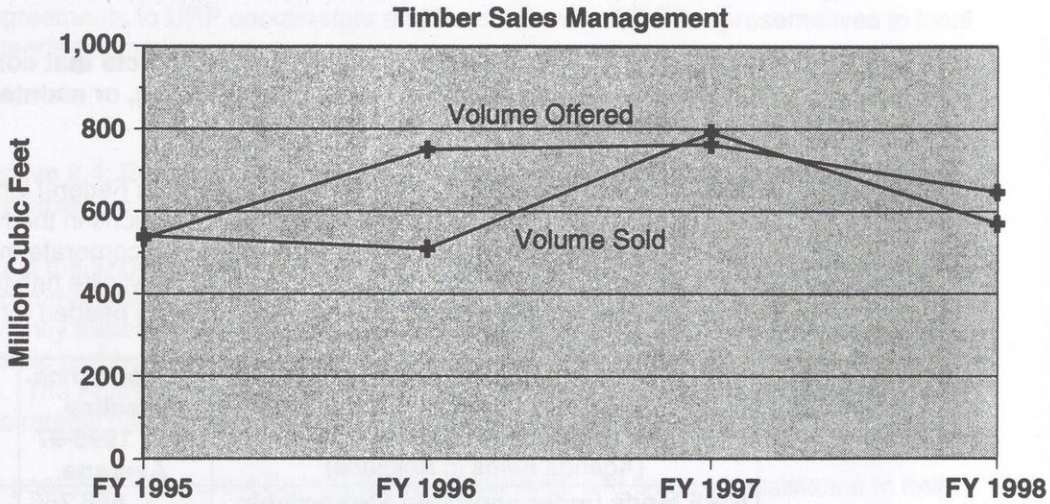
As documented in Tables 33-38 of the Statistical Appendix, the Forestland Management program provides wood for American consumers, jobs and income to local communities, and other tree and special forest products in demand by the public.

The revised and improved *Wood Handbook*, Agricultural Handbook No. 72, has just been published. There have been other revisions since the original handbook was first issued in 1935. This popular handbook provides engineers, architects, and others with properties of wood and how to use wood efficiently in construction.

The demand for softwood sawtimber is projected to grow, and the role of NIPF landowners is expected to increase. Technical and financial assistance to NIPF landowners interested in timber management helps meet national demands for wood products and provides sustained supplies while supporting healthy ecological conditions. Timber management research contributes to local, regional, and national economies and supports improvements in technology and product diversification.

By working with managers of NIPF lands, timber sale layout and design conducted under approved Stewardship Management Plans is more ecologically sound. As NIPF lands provide an increasing percent of the Nation's timber supply, the need to provide proper planning and timely assistance is becoming more crucial.

In California, the Forest Service is participating with DOI agencies, and local community, industry, and environmental organizations in the Quincy Library Group. This coalition has developed a strategy that provides for multiple goods and services on NFS lands, including commercial thinning and fuel reduction. Through these kinds of collaborative efforts, timber harvesting opportunities and resource improvements can be successfully accomplished together.



In FY 1998, the Forest Management Staff conducted four program reviews and one unannounced audit in four regions focusing on timber sale preparation, harvest administration, timber theft prevention, and timber sale appraisals. Key findings included:

- timber accountability audits have not been completed to standard by some field units;
- some timber theft prevention and bid monitoring plans do not meet standards;
- security and accountability of tracer paint does not meet standards by some field units;
- the WO should provide the field with better direction on and training in suspension and debarment; and
- the transaction evidence appraisal system needs to be incorporated into some Regional Appraisal Handbooks.

Action Plans were finalized based upon the specific findings of each of these reviews, and implementation of the recommendations is currently in progress.

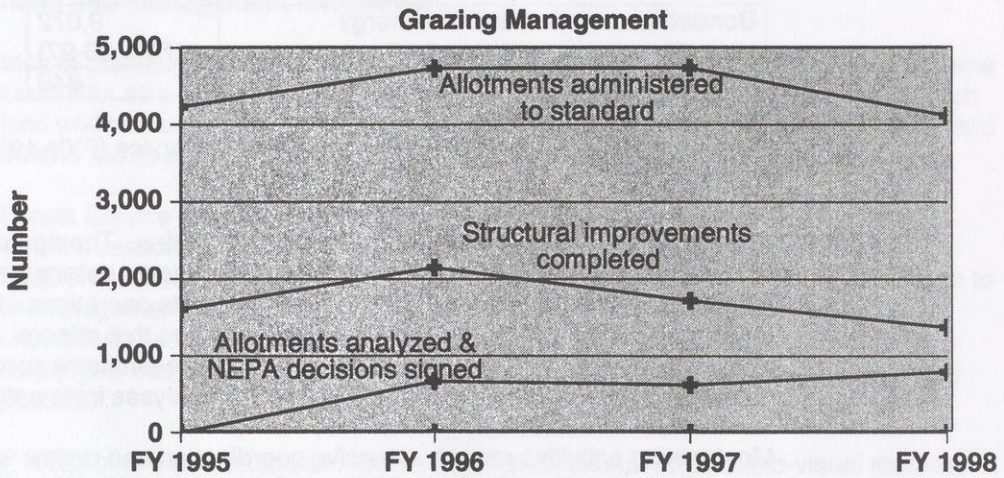
Objective 2.6: A sustainable supply of forage on suitable and capable lands for livestock and wildlife.

Seventy percent of the area within active grazing allotments on NFS land meets or is moving toward land and resource management plan objectives that result in healthy, native populations of wildlife, aquatic, and TES species. A key mechanism in this process is the scheduled NEPA analysis of many allotments leading to strategies, projects, and management guidelines that will improve forage conditions on public lands. Approximately 800 decisions based on these studies were signed in FY 1998.

Performance Indicators # (Agenda Items in Boldface)	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
Grazing allotments analyzed and NEPA decisions signed (number)	643	621	790
Range Structural improvements (number)	1,822	1,718	1,370
Allotments administered to standard (number)	4,564	4,735	4,113

Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

Customer service is an important part of the range management program and it has a direct bearing on the agency's ability to accomplish other performance outputs, such as allotments managed to standard. Levels of grazing use in FY 1998 are displayed in Tables 39-40.



As more energy is directed toward allotment analysis, field personnel presently have less time available to construct new improvements, or to properly administer existing allotments. When these studies are completed and decisions are implemented, the emphasis will shift back to physical range improvements and an increase in the number of allotments administered to standard.

In FY 1998, the Forest Service, FWS, BLM, local agency officials, tribal leaders, and citizens worked with the States of Arizona and New Mexico to develop a natural resource conservation and community development strategy that includes an analysis of grazing issues. Through these efforts, the participants are working to maintain grazing in upland areas while increasing protection for TES species habitat in streamside zones. This collaboration on providing forage while protecting habitat is improving overall sustainability of southwestern rangelands.

In FY 1998, one program review related to this objective was completed in Region 6, focusing on grazing resource management planning and inventory. Results of this review included a plan for accelerating progress toward meeting planned accomplishment goals for signed NEPA decisions. A team approach, including both regional office and forest personnel, was designed to help achieve this.

Objective 2.7: Available mineral resources that comply with environmental and health standards.

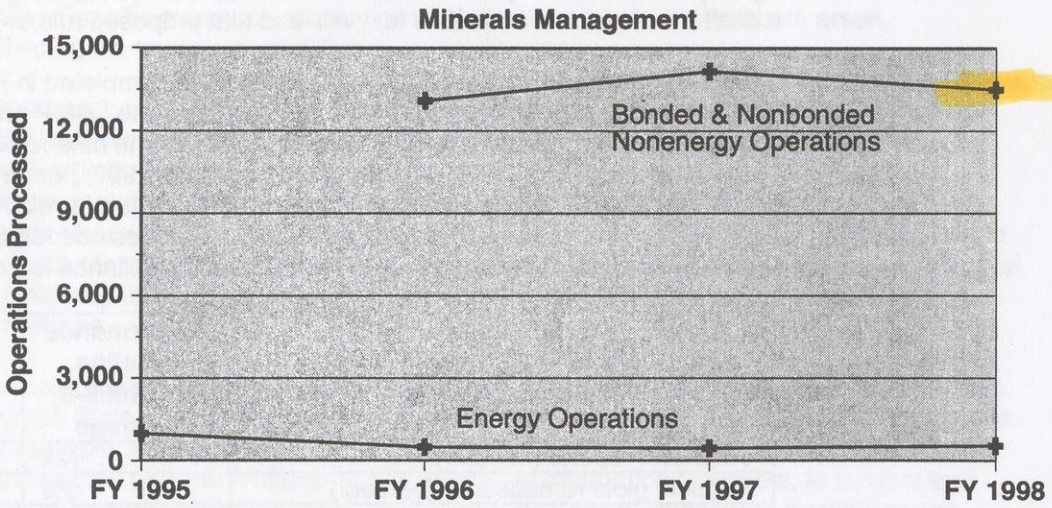
Exploration, development, and production of energy and minerals on NFS lands contribute to economic growth, create jobs in rural communities, and raise revenues for the U.S.Treasury and the States. Related energy production levels are shown in Table 41. The agency is ensuring that minerals activities are conducted in an ecologically acceptable manner by completing NEPA analyses in a timely fashion, monitoring operations, and implementing related research findings.

Performance Indicators #	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
Bonded and nonbonded nonenergy operations processed (number)	9,072 (FY's 96-97)	14,144	13,481
Energy operations processed (number)	646	455	544

Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

The Forest Service role in mineral development varies. The agency prepares site-specific NEPA documents for proposed operations, determines if design or mitigation measures are necessary, and monitors and inspects operations. By processing development proposals on time, the agency ensures that mineral resources are available to meet demand. In recent years, the agency has been more successful at meeting this objective, in part by securing funding for NEPA analyses from potential operators.

Most mining activities require extensive coordination and review with the DOI. For example, on the Thunder Basin National Grassland in Wyoming, the Office of Surface Mining is responsible for managing on-the-ground operations of a coal mine, BLM monitors resource production, and the Minerals Management Service collects royalties. The Forest Service ensures surface protection and monitors the operation to ensure that production is conducted in an ecologically sound manner.



On a national level, several Memoranda of Understanding call for close cooperation, coordination, and sharing resources with the BLM. While not specific to the minerals and geology program, they open the door to helping each other process, administer, and oversee energy and nonenergy developments.

Objective 2.8: Better resource management decisions based on the best available scientific and management information.

The task of planning for the full range of multiple-use management activities has become more complex as a result of increasing demands for a limited resource base. Research and land and resource management planning efforts help agency managers quantify and understand the social and economic trade-offs among various policy options.

The Forest Service research organization provides information about relationships between the resource and natural and human-caused change. Most resource management issues today cut across disciplines. For example, fish habitat issues link to timber management, livestock grazing, and road maintenance issues. Integrating research efforts across disciplines increases the cost-effectiveness of research efforts and helps NFS managers understand issues and solutions from a broader, ecosystem perspective.

In FY 1998, over 1,500 technical reports, brochures, articles, and audio-visual materials were completed to assist in the transfer of research information to a wide variety of end users. Approximately 6 percent of all Forest Inventory and Analysis (FIA) field plots were reinventoried in 1998, moving toward an annual goal of 20 percent within this program that covers all public and private forests in the United States and its territories.

The complexity and data-intensive nature of the existing forest planning process demands substantial time and funding to acquire, analyze, and interpret information. Three land and resource management plan (LRMP) revisions were initiated in FY 1998 based on the need to change existing direction as the basis for plan decisions.

The Secretary of Agriculture's Committee of Scientists, supported by the EMCT and other agency staff, has completed its review of Forest Service planning regulations and issued a draft set of recommendations that will lead to a proposed rule in FY 1999.

Nearly 70 monitoring reports at various scales were completed in FY 1998. Inventory and monitoring provide the information needed to initiate LRMP revisions, leading to an anticipated 23 completions by the year 2000. Five of the nine regions produced a *State of the Region* evaluation report, down from nine in FY1997, primarily due to changes in content requirements and in regional staffing. Since this is a relatively new item, it may take several years for the regions to refine the processes needed to conduct useful evaluations for this type of report. In FY 1999 full compliance is expected.

Performance Indicators #	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
Technical reports (number)	NA	NA	1,526
FIA field plots remeasured (percent)	6%	6%	6%
LRMP revisions, new plans initiated	8	11	3
LRMP revisions completed	NA	5	2
LRMP monitoring and evaluation (reports)	60	92	64
State of the Region evaluations (reports)	NA	9	5

Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

Interagency efforts in 1998 included large-scale assessments such as the Southern Appalachian Assessment. The results of this assessment have been developed and shared by a number of Federal and State agencies, including the Forest Service, National Park Service, Tennessee Valley Authority, and Army Corps of Engineers. Completed over a 2-year span at relatively low cost, the assessment has already provided invaluable support for several agency planning efforts.

Objective 2.9: A safe environment for the public and employees on NFS lands.

Through the Law Enforcement and Investigations program, the agency seeks to reduce criminal activities associated with loss and damage to natural resources and structures, and increase forest patrols to create a safer environment for visitors and employees.

Annual Reporting Items #	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
Incident warning & violation notices (number)	NA	298,280	288,370
Interagency agreements completed (number)	NA	717	693
Projected investigations (number)	NA	1,130	1,853

Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

In FY 1998, the Forest Service continued to work toward reducing criminal activities associated with loss and damage to natural resources and structures below FY 1997 levels. Specific examples of related investigations include: timber theft, arson, archeological resources, and illegal drug cultivation.

Annual performance measures for law enforcement are under development. Several indicators, such as the number of incidents that occurred and the number of investigations conducted, are used to indicate relative levels of activity in law enforcement, but are not appropriate for distribution to the field as targets. Many such measures are complex, and require careful interpretation. For example, while increased numbers of violation notices issued might suggest greater levels of performance, the goal is to actually issue fewer notices in a safer environment characterized by greater public compliance.

Law enforcement issues cut across jurisdictional boundaries. Interagency efforts enable Federal, State, and county law enforcement operations to share resources and expertise. For example, Forest Service law enforcement officers worked closely with Border Patrol agents within national forests, located on or near international borders, to combat and mitigate the natural resource and public safety impacts of illegal drug smuggling and illegal immigration.

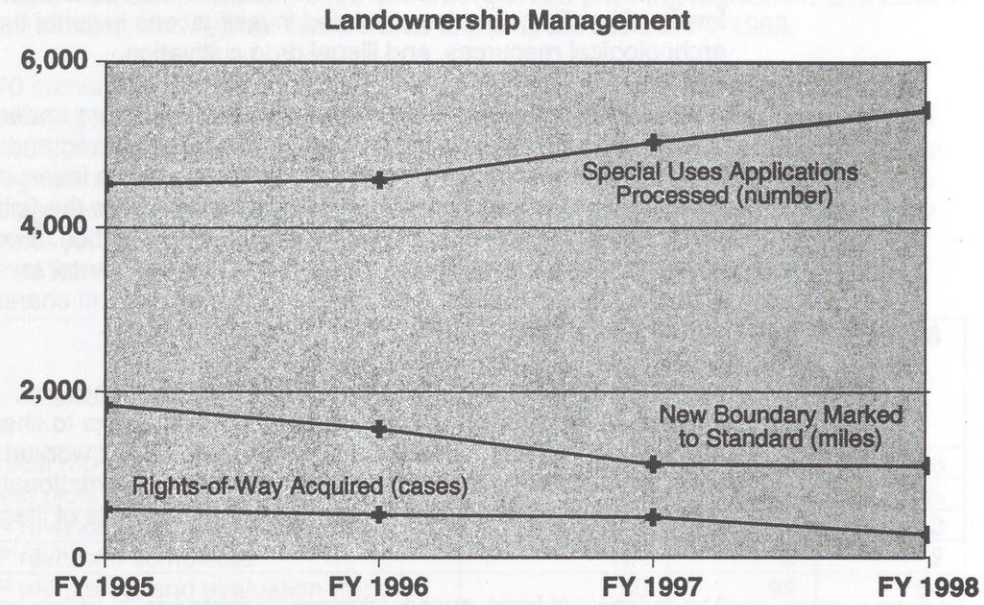
At a more local level, cooperative agreements provided funds to county law enforcement agencies to purchase equipment and perform patrols on NFS land. Detection and eradication of marijuana were conducted to meet the President's goals as identified in the 1998 National Drug Control Strategy.

Objective 2.10: NFS resources and land title are protected through conflict-free and legally defensible boundary lines, administration of special use authorizations, and provision of quality geometronics data for planning and management.

Through the Landownership Management program, the Forest Service surveys, marks, and maintains boundary lines to standard, administers special use authorizations to meet public health and safety standards, responds to applications for new authorizations, and provides geometronics data for planning and management.

Landlines established by legal surveys, which are clearly marked and posted, provide managers with defined boundaries for resource activities and development, while protecting property rights of adjoining landowners. Maintaining secure and clear landline boundaries prevents encroachments, landownership disputes, and timber trespasses. Accomplishments by category and region are shown in Table 42.

The agency is cooperating with BLM and contracting with private sector firms to achieve long-term landline goals. Through an interagency agreement, the Forest Service participates in the FS-BLM 9800 Fund Transfer Program to share and/or transfer the costs of surveying, marking, and posting boundary lines. This program ensures that public land boundaries are marked consistently, are marked only once, and that people needed to complete the job at either agency are available. In FY 1998, reimbursements totaled about $1.4 million.



Special use authorizations, including communication sites, public and private roads, hydropower license renewals, and energy related transmission rights-of-way, are all a part of the goods and services provided from NFS lands. Over 6,000 applications are submitted annually, and the total number processed in a timely fashion in FY 1998 continued to increase over prior years. These permits also provide support to other Federal, State, and local agencies in fulfilling their missions.

Performance Indicators #	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
New boundary marked to standard (miles)	1,500	1,119	1,100
Rights-of-way acquired (cases)	526	484	277
Special uses applications processed	4,711	5,033	5,421
Special uses permits administered to standard	20,193	20,996	14,926
Hydropower license renewals	NA	NA	89
Revised Primary Base Series quads maintained to standard (number)	NA	645	653
Revised Secondary Base Series quads maintained to standard (number)	NA	32	23

Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

The types and numbers of permits and stages or levels at which a permit would be considered complete or fully administered for a given category are under review. As a result, these accomplishments will be measured and reported within a standardized and automated system by FY 2001.

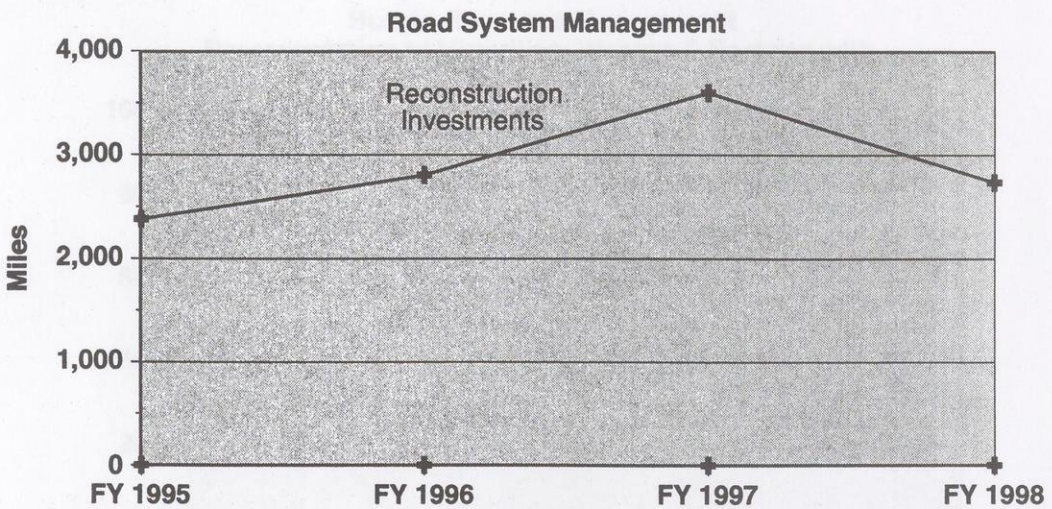
The number of rights-of-way acquisition cases continued to decline in FY 1998 for two main reasons. First, current levels of forest management activities that often require road access rights-of-way have declined over the past 2 years. Second, some regions have increased their acquisition of temporary rights-of-way in lieu of perpetual multiple-use access.

Objective 2.11: An efficient and effective infrastructure that supports public and administrative uses of NFS lands.

Forest Service facilities are maintained to provide for a healthy and safe work environment, and to meet legal and safety requirements. This results in higher employee productivity, improved public image, and better customer service through better access. Adequate facilities and equipment also increase productivity in environmental resource development and use. At the same time, roads and facilities that are maintained to an acceptable standard help conserve resources and protect ecosystems by mitigating adverse environmental impacts.

Performance Indicators # (Agenda Items in Boldface)	**Performance Baseline, FY's 1995-97 Average**	**FY 1997 Final**	**FY 1998 Final**
System roads maintained to standard (% of total)	18%	16%	16%
Investments in existing roads (miles)	2,924	3,594	2,732
Bridges inspected as scheduled (%)	95%	95%	90%
Dams inspected as scheduled (%)	85%	85%	85%

Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98. See Tables 42-45 in the Statistical Appendix for more detail.



Half of all Forest Service-owned facilities are at least 30 years old, and more than one-third of them are over 50 years old. These aging facilities are now beginning to deteriorate rapidly. The triage approach to infrastructure maintenance and repair required by recent annual appropriations cannot keep up with overall needs. To keep these facilities safe and accessible, the agency is exploring private funding, concessionaire operations, public/private ventures, and matching grants through programs such as the Transportation Equity Act for the 21st Century (T21) to supplement regular agency appropriations.

Sharing facilities with other Federal agencies is helping to address facility maintenance and repair needs. In Colorado, the Forest Service and BLM share visitor centers and administrative offices, which saves money and supports one-stop shopping for customers who need services from both agencies. Similarly, the Forest Service and other USDA agencies share office space to reduce the cost of rent, utilities, and maintenance.

Goal 3: Ensure Organizational Effectiveness

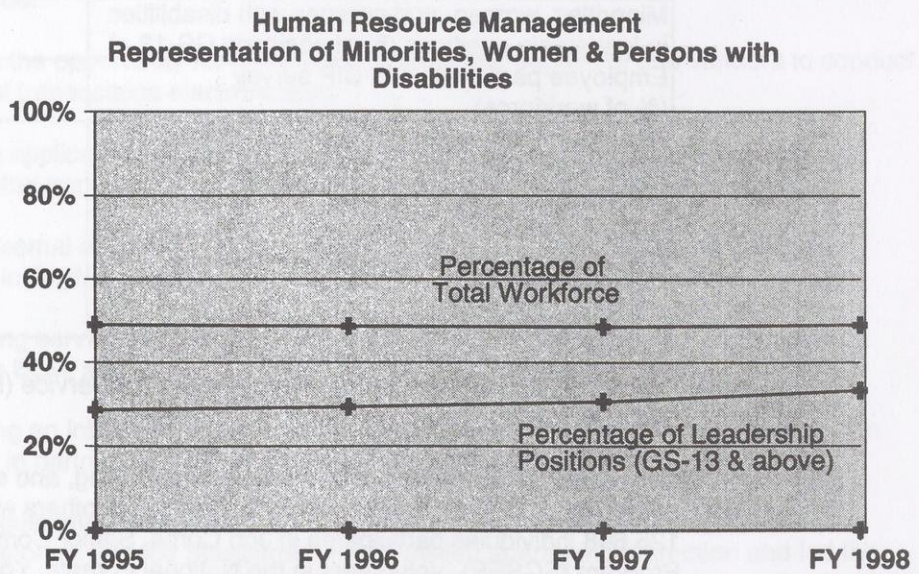
The need to have an effective and efficient administrative organization is widely recognized. In response to public demand for more efficient and effective governmental operations, Congress has taken steps to increase accountability for performance throughout the Federal Government. The President's National Performance Review directs agencies to review their business processes and find ways to become more efficient. The Forest Service reinvention study identified a number of activities that could be improved through reengineering.

To address these concerns, in FY 1998 the Forest Service initiated *Project Ponderosa* to focus attention, energy, and resources on improving the manner in which the agency conducts its business operations. The following management initiatives outline in more detail the agency's progress in these areas.

[Note: These overarching concerns are expressed as Management Initiative 3.5 in the GPRA Strategic Plan and Annual Performance Plans. Since those plans do not identify specific indicators or outputs for that initiative, in this report it is treated as an organizing theme or principle.]

Management Initiative 3.1: An innovative, people-oriented work environment and workforce that is representative of society as a whole and that services all customers equally.

A key component of an effective organization is a workforce that is representative of the agency's customers and American public. The Forest Service report *Toward a Multicultural Organization (1991)* set the course to meeting these challenges. Goals and strategies were identified to allow the Forest Service to attract, retain, and provide career opportunities for employees of various ethnic, cultural, and religious backgrounds, as well as those with disabilities (see Tables 46-50).



As a result of USDA customer and employee concerns, the Secretary of Agriculture established a Civil Rights Action Team in 1997 to develop recommendations for improved employee and customer relations and program delivery throughout the Department. The Secretary accepted those recommendations, and many of them have been implemented within the Forest Service and/or Department-wide. For example, in FY 1998 the Forest Service established a team to resolve employee complaints dealing with civil rights issues. Improvements will be measured using indicators identified in the USDA Civil Rights Action Team report. Work to implement the remaining recommendations is ongoing.

The agency monitors employee satisfaction through the Continuous Improvement Process (CIP) questionnaire. The survey covers communication, human resource management, job satisfaction, organizational management, service and quality, and supervision. By establishing a baseline, identifying areas needing improvement, and setting and achieving goals, an improved work environment is expected to increase employee productivity.

In 1998, Human Resource Management (HRM) conducted program reviews in Region 2 and Region 6. It was found that streamlining activities, efforts related to increasing opportunities for persons with disabilities, and LMR Partnerships are very strong. There are concerns about heavy workloads in HRM, and lack of strategic direction in the delivery of HR services. A national evaluation of service delivery and quality of current services is now underway, and a Service-wide workforce plan is being initiated.

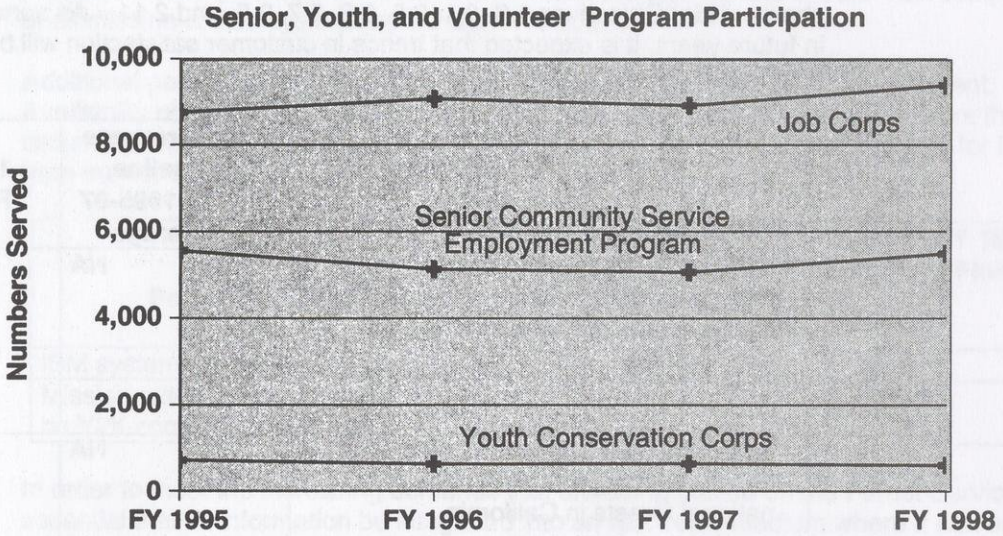
Much progress has been made and efforts continue today as shown in the accompanying table and graph. Building skills and cultural awareness for working with low-income, minority, historically underserved communities and tribal governments is also an area that continues to be emphasized.

Performance Indicators #	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
Minorities, women, and persons with disabilities in the workforce (% of total)	48.7%	48.5%	48.9%
Minorities, women, and persons with disabilities in leadership positions (% of positions GS-13 +)	30.2%	30.6%	33.2%
Employee participation in CIP survey (% of workforce)	58%	58%	65%
Participants in Senior, Youth, and Volunteer programs (number)			
Youth Conservation Corps	656	632	594
Job Corps	8,903	8,903	9,373
Senior Community Service Employment	5,246	5,055	5,484
Hosted	9,226	7,793	11,976
Volunteers in National Forests	91,609	112,384	98,271

Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FYs 1995-98.

The agency is committed to providing work, training, and educational opportunities to the unemployed, underemployed, elderly, youth, and others with special needs. In FY 1998, 125,698 individuals participated in Job Corps, Senior Community Service Employment Program (SCSEP), Volunteers in the National Forests, Youth Conservation Corps (YCC),

and the Hosted Program. Together, these Senior, Youth, and Volunteer Programs (SYVP) accomplished high-priority conservation work valued at over $109 million in support of the Forest Service mission.



Management Initiative 3.2: All customers receive better service.

Providing good customer service is a critical component of the Forest Service mission. As a High Impact Agency, this management initiative provides a means of addressing aspects of the five customer service goals identified in the National Performance Review. These include:

1) offering the opportunity for customers, contractors, suppliers, and vendors to conduct financial transactions electronically;

2) offering applicants and permittees toll-free telephone, World Wide Web, and automated applications for many special use permits;

3) using internal enterprise teams to improve management efficiency of the national forests in California;

4) improving service to public land users through "one-stop shopping" in conjunction with the BLM; and

5) providing an integrated, nationwide outdoor recreation information and reservation system in partnership with BLM and the National Park Service.

An agency customer service team created in response to Executive Order 12862, "Setting Customer Service Standards," has provided agencywide direction and led the effort in measuring customer satisfaction. In FY's 1996-97, the customer service team administered nine different customer satisfaction surveys to external customers of the agency. The surveys covered NFS, R&D, and S&PF, and were administered to a

random sample of customers from selected forests, all research stations, and the Forest Service Northeastern Area. They covered recreation, timber sale contracts, range permits, and other programs.

In FY 1998, each office began using the results to develop the improvements identified by their customers. The results of some of the surveys conducted in FY 1997-98 are shown under Objectives 1.6, 2.1, 2.5, 2.6, 2.7, 2.8, and 2.11. As surveys are completed in future years, it is expected that trends in customer satisfaction will be displayed under each appropriate objective.

Performance Indicators	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
Offer to all customers, contractors, suppliers and vendors the opportunity to conduct electronic financial transactions.	NA	NA	Some reference materials available.
Establish internal enterprise teams to improve management efficiency of national forests in California.	NA	NA	Several pilot teams now in place.
Offer toll-free telephone, World Wide Web, and automated applications to all permittees and applicants of most frequently requested special use permits.	NA	NA	Joint FS and BLM web page in place.
Improve service to public land users by providing one-stop shopping for information, permits, and other frequently requested over-the-counter products and services at BLM and Forest Service facilities.	NA	NA	"Service first" agreement signed by FS Chief and BLM Director.
Provide an integrated nationwide outdoor recreation information system that gives all Americans quick and easy access to the BLM, National Park Service, and Forest Service, including recreation use permits and reservations.	NA	NA	System in place, goal achieved.
Customer satisfaction surveys completed (number)	9	9	5

Management Initiative 3.3: Integrated information systems, data structures, and information management processes in place to support the agency's mission.

At the end of FY 1998, approximately 70 percent of the agency's employees were IBM system users. Progress was accelerating on redesigning the agency's information processes and applications to meet the needs of the agency and ensure Y2K compliance of all mission critical systems by January 1, 2000.

Additional performance indicators are being considered or are under development. Availability of data, consistency of definitions, and utility for managers are factors that will determine whether indicators are used in annual performance measurement or for longer term monitoring.

Performance Indicators	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
IBM system users (% of employees)	33%	33%	70%
Mission critical systems tested and found to be Y2K compliant (% of total)	10%	10%	30%

In order to meet the increasing demands that are being placed on the Forest Service, it is essential that all information be integrated into an electronic medium where it can be readily accessed and easily shared. The IBM system provides not only administrative applications, but also a Geographic Information System (GIS) capability, which will allow greater and quicker manipulation of resource information crucial to decisionmaking. It will also provide better communications between the Forest Service and others, thus facilitating the representation and integration of varying views into agency decisionmaking.

In FY 1998, two program reviews related to Management Initiative 3.3 were scheduled for three regions. Two reviews were actually conducted, with the following findings:

- Good progress was being made in the regions on converting from the legacy Data General computer equipment to the replacement IBM computer platform.
- Good progress was being made in the regions on assessing Y2K problems of regional software applications and in accomplishing the redesign and repair work needed to resolve those problems.
- Improvement was needed in providing employees with training on the new IBM environment.
- Improvement was needed to cut regional software distribution cycle times by 50 percent.
- Improvement was needed to develop a more detailed strategy for upgrading aging parts of the regional telecommunications networks.
- Improvement was needed in coordinating wide-area planning for GIS efforts.
- Improvement was needed at the local (forest and district) levels in assessing the Y2K problems of local applications and repairing same.

Management Initiative 3.4: A sound financial system that supports resource decisions with timely, accurate information and financial expertise.

In July 1996, the USDA Inspector General issued an adverse opinion criticizing systems, operations, and skills used by the Forest Service in financial management. The audit identified seven areas of deficiency: 1) property, plant, and equipment, 2) accounts receivable, 3) net position - equity of the U.S. Government accounts, 4) reimbursements, 5) revenues from the sale of goods and services, 6) program and operating expenses, and 7) depreciation and amortization expense. The agency is committed to working with the USDA Office of the Chief Financial Officer, Office of Inspector General (OIG), and the General Accounting Office to remedy these deficiencies with a goal of having an unqualified opinion on the 2000 financial audit report (to be issued in March 2001).

Several teams commissioned by the Forest Service Chief Operating Officer have taken the first steps to address the USDA Inspector General's concerns. Efforts are underway to find ways to improve and simplify the budget structure, reduce the number of management and work activity codes, develop useful and accurate financial reports for managers, and identify related staffing needs. Ongoing efforts to develop improved financial systems and processes (i.e., the Foundation Financial Information System - FFIS) will facilitate cost-revenue comparisons and further enhance the capability of Forest Service managers to make sound resource decisions under all objectives.

A significant achievement in FY 1998 was the establishment of the agency's Chief Financial Officer position, and filling it with an experienced administrator. Reorganization of the Program Development and Budget and Financial Management staff areas under this new Deputy Chief was also accomplished.

In FY 1998, the agency continued to implement financial systems that support fiscal accountability; that are integrated across USDA; and that facilitate comparisons of costs, revenues and accomplishments. Tables 51-56 summarize data available at this time. In the past year, the Forest Service also sought to respond to OIG audits in a timely manner and collected external debts using the tools provided in the Debt Collection Improvement Act of 1996. Several performance measures are under development for this objective and are outlined below.

Performance Indicators	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
FFIS implemented	NA	NA	3 pilot units
Real Property Inventory completed	NA	NA	No
Financial management reports developed showing obligations, direct/indirect costs and performance indicator costs	NA	NA	No
Unqualified audit opinion (Yes/No)	No	No	No
Audit items from the Secretary's Management Report eliminated	No	No	No

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Table 1--National Forest System lands administered by the Forest Service as of September 30, 1998

State, Commonwealth, or Territory	National forests, purchase units, research areas, and other areas	National grasslands	Land utilization projects	Total	National Wilderness Preservation System 1/
		Acres			*Acres*
Alabama	664,947	0	40	664,987	32,167
Alaska	21,974,039	0	0	21,974,039	5,752,541
Arizona	11,255,004	0	0	11,255,004	1,345,008
Arkansas	2,579,315	0	0	2,579,315	116,578
California	20,634,497	18,425	0	20,652,922	4,432,634
Colorado	13,880,773	628,380	0	14,509,153	3,147,860
Connecticut	24	0	0	24	0
Florida	1,147,224	0	0	1,147,224	74,495
Georgia	865,080	0	0	865,080	114,537
Hawaii	1	0	0	1	0
Idaho	20,411,354	47,756	0	20,459,110	3,961,578
Illinois	292,576	0	0	292,576	25,638
Indiana	196,098	0	0	196,098	12,945
Kansas	0	108,175	0	108,175	0
Kentucky	693,180	0	0	693,180	16,779
Louisiana	604,210	0	0	604,210	8,679
Maine	53,040	0	0	53,040	12,000
Michigan	2,856,807	0	2	2,856,809	91,891
Minnesota	2,837,591	0	0	2,837,591	809,772
Mississippi	1,158,716	0	0	1,158,716	6,046
Missouri	1,495,156	0	0	1,495,156	63,198
Montana	16,886,017	0	0	16,886,017	3,372,503
Nebraska	257,612	94,480	0	352,092	7,794
Nevada	5,826,255	0	0	5,826,255	787,085
New Hampshire	727,251	0	0	727,251	102,932
New Mexico	9,189,983	136,417	240	9,326,640	1,388,262
New York	16,164	0	0	16,164	0
North Carolina	1,243,823	0	0	1,243,823	102,634
North Dakota	743	1,105,009	0	1,105,752	0
Ohio	228,585	0	0	228,585	0
Oklahoma	350,502	46,286	0	396,788	14,543
Oregon	15,543,284	112,347	856	15,656,487	2,073,244
Pennsylvania	513,361	0	0	513,361	8,938
Puerto Rico	27,831	0	0	27,831	0
South Carolina	613,025	0	0	613,025	16,671
South Dakota	1,145,120	867,155	0	2,012,275	9,826
Tennessee	634,466	0	0	634,466	66,349
Texas	637,399	117,620	0	755,019	38,483
Utah	8,111,041	0	0	8,111,041	773,818
Vermont	368,426	0	0	368,426	59,421
Virgin Islands	147	0	0	147	0
Virginia	1,658,769	0	0	1,658,769	87,064
Washington	9,200,938	0	738	9,201,676	2,571,609
West Virginia	1,032,695	0	0	1,032,695	80,852
Wisconsin	1,521,170	0	0	1,521,170	42,294
Wyoming	8,688,410	549,157	0	9,237,567	3,111,232
Total	188,022,649	3,831,207	1,876	191,855,732	34,739,900

1/ Includes all changes to the Wilderness Preservation System through the 106th Congress.

Table 2--Research accomplishments--fiscal years 1995-98

Research subject area 2/	Research Accomplishments 1/ 1998	1997	1996	1995
Vegetation Management & Protection Research				
Fundamental Plant Science	281	270		
Silvicultural Applications	214	206		
Quantitative Analysis	76	73		
Forest & Rangeland Management	120	115		
Forest Operations Engineering	61	59		
Insects/Diseases/Exotic Weeds	290	279		
Fire Science	116	112		
Subtotal 3/	1,158	1,114	1,289	1,408
Wildlife, Fish, Water & Atmospheric Sciences Research				
Terrestrial Wildlife Habitat	292	281		
Aquatic Habitat	113	109		
Watershed	263	253		
Atmospheric Sciences	86	83		
Subtotal 3/	754	726	741	768
Resource Valuation and Use Research				
Economics	117	113		
Urban Forestry	38	37		
Wilderness	17	16		
Social/Cultural	150	144		
Forest Product Utilization & Processing	249	240		
Forest Product Safety/Human Health	112	108		
Subtotal 3/	683	658	705	651
Inventory & Monitoring				
Forest Inventory & Analysis	81	78		
Forest Health Monitoring	23	22		
Monitoring Methods/Applications	19	18		
Subtotal 3/	123	118	212	138
General			58	56
Grand total	2,718	2,616	3,005	3,021

1/ Research accomplishments include: books, papers in series, journal articles, proceedings, general technical reports, special reports, patents, videos, computer programs, dissertations and theses, and other similar accomplishments.

2/ Research subject area categories reflect the Research Budget and Attainment Information System, established in FY 1997.

3/ Subtotals for 1995-96 have been adjusted, as needed, to correspond with Research Budget and Attainment Information System work activities.

Table 3--Forest Research funding--fiscal years 1994-98

	1998	1997	1996	1995	1994
			1,000 dollars actual		
Appropriated accounts					
Forest protection research					41,089
Resource analysis research					35,932
Forest management research					40,887
Forest environment research					41,978
Forest products and harvesting research					25,697
Ecosystem research					7,500
Research foundation program 1/				111,376	
Forest resources and management research 1/				74,178	
Ecosystem reserach 1/				7955	
Forest and Rangeland Research 2/	187,944	179,781	177,854		
Subtotal	187,944	179,781	177,854	193,509	193,083
Transfer from timber salvage sales 3/	0	0	0	0	1,963
Research construction (subtotal)	2,560	2,000	2,000	4,316	4,910
Total appropriated accounts	190,504	181,781	179,854	197,825	199,956
Reimbursable accounts (subtotal)	16,290	10,993	14,898		19,578
Grand Total	206,794	192,774	194,752	197,825	219,534

1/ In FY 1995, the budget structure was revised from six major budget line items to three. The three budget line items for for FY 1995 overlap those used the previous years.
2/ In FY 1996, the budget structure was revised from three BLI's to one.
3/ FY 1994 transfer from timber salvage sale funds to cover cost of Voluntary Separation Incentive (Buyout).

Table 4--Extramural research funded through Forest Service Research appropriations--fiscal years 1997-98

Type of recipient	1998		1997	
	1,000 dollars	*Number of grants*	*1,000 dollars*	*Number of grants*
Domestic grantees				
Universities and colleges:				
Land Grant research institutions	7,595	270	15,360	512
1890 Land Grant and predominately black institutions	498	10	558	10
Other non-Land Grant institutions	7,654	212	1,375	71
Subtotal, universities and colleges	15,747	492	17,293	593
Other domestic				
Profit organizations	11	1	10	2
Nonprofit institutions and organizations	1,571	60	1,591	55
Federal, State, and local governments	254	8	825	34
Private individuals	27	4	72	10
Small business innovation research	0	0	0	0
Industrial firms	0	0	0	0
Subtotal, other domestic	1,863	73	2,498	101
Total, domestic	17,610	565	19,791	694
Foreign grantees				
Universities and colleges	0	0	0	0
Profit & nonprofit institutions and organizations	74	8	79	7
Private individuals	11	2	6	2
Total, foreign grantees	85	10	85	9
Grand total	17,695	575	19,876	703

Table 5--Summary of State and Private Forestry accomplishments--fiscal years 1997-98

	Unit of measure 1/	1998 Actual	1998 Funded	Percent of 1998 Actual to 1998 Funded	1997 Actual	Percent of 1997 Actual to 1998 Actual
Appropriated accounts						
Forest pest management 2/						
Insect and disease management surveys	MM acres	788.0	657.0	119.9	772.0	98.0
Insect and disease suppression	MM acres	0.8	0.8	100.0	1.5	187.5
Insect and disease special projects	Projects	36.0			32.0	88.9
Forest Management and utilization						
Forest resource management						
Forest land management plans	MM acres	1.9			2.1	110.5
Timber harvested	MM cubic feet	128.7			514.0	399.4
Reforestation 3/	M acres	1,143.7			867.0	75.8
Timber stand improvement 4/	M acres	265.4			220.0	82.9
Woodland owners assisted	M owners	146.7			187.0	127.5
Wood utilization	MM cubic feet					
Seedling, nursery, and tree improvement	MM seedlings	396.5			50.0	12.6
Urban forestry asssistance 5/	No. of assists	10,325.0				
Transfer accounts						
Rural community fire protection, FmHA	M approved applications					
Watershed and flood prevention, NRCS	Projects	16.0			21.0	131.3
Watershed surveys and planning, NRCS 6/	Plans				16.0	
Resource conservation and development, NRCS	Projects	196.0			258.0	131.6
Forestry Incentives Program, ASCS						
Reforestation	M acres	81.6			106.0	129.9
Timber stand improvement	M acres	18.3			22.0	120.2
Environmental Quality Incentives Program (EQIP) 7/						
Reforestation	M acres				145.0	
Timber stand improvement	M acres				9.0	

1/ M=thousand, MM=million.
2/ Includes accomplishments on National Forest System and other Federal lands, as well as State and private lands.
3/ Includes Conservation Reserve Program, Forestry Incentives Program, and Agricultural Conservation Program accomplishments.
4/ Includes Forestry Incentives Program and Agricultural Conservation Program accomplishments.
5/ Areas represent more than one assistance per community; e.g., New York, Philadelphia, etc.
6/ Data is no longer collected. These measures will be dropped.
7/ Formerly Agricultural Conservation Program, ASCS

Table 6--State and Private Forestry funding--fiscal years 1994-98

	1998	1997	1996	1995	1994
			1,000 dollars actual		
Appropriated accounts					
Forest pest management	53,490	48,165	32,971	34,902	38,541
Fire protection	20,152	18,001	17,001	13,689	17,148
Forest management and utilization	87,595	89,295	86,861	105,587	93,218
Special projects		0	0	0	19,200
Subtotal	161,237	155,461	136,833	154,178	168,107
Transfer accounts					
Rural community fire protection	2,000	1,285	2,000	3,400	3,500
Watershed and flood prevention	27	267	139	500	2,020
Watershed planning	491	270	107 1/	230	303
Watershed operations	81	218	173 1/	151	410
Emergency watershed protection	3,392	1,989	0 1/	0	0
Resource conservation and development	332	542	494	594	555
River basin surveys and investigations	0	0	345 1/	570	830
Forestry Incentives Program 2/	632	631	633	662	1,169
Agricultural Conservation Program 2/	0	0	750	1,000	1,824
Pesticide assessment	360	355	361 1/	360	190
Subtotal	7,315	5,557	5,002	7,467	10,801 3/
Total	168,552	161,018	141,835	161,645	178,908 3/

1/ The numbers originally published in 1996 were estimates. They have been changed to reflect actual amounts.

2/ Includes only technical assistance allocated for the Forestry Incentives and Agricultural Conservation Programs (administered jointly by FSA and FS).

3/ Totals appear different than those published in the FY 1996 Report of the Forest Service due to a formula error.

Table 7--Summary of National Forest System accomplishments compared to funded output levels and 5-year average--fiscal year 1998

Resource area	Activity	Units 1/	1998 Funded	1998 Actual 2/	1998 Actual to Funded	1997 Actual 2/	1997 Actual to 1998 Actual	1994-98 average accomp.
Recreation	Visitor use	MM RVD's 3/			NA			203.3
		MM visits 3/			NA			171.9
Wilderness	Management	MM acres	179.2	167.2	93.3	34.7	20.8	61.2
Wildlife & fish	Habitat restored/enhanced							
	Appropriated funds	Structures	0.0	5,542.5	NA	6,351.0	114.6	8,241.7
	K-V funds 4/	Structures	0.0	17,955.0	NA	32,954.0	183.5	23,627.1
	Strm habitat restored/enhanced 5/							
	Appropriated funds	Miles	1,783.9	1,843.0	103.3	2,006.0	108.8	1,437.2
	K-V funds	Miles	0.0	344.0	NA	729.0	211.9	312.4
Range	Forage improvement							
	Appropriated funds	M acres	30.1	23.8	79.1	36.9	155.0	41.7
	K-V funds	M acres	0.0	8.6	NA	12.5	145.3	9.0
	Forage Improvement							
	Appropriated funds	Structures	960.0	1,369.8	142.7	1,718.0	125.4	1,845.7
	K-V funds	Structures	0.0	169.5	NA	328.0	193.5	291.1
Forest Management	Sales offering	B bd. ft.	0.0	3.4	NA	4.0	117.6	3.8
	Reforestation 6/							
	Appropriated funds	M acres	100.4	117.3	116.8	128.1	109.2	131.5
	K-V funds	M acres	160.7	170.6	106.2	193.4	113.4	226.3
	Timber stand improvement							
	Appropriated funds	M acres	151.7	167.8	110.6	118.9	70.9	137.9
	K-V funds	M acres	136.2	129.0	94.7	139.0	107.8	132.1
Soil & water	Resource improvements							
	Appropriated funds	M acres	27.3	38.5	141.0	46.1	119.7	34.1
	K-V funds	M acres	0.0	18.2	NA	17.5	96.2	13.1
Minerals	Bonded nonenergy ops. 5/	Ops. processed	0.0	803.0	NA	961.0	119.7	6,483.3
	Energy operations 5/	Ops. processed	0.0	544.0	NA	455.0	83.6	496.6

See footnotes at end of table.

Table 7--Summary of National Forest System accomplishments compared to funded output levels and 5-year average--fiscal year 1998--Continued

Resource area	Activity	Units 1/	1998 Funded	1998 Actual 2/	1998 Actual to Funded	1997 Actual 2/	1997 Actual to 1998 Actual	1994-98 average accomp.
Support	Trail construction/reconstruction	Miles	0.0	2,149.5	NA	1,673.7	77.9	1,954.4
	Road construction							
	Appropriated funds							
	Construction	Miles	0.0	11.2	NA	8.2	73.2	17.0
	Reconstruction	Miles	2,959.8	336.7	11.4	384.3	114.1	409.2
	Purchaser credit							
	Construction 7/	Miles	0.0	203.4	NA	391.6	192.5	396.1
	Reconstruction 7/	Miles	0.0	2,395.4	NA	3,209.6	134.0	2,293.1
	Fuels management							
	Appropriated funds	M acres	1,249.2	1,455.5	116.5	887.1	60.9	773.6
	Brush disposal funds	M acres	109.8	115.5	105.2	131.3	113.7	161.8
	Land acquired							
	Purchase and donation	M acres	20.1	97.0	482.6	103.0	106.2	83.3
	Exchanges	M acres	94.3	80.3	85.2	244.2	304.1	112.9
	Landline location	Miles	0.0	989.5	NA	1,117.0	112.9	1,614.3

1/ M = thousand, MM = million, B = billion, RVD = recreation visitor day.
2/ Does not include accomplishments from contributed funding sources.
3/ Data not available for FY 1997 or 1998.
4/ K-V = Knutson Vandenberg Act.
5/ New indicator in FY 1995. Average is based on 4 years of accomplishments.
6/ Includes natural regeneration without site preparation.
7/ Includes miles turned back to the Forest Service for construction or reconstruction (purchaser election program).

Table 8--National Forest System funding--fiscal years 1994-98

	1998	1997	1996	1995	1994
			1,000 dollars actual		
Ecosystem planning, inventory, and monitoring 1/		130,088	130,088	149,732	
Land Management Planning	36,174				
Inventory and Monitoring	91,931				
Minerals and geology management	36,000	35,767	35,017	38,932	33,017
Real estate management	47,014	43,047	43,047	45,621	34,880
Landline location	14,973	14,006	14,006	15,945	28,783
Maintenance of facilities	24,244	23,008	23,008	26,304	26,476
Law enforcement operations	63,967	59,637	59,637	63,516	55,130
Forest road maintenance	84,974	81,019	81,019	83,784	79,180
Timber sales management	208,848	196,000	188,641	108,555	184,606
Forestland vegetation management 2/	95,732	86,168	82,138 3/	84,907	62,339
Recreation use	218,260	211,151	211,151	220,136	224,522
Wildlife and fish habitat management	96,768	85,811	85,561	93,182	121,130
Rangeland management	45,314	38,012	27,012	18,473	44,127
Soil, water, and air management	51,196	42,114	42,014	48,282	77,984
Storm Supplemental	10,461				
Subtotal	1,125,856	1,045,828	1,022,339 4/	997,369 4/	972,174
General Administration (subtotal)	261,888	259,353	263,698	296,982	298,174
Preparedness and fire use	319,167	319,315	295,315	160,010	190,108
Suppression operations	265,392	510,701	90,170	225,628	190,222
Emergency contingency	0	0	100,000		
Storm Supplemental	2,000				
Subtotal	586,559	830,016	485,485	385,638	380,330
Youth Conservation Corps (subtotal) 5/	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)
Construction					
Construction of facilities 6/	47,919	59,974	46,029	61,588	94,437
Forest road and trail construction 7/	115,359	115,000	114,951	98,185	97,345
Forest trail construction	0	0		32,448	32,310
Emergency supplemental	0	32,895	60,800		
Forest roads purchaser construction 8/	(38,974)	(36,854)	(41,291)	(50,000)	(60,000)
Transfer to salvage	0	0	0	0	0
Watershed restoration	0	0	0	0	20,000
Subtotal	163,278	207,869	221,780	192,221	244,092

See footnotes at end of table.

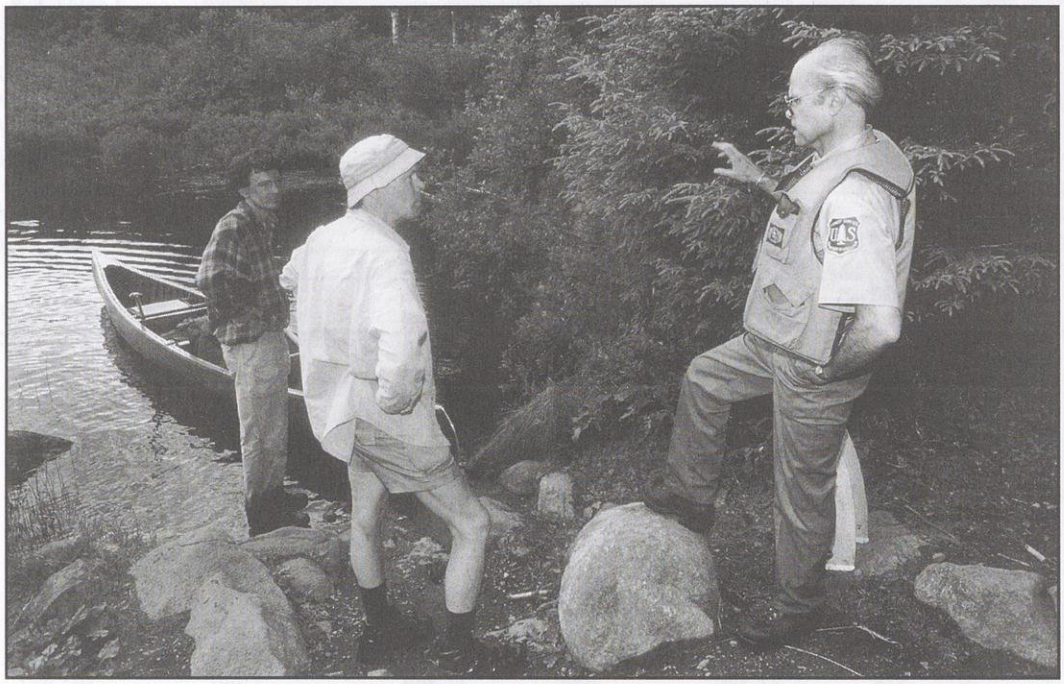
Table 8--National Forest System funding--fiscal years 1994-98--Continued

	1998	1997	1996	1995	1994
			1,000 dollars actual		
Land acquisition	52,976	40,575	39,392	63,873	64,250
Acquisition of lands for national forests, special acts	1,069	1,048	1,069	1,247	1,212
Acquisition of lands to complete exchanges	210	364	341	794	203
Gifts, donations and bequests	92	55	87	4	96
Range betterment	3,811	3,453	4,647	1,149	4,600
Permanent appropriations	510,512	484,868	512,001 9/	506,289	542,774
Trust funds	231,885	206,703	205,597 10/	222,953	298,404
Total	2,938,136	3,080,132	2,756,436 4/	2,668,519 4/	2,806,309

1/ Ecosystem Planning, Inventory, and Monitoring was funded through one line item from FY 1995-97. The FY 1998 Interior and Related Agencies Appropriation Act split the activity into two line items, Land Management Planning and Inventory and Monitoring.
2/ Includes reforestation trust fund dollars.
3/ Number has been revised from that published in the FY 1996 Report of the Forest Service to include reforestation trust fund dollars.
4/ Number has been revised from that published in the FY 1997 Report of the Forest Service to correct an error.
5/ Appropriations Act required minimum level of funding from national forest funds; amounts not included in totals.
1994 - operated a $1.7 million program from available funds.
1995 - operated a $1.3 million program from available funds.
1996 - operated a $1.2 million program from available funds.
1997 - operated a $1.8 million program from available funds.
1998 - operated a $1.0 million program from available funds.
6/ Excludes construction of research facilities.
7/ In FY 1996, road and trail construction EBLI's were combined.
8/ This account was taken off budget in 1982. For comparison, the amounts are shown a non-add items.
9/ Number has been revised from that published in the FY 1996 Report of the Forest Service to include Payments to States.
10/ Number has been revised from that published in the FY 1996 Report of the Forest Service to reflect program level funding.

Table 9--Land acquisition and exchange--fiscal years 1997 and 1998

	1998 acres	1997 acres
Purchase	97,046	103,023
Exchange	69,938	244,178



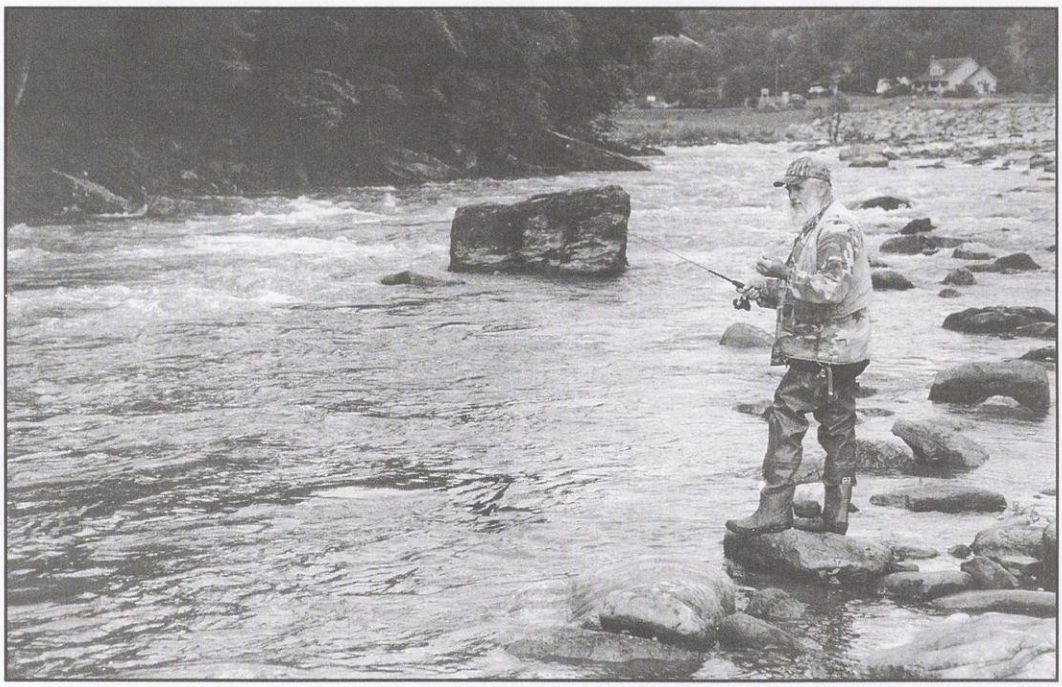


Table 10--Summary of forest stewardship plans and acres accomplished by State--fiscal years 1997-98

State or Territory	1998 Plans	1998 Acres	1997 Plans	1997 Acres	(1991-98) Cumulative plans 2/	(1991-98) Cumulative acres
Alabama	305	82,469	237	104,013	2,062	461,893
Alaska	46	441,834	48	334,093	273	2,870,329
American Samoa	47	110	62	401	230	1,339
Arizona	21	4,738	17	1,782	138	237,551
Arkansas	256	36,928	398	20,310	1,747	297,030
California	15	9,072	7	2,272	453	256,426
Colorado	37	24,093	71	18,696	1,699	404,715
Connecticut	37	5,445	45	3,814	246	30,660
Delaware	64	4,305	104	5,016	485	32,502
Florida	123	29,821	171	42,102	1,012	393,972
Fed St of Micronesia	0	0	0	0	0	0
Georgia	75	15,563	286	60,886	2,178	689,047
Guam	17	74	20	18	136	449
Hawaii	5	72	0	0	33	5,238
Idaho	185	15,242	100	25,475	1,356	101,953
Illinois	1,367	39,278	776	27,949	8,105	331,276
Indiana	1,058	27,237	1,043	49,512	12,207	461,928
Iowa	514	18,513	484	17,981	6,630	215,457
Kansas	112	9,684	93	5,954	1,142	65,360
Kentucky	1,619	167,618	1,307	170,706	9,373	1,037,743
Louisiana	186	6,435	49	7,097	905	84,666
Maine	226	19,999	183	16,731	2,713	239,866
Maryland	378	21,329	365	17,344	3,540	197,927
Massachusetts	208	14,594	264	21,689	2,361	210,656
Michigan	400	58,237	271	37,487	2,536	349,119
Minnesota	951	93,770	708	38,990	8,040	754,000
Mississippi	0	0	0	0	690	154,101
Missouri	325	45,500	272	52,628	2,298	316,930
Montana	100	18,185	81	89,502	733	449,853
Nebraska	44	4,206	51	8,040	1,114	54,518
Nevada	7	11,901	10	4,707	170	81,962
New Hampshire	126	17,697	157	46,902	1,896	365,057
New Jersey	84	5,231	14	6,683	380	52,510
New Mexico	37	11,024	31	6,181	300	262,519
New York	833	86,062	989	116,066	12,740	1,139,238
North Carolina	140	16,352	154	17,939	1,379	220,148
North Dakota	147	5,143	158	6,942	1,174	57,056
Ohio	873	43,061	1,126	53,151	11,740	563,081
Oklahoma	111	18,651	101	22,720	712	193,480
Oregon	71	18,203	71	34,226	1,059	263,951
Pennsylvania	352	49,944	171	22,661	1,562	233,861
Puerto Rico	3	228	8	551	12	1,711
Rhode Island	16	1,006	16	784	280	11,966
South Carolina	229	49,696	210	42,608	2,062	554,339
South Dakota	102	3,157	84	3,360	922	36,969
Tennessee	244	34,937	218	30,607	1,497	270,938

See footnotes at end of table.

Table 10--Summary of forest stewardship plans and acres accomplished by State--fiscal years 1997-98--Continued

State or Territory	1998		1997		(1991-98) Cumulative plans 2/	(1991-98) Cumulative acres
	Plans	Acres	Plans	Acres		
Texas	183	38,655	308	171,346	1,652	442,800
Utah	1	960	1	3,000	85	196,729
Vermont	61	9,166	172	24,594	1,602	236,477
Virginia	610	79,029	617	86,148	4,714	726,094
Washington	519	28,964	581	30,627	2,788	195,438
West Virginia	269	35,912	292	71,347	2,703	410,587
Wisconsin	2,947	140,489	2,285	148,544	23,231	1,158,108
Wyoming	73	11,695	88	11,788	1,178	103,201
Total	16,759	1,931,514	15,357	2,143,970	150,273	18,484,724

1/ Unlisted States had no data.
2/ Landowner forest stewardship plans.

Table 11--Small watershed protection accomplishments--fiscal years 1994-98 (Watershed Protection and Flood Prevention Act of 1954) 1/

	Unit of measure	1998 2/	1997	1996	1995	1994
Land treatment 3/						
Forest land	Acres	0	8,402	2,193	1,905	16,806
Cropland	Acres	0	741	1,160	0	626
Pastureland	Acres	0	88	45	7,284	28
Total land treatment	Acres	0	9,233	3,398	9,189	17,460
Landowners assisted	Number	0	1,186	1,348	1,465	1,483

1/ Accomplishments are limited to activities accomplished solely by small watershed protection program funds.
2/ In FY 1998, there were no Forest Service accomplishments to report for Table 11. Historically the Forest Service has worked with the Natural Resources Conservation Service (NRCS) in project planning and accomplishment with regard to work under the Watershed Protection Act of 1954. NRCS has assumed increased responsibility for on-the-ground project implementation. During FY 1998, Forest Service responsibility was to work with NRCS and provide forestry assistance for project work. Table 11 will be dropped.
3/ Reported in land use categories consistent with those reported by NRCS.

Table 12--Flood prevention accomplishments--fiscal years 1994-98 (Watershed Protection and Flood Prevention Act of 1954) 1/

	Unit of measure	1998 2/	1997	1996	1995	1994
Land treatment 3/						
Forest land	Acres	0	6,541	8,682	63,028	6,335
Cropland	Acres	0	20	1,668	575	
Pastureland	Acres	0	78	92	83	40
Total land treatment	Acres	0	6,639	10,442	63,686	6,375
Landowners assisted	Number	0	1,183	2,265	2,461	1,528

1/ Accomplishments are limited to activities accomplished solely by small watershed protection program funds.
2/ In FY 1998, there were no Forest Service accomplishments to report for Table 12. Historically the Forest Service has worked with the Natural Resources Conservation Service (NRCS) in project planning and accomplishment with regard to work under the Watershed Protection Act of 1954. NRCS has assumed increased responsibility for on-the-ground project implementation. During FY 1998, Forest Service responsibility was to work with NRCS and provide forestry assistance for project work. Table 12 will be dropped.
3/ Reported in land use categories consistent with those reported by NRCS.

Table 13--Roads decommissioned, reconstructed, and constructed by the Forest Service--fiscal year 1998 1/

Region	Decommissioned	Reconstruction	Construction
	Miles	*Miles*	*Miles*
Northern (R-1)	475.8	496.3	29.9
Rocky Mountain (R-2)	118.0	160.8	28.8
Southwest (R-3)	161.9	60.3	1.4
Intermountain (R-4)	271.2	154.0	23.1
Pacific Southwest (R-5)	83.2	339.4	16.8
Pacific Northwest (R-6)	703.1	665.2	54.5
Southern (R-8)	184.2	638.9	30.0
Eastern (R-9)	64.1	164.6	23.7
Alaska (R-10)	37.0	52.6	6.4
Total	2,098.5	2,732.1	214.6

1/ Reconstruction and construction miles accomplished are from Road Reconstruction and Construction Appropriation, and from Purchaser Credits and Purchaser Election inventory revisions, and new construction.

Table 14--Wildlife and fish habitat restoration and enhancement by region--fiscal year 1998 1/

Region	Wildlife	Inland fish	Anadromous fish	Threatened, endangered, and sensitive species	Total
Northern (R-1)					
Terrestrial acres restored/enhanced	12,365			3,890	16,255
Lake acres restored/enhanced		41		16	110
Stream miles restored/enhanced		146	32	26	130
Structures	15			31	46
Rocky Mountain (R-2)					
Terrestrial acres restored/enhanced	24,691			7,887	32,578
Lake acres restored/enhanced		64		46	110
Stream miles restored/enhanced		53		45	98
Structures	85			182	267
Southwestern (R-3)					
Terrestrial acres restored/enhanced	20,430			20,084	40,514
Lake acres restored/enhanced		1,516		2	1,518
Stream miles restored/enhanced		37		14	
Structures	134			53	187
Intermountain (R-4)					
Terrestrial acres restored/enhanced	33,572			130,600	164,172
Lake acres restored/enhanced		61		48	109
Stream miles restored/enhanced		65	6	72	143
Structures	265			356	621
Pacific Southwest (R-5)					
Terrestrial acres restored/enhanced	9,506			1,527	11,033
Lake acres restored/enhanced		495		19	514
Stream miles restored/enhanced		77	158	49	284
Structures	382			224	606
Pacific Northwest (R-6)					
Terrestrial acres restored/enhanced	19,607			2,418	22,025
Lake acres restored/enhanced		73		3	76
Stream miles restored/enhanced		76	121	34	231
Structures	1,432			153	1,585
Southern (R-8)					
Terrestrial acres restored/enhanced	33,263			33,125	66,388
Lake acres restored/enhanced		3,465			3,465
Stream miles restored/enhanced		161	50	3	214
Structures	854			864	1,718
Eastern (R-9)					
Terrestrial acres restored/enhanced	13,333			2,435	15,768
Lake acres restored/enhanced		2,369			2,369
Stream miles restored/enhanced		284	254	2	540
Structures	358			155	513

See footnotes at end of table.

Table 14--Wildlife and fish habitat restoration and enhancement by region--fiscal year 1998--Continued 1/

Region	Wildlife	Inland fish	Anadromous fish	Threatened, endangered, and sensitive species	Total
Alaska (R-10)					
Terrestrial acres restored/enhanced	450				450
Lake acres restored/enhanced		368	1,086		1,454
Stream miles restored/enhanced		12	69		81
Structures	0				0
Total					
Terrestrial acres restored/enhanced	167,217	0	0	201,966	369,183 2/
Lake acres restored/enhanced	0	8,452	1,086	134	9,672 3/
Stream miles restored/enhanced	0	911	690	245	1,846 4/
Structures	3,525	0	0	2,018	5,543 5/

1/ Includes activities accomplished with appropriated funds (Fund code 1)
2/ In addition, 208,391 terrestrial acres were restored or enhanced with contributed, K-V, or other funds.
3/ In addition, 4,137 lake acres were restored or enhanced with contributed, K-V, or other funds.
4/ In addition, 761 stream miles were restored or enhanced with contributed, K-V, or other funds.
5/ In addition, 19,606 structures were completed with contributed, K-V, or other funds.

Table 15--Reforestation expenditures and accomplishments by funding source--fiscal years 1994-98 1/

	Appropriated	Knutson-Vandenberg	Total
1994			
Million dollars 2/	36.0	71.0	107.0
1,000 acres	146.1	288.8	434.9 3/
Constant dollars/acre	246.4	245.8	246.0 4/
1995			
Million dollars 2/	38.7	81.9	120.6
1,000 acres	136.1	250.9	387.0 5/
Constant dollars/acre	284.3	326.4	311.6 4/
1996			
Million dollars 2/	33.2	64.6	97.8
1,000 acres	129.9	227.6	357.5 6/
Constant dollars/acre	255.6	283.8	273.6 4/
1997			
Million dollars 2/	37.4	53.5	90.9
1,000 acres	128.1	193.4	321.5 7/
Constant dollars/acre	292.0	276.6	282.7 4/
1998			
Million dollars 2/	37.7	49.4	87.1
1,000 acres	117.3	170.6	287.9 8/
Constant dollars/acre	321.4	289.6	302.5 4/

1/ Data source for accomplishments is the Timber Activity Control System silviculture data base (TRACS/Silva) and the source for expenditures is the agency's financial data base at the National Finance Center.
2/ All previously published values have been converted to an obligations basis in 1998 constant dollars. No General Administration funds or law enforcement funds included. Does not include funds for nursery and tree improvement. Errant data from prior years.
3/ Includes 101,010 acres of certified natural regeneration without site preparation, but does not include 6,194 acres accomplished with contributed funding.
4/ Weighted average.
5/ Includes 103,692 acres of certified natural regeneration without site preparation, but does not include 5,270 acres accomplished with contributed funding.
6/ Includes 113,295 acres of certified natural regeneration without site preparation, but does not include 5,403 acres accomplished with contributed funding.
7/ Includes 102,992 acres of certified natural regeneration without site preparation, but does not include 6,611 acres accomplished with contributed funding.
8/ Includes 87,622 acres of certified natural regeneration without site preparation, but does not include 4,997 acres accomplished with contributed funding.

Table 16--Reforestation program needs--fiscal years 1998-2000 1/

	Current and Projected	Prior Year Projected 2/
	1,000 acres	*1,000 acres*
Fiscal year 1998		
10/1/97 balance	763.9	764
New needs 3/	207.7	250
Actual accomplishments	(292.9)	(350)
10/1/98 balance	678.7	664
Fiscal year 1999		
10/1/98 balance	679	
New needs 3/	200	
Projected accomplishments	(269)	
10/1/99 balance	610	
Fiscal year 2000		
10/1/00 balance	610	
New needs 3/	175	
Projected accomplishments	(234)	
Projected 10/1/00 balance	551	

1/ Data source is Reforestation & TSI Needs Report (2400-K). This information is required by the National Forest Management Act of 1976, Section 4d(1).

2/ Projections in FY 1997 Report of the Forest Service.

3/ Actual or new needs are the results of timber harvests, regeneration failures, and natural disasters such as fires, storms, insects, diseases, and other changes. Includes actual and projected estimates of certified natural regeneration without site preparation.

Table 17--Reforestation needs as of October 1, 1998, by State, national forest, and site productivity class 1/

State, Commonwealth, or Territory 2/ National Forest	Acres by site productivity class 3/ 0-49	50-84	85-119	120+	Total acres
Alabama					
NFs in Alabama (subtotal)	255	2,360	271	196	3,082
Alaska					
Chugach	0	0	0	0	0
Tongass-Chatham	1	126	1,025	1,671	2,823
Tongass-Ketchikan	10	172	1,651	16,750	18,583
Tongass-Stikine	45	80	145	1,193	1,463
Subtotal	56	378	2,821	19,614	22,869
Arizona					
Apache-Sitgreaves	5,085	2,422	116	0	7,623
Coconino	4,175	3,540	0	0	7,715
Coronado	8	0	0	0	8
Kaibab	5,988	1,278	0	0	7,266
Prescott	89	80	0	0	169
Tonto	1,688	187	0	0	1,875
Subtotal	17,033	7,507	116	0	24,656
Arkansas					
Ouachita	241	255	13,795	58	14,349
Ozark-St. Francis	1,184	11,352	1,769	82	14,387
Subtotal	1,425	11,607	15,564	140	28,736
California					
Angeles	304	801	311	0	1,416
Cleveland	0	122	0	0	122
Eldorado	0	0	402	1,233	1,635
Inyo	0	9	0	0	9
Klamath	364	2,011	2,074	1,352	5,801
Lake Tahoe Basin	0	47	727	453	1,227
Lassen	17	6,065	2,236	2,892	11,210
Los Padres	0	21	5	0	26
Mendocino	44	1,368	947	829	3,188
Modoc	0	3,272	88	66	3,426
Plumas	0	1,389	3,415	1,924	6,728
Rogue River	0	96	0	0	96
San Bernardino	346	389	29	0	764
Sequoia	52	155	1,861	958	3,026
Shasta	0	304	1,054	373	1,731
Sierra	34	553	1,396	2,635	4,618
Siskiyou	0	0	0	0	0

See footnotes at end of table.

Table 17--Reforestation needs as of October 1, 1998, by State, national forest, and site productivity class 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Acres by site productivity class 3/ 0-49	50-84	85-119	120+	Total acres
California (continued)					
Six Rivers	0	3	823	435	1,261
Stanislaus	2,134	14,006	30,956	18,948	66,044
Tahoe	79	171	2,611	2,014	4,875
Toiyabe/Humboldt	23	25	0	0	48
Trinity	0	105	64	50	219
Subtotal	3,397	30,912	48,999	34,162	117,470
Colorado					
Arapaho and Roosevelt	4,249	140	0	0	4,389
Grand Mesa, Uncompahgre, and Gunnison	7,151	2,634	209	0	0 9,994
Manti-La Sal	0	0	0	0	0
Medicine Bow and Routt	4,295	2,111	265	0	6,671
Pike and San Isabel	1,501	647	0	0	2,148
Rio Grande	2,945	2,304	190	0	5,439
San Juan	1,659	2,489	266	0	4,414
White River	622	378	113	0	1,113
Subtotal	22,422	10,703	1,043	0	34,168
Florida					
NFs in Florida (subtotal)	590	668	18	1,662	2,938
Georgia					
Chattahoochee and Oconee (subtotal)	0	27	2,583	793	3,403
Idaho					
Boise	6,283	32,955	7,058	2,107	48,403
Caribou	0	859	31	0	890
Challis	7	302	0	0	309
Clearwater	1,913	395	1,372	1,460	5,140
Idaho Panhandle	5,273	1,597	4,527	3,041	14,438
Nez Perce	641	628	2,612	673	4,554
Payette	725	1,378	2,750	4	4,857
Salmon	4,283	120	0	0	4,403
Sawtooth	244	284	0	0	528
Targhee	266	5,455	0	56	5,777
Subtotal	19,635	43,973	18,350	7,341	89,299
Illinois					
Shawnee (subtotal	0	0	565	0	565

See footnotes at end of table.

Table 17--Reforestation needs as of October 1, 1998, by State, national forest, and site productivity class 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Acres by site productivity class 3/ 0-49	50-84	85-119	120+	Total acres
Indiana					
Hoosier (subtotal)	0	278	436	288	1,002
Kentucky					
Daniel Boone (subtotal)	0	1,645	0	628	2,273
Louisiana					
Kisatchie (subtotal)	0	27	463	663	1,153
Maine					
White Mountain (subtotal)	126	110	68	24	328
Michigan					
Hiawatha	6,979	6,222	2,247	2	15,450
Huron-Manistee	13	2,095	0	11	2,119
Ottawa	1,027	12,060	4,818	123	18,028
Subtotal	8,019	20,377	7,065	136	35,597
Minnesota					
Chippewa	108	496	29	16	649
Superior	0	5,577	1,912	67	7,556
Subtotal	108	6,073	1,941	83	8,205
Mississippi					
NFs in Mississippi (subtotal)	72	534	77	465	1,148
Missouri					
Mark Twain (subtotal)	0	18,099	13	0	18,112
Montana					
Beaverhead & Deerlodge	1,206	411	112	0	1,729
Bitterroot	1,001	619	45	34	1,699
Custer	1,414	169	50	0	1,633
Flathead	1,541	1,013	1,099	46	3,699
Gallatin	385	1,076	0	0	1,461
Helena	1,592	480	13	0	2,085
Kootenai	2,534	3,932	3,250	416	10,132
Lewis and Clark	1,087	140	40	10	1,277
Lolo	4,996	2,006	1,041	346	8,389
Subtotal	15,756	9,846	5,650	852	32,104

See footnotes at end of table.

Table 17--Reforestation needs as of October 1, 1998, by State, national forest, and site productivity class 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Acres by site productivity class 3/ 0-49	50-84	85-119	120+	Total acres
Nebraska					
Nebraska (subtotal)	0	0	0	0	0
Nevada					
Humboldt	0	0	0	0	0
Inyo	0	0	0	0	0
Lake Tahoe Basin	0	0	0	629	629
Toiyabe	0	0	0	0	0
Subtotal	0	0	0	629	629
New Hampshire					
White Mountain (subtotal)	1,985	6,289	2,546	1,188	12,008
New Mexico					
Carson	2,161	1,462	30	0	3,653
Cibola	39	35	0	0	74
Gila	1,767	502	0	0	2,269
Lincoln	56	722	40	0	818
Sante Fe	4,818	755	0	0	5,573
Subtotal	8,841	3,476	70	0	12,387
New York					
Green Mountain (subtotal)	0	0	11	8	19
North Carolina					
NFs in North Carolina (subtotal)	611	1,775	32	119	2,537
Ohio					
Wayne (subtotal)	171	129	885	1,381	2,566
Oklahoma					
Ouachita (subtotal)	0	0	0	393	393
Oregon					
Deschutes	6,305	465	45	20	6,835
Fremont	3,420	1,058	71	0	4,549
Klamath	10	0	40	98	148
Malheur	2,021	9,500	0	0	11,521
Mt. Hood	133	3,941	226	406	4,706
Ochoco	411	2,308	70	0	2,789
Rogue River	0	982	1,895	74	2,951
Siskiyou	69	32	607	193	901
Siuslaw	0	0	0	678	678
Umatilla	250	17,002	2,474	472	20,198

See footnotes at end of table.

Table 17--Reforestation needs as of October 1, 1998, by State, national forest, and site productivity class 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Acres by site productivity class 3/ 0-49	50-84	85-119	120+	Total acres
Oregon (continued)					
Umpqua	68	129	1,310	72	1,579
Wallowa-Whitman	473	9,084	1,501	30	11,088
Willamette	48	670	255	4,058	5,031
Winema	221	2,936	1,674	0	4,831
Subtotal	13,429	48,107	10,168	6,101	77,805
Pennsylvania					
Allegheny (subtotal)	299	3,269	3,404	414	7,386
Puerto Rico					
Caribbean (subtotal)	0	0	41	118	159
South Carolina					
Francis Marion and Sumter (subtotal)	0	0	98	55	153
South Dakota					
Black Hills (subtotal)	32,043	6,016	6	64	38,129
Tennessee					
Cherokee (subtotal)	0	219	857	3,328	4,404
Texas					
NFs in Texas (subtotal)	0	1,513	49	753	2,315
Utah					
Ashley	2,302	0	0	0	2,302
Dixie	11,074	604	0	0	11,678
Fishlake	146	207	5	0	358
Manti-La Sal	0	654	19	0	673
Uinta	0	13	218	0	231
Wasatch-Cache	0	7	84	15	106
Subtotal	13,522	1,485	326	15	15,348
Vermont					
Green Mountain (subtotal)	3	936	32	10	981
Virginia					
George Washington and Jefferson (subtotal)	1,428	4,670	228	590	6,916

See footnotes at end of table.

Table 17--Reforestation needs as of October 1, 1998, by State, national forest, and site productivity class 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Acres by site productivity class 3/ 0-49	50-84	85-119	120+	Total acres
Washington					
Colville	862	1,081	789	120	2,852
Gifford Pinchot	92	583	938	350	1,963
Idaho Panhandle	218	0	63	0	281
Mt. Baker-Snoqualmie	0	163	384	238	785
Okanogan	6,440	583	995	0	8,018
Olympic	0	0	8	0	8
Umatilla	14	218	0	77	309
Wenatchee	10	9,920	976	253	11,159
Subtotal	7,636	12,548	4,153	1,038	25,375
West Virginia					
George Washington and Jefferson	42	25	10	149	226
Monongahela	49	652	842	535	2,078
Subtotal	91	677	852	684	2,304
Wisconsin					
Chequamegon	1,488	5,706	992	83	8,269
Nicolet	361	1,804	601	240	3,006
Subtotal	1,849	7,510	1,593	323	11,275
Wyoming					
Bighorn	2,532	46	0	0	2,578
Black Hills	13,253	7,859	38	0	21,150
Bridger-Teton	0	0	1,006	0	1,006
Medicine Bow and Routt	2,627	231	0	0	2,858
Shoshone	465	460	4	0	929
Targhee	0	0	0	0	0
Wasatch-Cache	17	126	0	0	143
Subtotal	18,894	8,722	1,048	0	28,664
Total	189,696	272,465	132,442	84,258	678,861

1/ Data source is Reforestation & TSI Needs Report (2400-K) Table 1. This information is required by the National Forest Management Act of 1976, Sec.4d(1).

2/ Unlisted States had no reforestation needs as of October 1, 1998.

3/ Site productivity class refers to the amount of wood produced in cubic feet per acre per year in a natural unmanaged stand.

Table 18--Reforestation and timber stand improvement acreages certified as satisfactorily stocked by State and national forest--fiscal year 1998 1/

State, Commonwealth, or Territory 2/ National Forest	Reforestation					Timber Stand Improvement					
	Artificial regeneration		Natural regeneration								
			w/ site	w/o site				Precomm.			
	Planted	Seeded	prep. 3/	prep. 3/	Total	Cleaning	Release	Thinning	Fertilization	Pruning	Total
					Acres						*Acres*
Alabama											
NFs in Alabama (subtotal)	2,912	0	107	60	3,079	0	789	0	0	0	789
Alaska											
Chugach	0	0	0	0	0	0	0	0	0	0	0
Tongass-Chatham	64	0	0	1,567	1,631	0	0	671	0	21	692
Tongass-Ketchikan	162	0	0	5,202	5,364	0	0	617	0	0	617
Tongass-Stikine	169	0	0	3,077	3,246	0	0	1,175	0	124	1,299
Subtotal	395	0	0	9,846	10,241	0	0	2,463	0	145	2,608
Arizona											
Apache-Sitgreaves	0	0	0	3,418	3,418	0	0	358	0	0	358
Coconino	14	0	0	0	14	0	0	0	0	0	0
Coronado	0	0	0	0	0	0	0	0	0	0	0
Kaibab	414	0	126	1,313	1,853	0	0	0	0	0	0
Prescott	0	0	0	0	0	0	0	0	0	0	0
Tonto	0	0	0	53	53	0	0	0	0	0	0
Subtotal	428	0	126	4,784	5,338	0	0	358	0	0	358
Arkansas											
Ouachita	1,237	0	4,229	0	5,466	0	4,208	3,015	0	0	7,223
Ozark-St. Francis	0	0	922	405	1,327	0	727	0	0	0	727
Subtotal	1,237	0	5,151	405	6,793	0	4,935	3,015	0	0	7,950
California											
Angeles	0	0	0	0	0	0	360	451	0	303	1,114
Cleveland	0	0	0	0	0	0	0	0	0	0	0
Eldorado	0	0	0	0	0	0	2,709	1,687	0	0	4,396
Inyo	518	0	0	0	518	0	0	560	0	0	560

See footnotes at end of table.

Table 18--Reforestation and timber stand improvement acreages certified as satisfactorily stocked by State and national forest--fiscal year 1998 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Reforestation					Timber Stand Improvement					
	Artificial regeneration		Natural regeneration								
			w/ site	w/o site				Precomm.			
	Planted	Seeded	prep. 3/	prep. 3/	Total	Cleaning	Release	Thinning	Fertilization	Pruning	Total
					Acres						*Acres*
California (continued)											
Klamath	6,167	0	3	1,456	7,626	0	2,516	2,765	0	0	5,281
Lake Tahoe Basin	0	0	0	0	0	0	0	490	0	0	490
Lassen	797	0	0	0	797	0	939	10,096	195	0	11,230
Los Padres	0	0	0	0	0	0	0	0	0	0	0
Mendocino	578	0	0	0	578	0	1,614	760	1,055	33	3,462
Modoc	0	0	0	0	0	0	207	2,015	0	0	2,222
Plumas	1,056	0	73	6	1,135	0	1,901	1,951	0	0	3,852
Rogue River	466	0	0	0	466	0	0	0	0	0	0
San Bernardino	0	0	0	0	0	0	21	80	21	13	135
Sequoia	33	0	0	0	33	0	1,995	1,054	0	8	3,057
Shasta	995	0	0	15	1,010	0	4,453	982	0	114	5,549
Sierra	212	0	0	22	234	0	2,628	756	0	0	3,384
Siskiyou	0	0	0	0	0	0	0	0	0	0	0
Six Rivers	0	0	0	0	0	0	1,340	417	0	0	1,757
Stanislaus	443	0	6	0	449	0	3,870	55	0	0	3,925
Tahoe	504	0	281	297	1,082	0	6,374	7,359	0	0	13,733
Toiyabe	0	0	0	0	0	0	0	350	0	0	350
Trinity	357	0	0	0	357	0	1,858	694	0	0	2,552
Subtotal	12,126	0	363	1,796	14,285	0	32,785	32,522	1,271	471	67,049
Colorado											
Arapaho and Roosevelt	0	0	832	1,659	2,491	0	0	0	0	0	0
Grand Mesa, Uncompahgre, and Gunnison	0	0	105	1,008	1,113	0	0	0	0	0	0

See footnotes at end of table.

Table 18--Reforestation and timber stand improvement acreages certified as satisfactorily stocked by State and national forest--fiscal year 1998 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Reforestation					Timber Stand Improvement					
	Artificial regeneration		Natural regeneration								
	Planted	Seeded	w/ site prep. 3/	w/o site prep. 3/	Total	Cleaning	Release	Precomm. Thinning	Fertilization	Pruning	Total
					Acres						*Acres*
Colorado (continued)											
Manti-La Sal	0	0	0	0	0	0	191	0	0	0	191
Medicine Bow and Routt	238	131	263	796	1,428	0	0	0	0	0	0
Pike and San Isabel	0	0	32	161	193	0	0	0	0	0	0
Rio Grande	0	0	0	1,382	1,382	0	0	0	0	0	0
San Juan	14	0	0	485	499	0	0	0	0	0	0
White River	115	0	0	751	866	0	543	0	0	0	543
Subtotal	367	131	1,232	6,242	7,972	0	734	0	0	0	734
Florida											
NFs in Florida (subtotal)	1,931	2,599	0	95	4,625	0	634	0	0	0	634
Georgia											
Chattahoochee and Oconee (subtotal)	1,383	0	1,475	0	2,858	0	1,852	1,474	0	0	3,326
Idaho											
Boise	3,750	0	0	186	3,936	0	402	3,690	0	0	4,092
Caribou	577	0	298	156	1,031	0	0	508	0	0	508
Challis	337	0	0	97	434	0	0	238	0	0	238
Clearwater	3,414	0	30	252	3,696	0	311	450	0	351	1,112
Idaho Panhandle	7,401	0	130	449	7,980	0	1,913	3,651	243	2,894	8,701
Kootenai	0	0	0	0	0	0	33	0	0	0	33
Nez Perce	1,453	0	600	293	2,346	0	0	921	0	128	1,049
Payette	4,172	0	33	0	4,205	0	0	1,262	0	0	1,262
Salmon	232	0	0	73	305	0	0	0	0	0	0
Sawtooth	0	0	0	0	0	0	0	0	0	0	0
Targhee	3,358	0	2,056	0	5,414	0	0	1,126	0	0	1,126
Subtotal	24,694	0	3,147	1,506	29,347	0	2,659	11,846	243	3,373	18,121
Illinois											
Shawnee (subtotal	40	0	593	146	779	0	256	0	0	0	256

See footnotes at end of table.

Table 18--Reforestation and timber stand improvement acreages certified as satisfactorily stocked by State and national forest--fiscal year 1998 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Reforestation					Timber Stand Improvement					
	Artificial regeneration		Natural regeneration								
	Planted	Seeded	w/ site prep. 3/	w/o site prep. 3/	Total	Cleaning	Release	Precomm. Thinning	Fertilization	Pruning	Total
					Acres						*Acres*
Kentucky											
Daniel Boone (subtotal)	429	0	396	0	825	0	419	103	0	44	566
Louisiana											
Kisatchie (subtotal)	2,046	0	1,433	0	3,479	0	1,474	689	0	0	2,163
Maine											
White Mountain (subtotal)	0	0	0	0	0	0	0	0	0	0	0
Michigan											
Hiawatha	417	45	2,786	1,199	4,447	0	1,074	57	0	448	1,579
Huron-Manistee	0	0	1,503	1,979	3,482	0	69	95	0	0	164
Ottawa	385	0	2,319	6,603	9,307	0	342	0	0	0	342
Subtotal	802	45	6,608	9,781	17,236	0	1,485	152	0	448	2,085
Minnesota											
Chippewa	449	76	2,414	213	3,152	0	110	0	0	55	165
Superior	395	192	0	8,092	8,679	0	726	0	0	305	1,031
Subtotal	844	268	2,414	8,305	11,831	0	836	0	0	360	1,196
Mississippi											
NFs in Mississippi (subtotal)	6,493	92	140	0	6,725	0	2,617	333	92	0	3,042
Missouri											
Mark Twain (subtotal)	346	0	4,923	1,590	6,859	0	1,286	4,879	0	0	6,165
Montana											
Beaverhead & Deerlodge	520	0	919	824	2,263	0	136	1,533	0	0	1,669
Bitterroot	2,336	0	0	21	2,357	0	284	412	0	0	696
Custer	1,240	0	472	60	1,772	0	0	189	0	0	189
Flathead	3,693	196	663	852	5,404	0	300	1,832	0	0	2,132
Gallatin	2,003	0	55	86	2,144	0	0	968	0	0	968

See footnotes at end of table.

Table 18--Reforestation and timber stand improvement acreages certified as satisfactorily stocked by State and national forest--fiscal year 1998 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Reforestation					Timber Stand Improvement					
	Artificial regeneration		Natural regeneration			Precommercial					
	Planted	Seeded	w/ site prep. 3/	w/o site prep. 3/	Total	Cleaning	Release	Thinning	Fertilization	Pruning	Total
					Acres						*Acres*
Montana (continued)											
Helena	524	0	129	0	653	0	0	400	0	0	400
Kootenai	9,911	0	1,215	14	11,140	0	484	3,779	0	0	4,263
Lewis and Clark	383	0	468	125	976	0	0	525	0	0	525
Lolo	2,809	0	475	167	3,451	0	533	1,749	0	0	2,282
Subtotal	23,419	196	4,396	2,149	30,160	0	1,737	11,387	0	0	13,124
Nebraska											
Nebraska (subtotal)	0	0	0	0	0	0	0	0	0	0	0
Nevada											
Humboldt	0	0	0	0	0	0	0	0	0	0	0
Inyo	0	0	0	0	0	0	0	0	0	0	0
Lake Tahoe Basin	0	0	0	0	0	0	0	220	0	0	220
Toiyabe	0	0	0	0	0	0	0	0	0	0	0
Subtotal	0	0	0	0	0	0	0	220	0	0	220
New Hampshire											
White Mountain (subtotal)	0	0	545	1,463	2,008	0	0	0	0	0	0
New Mexico											
Carson	47	0	36	1,052	1,135	0	239	598	0	0	837
Cibola	0	0	0	0	0	0	0	0	0	0	0
Gila	0	0	0	1,111	1,111	0	0	0	0	0	0
Lincoln	0	0	0	26	26	0	0	374	0	0	374
Sante Fe	0	0	0	254	254	0	0	0	0	0	0
Subtotal	47	0	36	2,443	2,526	0	239	972	0	0	1,211
New York											
Green Mountain (subtotal)	0	0	0	0	0	0	0	5	0	0	5

See footnotes at end of table.

Table 18--Reforestation and timber stand improvement acreages certified as satisfactorily stocked by State and national forest--fiscal year 1998 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Reforestation					Timber Stand Improvement					
	Artificial regeneration		Natural regeneration								
			w/ site	w/o site				Precomm.			
	Planted	Seeded	prep. 3/	prep. 3/	Total	Cleaning	Release	Thinning	Fertilization	Pruning	Total
					Acres						*Acres*
North Carolina											
NF's in North Carolina (subtotal	919	0	664	0	583	0	1,737	218	0	18	1,973
Ohio											
Wayne (subtotal)	136	0	59	0	195	0	0	0	0	0	0
Oklahoma											
Ouachita (subtotal)	0	0	591	0	591	0	0	142	0	0	142
Oregon											
Deschutes	320	0	920	442	1,682	0	0	0	0	0	0
Fremont	2,747	0	0	252	2,999	0	0	665	0	0	665
Klamath	502	0	8	35	545	0	52	0	0	0	52
Malheur	4,300	0	0	59	4,359	0	0	0	0	0	0
Mt. Hood	5,502	0	0	288	5,790	0	0	1,272	0	0	1,272
Ochoco	1,192	0	0	16	1,208	0	0	0	0	0	0
Rogue River	1,335	0	0	99	1,434	0	0	0	0	0	0
Siskiyou	268	0	0	82	350	0	1,115	1,018	0	0	2,133
Siuslaw	0	0	0	0	0	0	3,504	810	0	0	4,314
Umatilla	2,183	0	629	4,309	7,121	0	0	1,902	0	0	1,902
Umpqua	2,207	0	0	0	2,207	0	0	785	0	95	880
Wallowa-Whitman	9,066	0	1,379	2,084	12,529	219	18	1,811	0	0	2,048
Willamette	4,726	0	0	815	5,541	0	428	4,678	1,242	777	7,125
Winema	937	0	0	0	937	0	0	1,282	0	0	1,282
Subtotal	35,285	0	2,936	8,481	46,702	219	5,117	14,223	1,242	872	21,673
Pennsylvania											
Allegheny (subtotal)	0	0	1,699	432	2,131	0	446	0	0	0	446
Puerto Rico											
Caribbean (subtotal)	0	0	0	0	0	0	0	0	0	0	0

See footnotes at end of table.

Table 18--Reforestation and timber stand improvement acreages certified as satisfactorily stocked by State and national forest--fiscal year 1998 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Reforestation					Timber Stand Improvement					
	Artificial regeneration		Natural regeneration								
			w/ site	w/o site				Precomm.			
	Planted	Seeded	prep. 3/	prep. 3/	Total	Cleaning	Release	Thinning	Fertilization	Pruning	Total
					Acres						*Acres*
South Carolina											
Francis Marion and Sumter (subtotal)	2,903	0	422	0	3,325	0	6,795	544	1,245	0	8,584
South Dakota											
Black Hills (subtotal)	0	0	0	8,755	8,755	0	0	5,342	0	0	5,342
Tennessee											
Cherokee (subtotal)	516	0	803	50	1,369	0	1,970	0	0	0	1,970
Texas											
NFs in Texas (subtotal)	897	0	54	389	1,340	0	0	628	0	0	628
Utah											
Ashley	0	0	0	2,468	2,468	0	0	429	0	0	429
Dixie	539	0	0	0	539	0	388	1,578	0	0	1,966
Fishlake	0	0	0	0	0	0	0	0	0	0	0
Manti-La Sal	0	0	0	0	0	0	440	99	0	0	539
Uinta	0	0	368	0	368	0	0	0	0	0	0
Wasatch-Cache	0	0	239	694	933	0	0	0	0	0	0
Subtotal	539	0	607	3,162	4,308	0	828	2,106	0	0	2,934
Vermont											
Green Mountain (subtotal)	0	0	1,374	3	1,377	0	3	0	0	0	3
Virginia											
George Washington and Jefferson (subtotal)	167	0	2,037	86	2,290	0	520	734	0	0	1,254
Washington											
Colville	2,949	0	53	298	3,300	0	0	1,782	0	0	1,782
Gifford Pinchot	1,969	0	0	152	2,121	0	438	2,087	0	0	2,525
Idaho Panhandle	14	0	0	0	14	0	80	129	0	54	263

See footnotes at end of table.

Table 18--Reforestation and timber stand improvement acreages certified as satisfactorily stocked by State and national forest--fiscal year 1998 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Reforestation					Timber Stand Improvement					
	Artificial regeneration		Natural regeneration								
			w/ site	w/o site				Precomm.			
	Planted	Seeded	prep. 3/	prep. 3/	Total	Cleaning	Release	Thinning	Fertilization	Pruning	Total
					Acres						*Acres*
Washington (continued)											
Mt. Baker-Snoqualmie	533	0	0	0	533	0	0	0	0	0	0
Okanogan	1,529	0	1,656	607	3,792	0	0	2,939	0	103	3,042
Olympic	0	0	0	44	44	0	0	787	0	0	787
Umatilla	319	0	0	173	492	0	0	498	0	0	498
Wenatchee	1,134	0	198	6,987	8,319	0	0	533	0	167	700
Subtotal	8,447	0	1,907	8,261	18,615	0	518	8,755	0	324	9,597
West Virginia											
George Washington and Jefferson	0	0	0	0	0	0	152	0	0	0	152
Monongahela	87	0	763	446	1,296	0	1,138	107	0	0	1,245
Subtotal	87	0	763	446	1,296	0	1,290	107	0	0	1,397
Wisconsin											
Chequamegon	311	54	1,113	885	2,363	0	240	0	0	100	340
Nicolet	264	0	480	696	1,440	0	272	0	0	0	272
Subtotal	575	54	1,593	1,581	3,803	0	512	0	0	100	612

See footnotes at end of table.

Table 18--Reforestation and timber stand improvement acreages certified as satisfactorily stocked by State and national forest--fiscal year 1998 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Reforestation					Timber Stand Improvement					
	Artificial regeneration		Natural regeneration								
			w/ site	w/o site		Precomm.					
	Planted	Seeded	prep. 3/	prep. 3/	Total	Cleaning	Release	Thinning	Fertilization	Pruning	Total
					Acres						*Acres*
Wyoming											
Bighorn	86	0	382	506	974	0	0	0	0	0	0
Black Hills	0	0	0	295	295	0	0	0	0	0	0
Bridger-Teton	572	0	3	0	575	0	0	426	0	0	426
Medicine Bow and Routt	0	0	736	1,028	1,764	0	119	1,227	0	0	1,346
Shoshone	105	0	0	3,407	3,512	0	0	441	0	0	441
Targhee	40	0	50	0	90	0	0	0	0	0	0
Wasatch-Cache	0	0	327	129	456	0	0	0	0	0	0
Subtotal	803	0	1,498	5,365	7,666	0	119	2,094	0	0	2,213
Total	131,213	3,385	50,092	87,622	272,312	219	74,592	105,311	4,093	6,155	190,370

1/ Data source is Reforestation & TSI Needs Report (2400-K) Table 1. This information is required by the National Forest Management Act of 1976, Sec.4d(1).

2/ Unlisted States had no reforestation needs as of October 1, 1998.

3/ Site productivity class refers to the amount of wood produced in cubic feet per acre per year in a natural unmanaged stand.

Table 19--Certification of reforestation and timber stand improvement acreages by region--fiscal year 1998 1/

Region	Reforestation					Timber Stand Improvement					
	Artificial regeneration		Natural regeneration								
	Planted	Seeded	w/ site prep. 3/	w/o site prep. 3/	Total	Cleaning	Release	Precomm. Thinning	Fertilization	Pruning	Total
					Acres						*Acres*
Northern (R-1)	35,701	196	5,156	3,143	44,196	0	4,074	16,538	243	3,427	24,282
Rocky Mountain (R-2)	558	131	2,350	20,233	23,272	0	662	7,010	0	0	7,672
Southwest (R-3)	475	0	162	7,227	7,864	0	239	1,330	0	0	1,569
Intermountain (R-4)	13,577	0	3,374	3,803	20,754	0	1,421	9,706	0	0	11,127
Pacific Southwest (R-5)	12,162	0	371	1,831	14,364	0	32,837	32,392	1,271	471	66,971
Pacific Northwest (R-6)	43,682	0	4,835	16,707	65,224	219	5,503	22,849	1,242	1,142	30,955
Southern (R-8)	21,833	2,691	13,273	1,085	38,882	0	23,894	7,880	1,337	62	33,173
Eastern (R-9)	2,830	367	20,571	23,747	47,515	0	5,962	5,143	0	908	12,013
Alaska (R-10)	395	0	0	9,846	10,241	0	0	2,463	0	145	2,608
Total	131,213	3,385	50,092	87,622	272,312	219	74,592	105,311	4,093	6,155	190,370

1/ Data source is Reforestation & TSI Needs Report (2400-K) Table 21. This information is required by the National Forest Management Act of 1976, Section 4d(1).

Table 20--Timber stand improvement expenditures and accomplishments by funding source--fiscal years 1994-98 1/

	Appropriated	Knutson-Vandenberg	Total
1994			
Million dollars 2/	18.8	22.6	41.4
1,000 acres	131.6	131.4	263 3/
Constant dollars/acre	142.9	172.0	157.4 4/
1995			
Million dollars 2/	25.7	28.0	53.7
1,000 acres	140.7	132.6	273.3 5/
Constant dollars/acre	182.7	211.2	196.5 4/
1996			
Million dollars 2/	22.3	24.0	46.3
1,000 acres	130.4	128.4	258.8 6/
Constant dollars/acre	171.0	186.9	178.9 4/
1997			
Million dollars 2/	21.1	25.3	46.4
1,000 acres	118.9	139.0	257.9 7/
Constant dollars/acre	177.5	182.0	179.9 4/
1998			
Million dollars 2/	26.1	23.9	50.0
1,000 acres	167.8	129.0	296.8 8/
Constant dollars/acre	155.5	185.3	168.5 4/

1/ Data source for accomplishments is the Timber Activity Control System silviculture data base (TRACS/Silva) and the source for expenditures is the agency's financial data base at the National Finance Center.
2/ All previously published values have been converted to an obligations basis in 1998 constant dollars. No General Administration funds or law enforcement funds included. Does not include funds for nursery and tree improvement.
3/ Does not include 1,572 acres accomplished with contributed funding.
4/ Weighted average.
5/ Does not include 270 acres accomplished with contributed funding.
6/ Does not include 889 acres accomplished with contributed funding.
7/ Does not include 2,758 acres accomplished with contributed funding.
8/ Does not include 3,392 acres accomplished with contributed funding.





Table 21--Timber stand improvement needs as of October 1, 1998, by State, national forest, cubic foot productivity class, and type of treatment 1/

State, Commonwealth, or Territory 2/ National Forest	Cubic foot productivity classes 3/ 0-49	50-84	85-119	120+	Total	Release subtotal	Thinning subtotal	Fertilization subtotal	Pruning subtotal
					Acres				
Alabama									
NFs in Alabama (subtotal)	682	3,554	795	687	5,718	5,450	268	0	0
Alaska									
Chugach	0	13	374	0	387	13	374	0	0
Tongass-Chatham	0	112	588	12,183	12,883	150	12,733	0	0
Tongass-Ketchikan	14	138	1,400	22,015	23,567	54	23,513	0	0
Tongass-Stikine	0	0	197	847	1,044	0	958	0	86
Subtotal	14	263	2,559	35,045	37,881	217	37,578	0	86
Arizona									
Apache-Sitgreaves	9,575	1,152	20	0	10,747	15	10,732	0	0
Coconino	5,708	715	0	0	6,423	169	6,254	0	0
Coronado	6	64	0	0	70	0	70	0	0
Kaibab	5,459	356	0	0	5,815	0	5,815	0	0
Prescott	56	0	0	0	56	56	0	0	0
Tonto	4,335	1,436	31	0	5,802	5,257	545	0	0
Subtotal	25,139	3,723	51	0	28,913	5,497	23,416	0	0
Arkansas									
Ouachita	53	1,029	476	459	2,017	1,817	200	0	0
Ozark-St. Francis	0	8,670	0	70	8,740	4,151	4,589	0	0
Subtotal	53	9,699	476	529	10,757	5,968	4,789	0	0
California									
Angeles	685	1,859	440	0	2,984	1,717	609	0	658
Cleveland	0	689	0	0	689	511	177	0	1
Eldorado	0	51	3,114	12,126	15,291	11,193	4,084	14	0
Inyo	0	98	0	0	98	19	79	0	0

See footnotes at end of table.

Table 21--Timber stand improvement needs as of October 1, 1998, by State, national forest, cubic foot productivity class, and type of treatment 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Cubic foot productivity classes 3/ 0-49	50-84	85-119	120+	Total	Release subtotal	Thinning subtotal	Fertilization subtotal	Pruning subtotal
					Acres				
California (continued)									
Klamath	852	22,966	30,730	19,069	73,617	34,482	39,092	34	9
Lake Tahoe Basin	800	2,329	2,962	492	6,583	3,635	2,948	0	0
Lassen	1,542	21,435	10,510	2,020	35,507	5,507	29,987	13	0
Los Padres	0	138	0	0	138	72	41	0	25
Mendocino	13	18,243	14,340	38,788	71,384	42,761	24,298	4,322	3
Modoc	39	11,041	3,798	543	15,421	6,806	7,873	727	15
Plumas	59	3,732	9,810	7,821	21,422	7,281	14,141	0	0
Rogue River	0	443	0	0	443	421	22	0	0
San Bernardino	272	2,577	107	66	3,022	1,246	1,741	0	35
Sequoia	156	1,364	4,214	7,102	12,836	7,821	4,048	672	295
Shasta	0	774	1,441	5,008	7,223	5,876	1,347	0	0
Sierra	321	2,705	9,739	18,170	30,935	16,994	13,482	0	459
Siskiyou	0	0	1,766	0	1,766	809	758	199	0
Six Rivers	0	114	5,698	14,440	20,252	12,571	7,681	0	0
Stanislaus	35	1,230	12,009	47,313	60,587	41,324	19,263	0	0
Tahoe	1,089	4,185	23,847	28,509	57,630	24,487	32,753	360	30
Toiyabe	611	737	30	0	1,378	0	1,378	0	0
Trinity	327	13,531	12,835	7,776	34,469	8,154	26,315	0	0
Subtotal	6,801	110,241	147,390	209,243	473,675	233,687	232,117	6,341	1,530
Colorado									
Arapaho and Roosevelt	2,553	0	0	0	2,553	282	2,271	0	0
Grand Mesa, Uncompahgre, and Gunnison	3,411	344	0	0	3,755	520	3,235	0	0
Manti-La Sal	0	90	95	0	185	0	185	0	0
Medicine Bow and Routt	8,326	1,730	50	0	10,106	2,836	7,270	0	0
Pike and San Isabel	1,009	280	0	0	1,289	920	369	0	0

See footnotes at end of table.

Table 21--Timber stand improvement needs as of October 1, 1998, by State, national forest, cubic foot productivity class, and type of treatment 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Cubic foot productivity classes 3/ 0-49	50-84	85-119	120+	Total	Release subtotal	Thinning subtotal	Fertilization subtotal	Pruning subtotal
					Acres				
Colorado (continued)									
Rio Grande	70	78	0	0	148	78	70	0	0
San Juan	1,827	1,172	0	0	2,999	2,779	220	0	0
White River	167	1,025	282	0	1,474	1,397	77	0	0
Subtotal	17,363	4,719	427	0	22,509	8,812	13,697	0	0
Florida									
NFs in Florida (subtotal)	838	446	677	41	2,002	550	392	1,060	0
Georgia									
Chattahoochee and Oconee (subtotal)	0	0	4,541	2,718	7,259	1,246	4,913	1,100	0
Idaho									
Boise	1,007	8,048	7,488	1,110	17,653	1,518	16,135	0	0
Caribou	0	312	47	0	359	0	359	0	0
Challis	6,981	622	0	0	7,603	5,359	2,244	0	0
Clearwater	943	66	665	2,422	4,096	647	2,168	0	1,281
Idaho Panhandle	25,351	11,663	46,385	48,976	132,375	8,421	100,622	3,474	19,858
Kootenai	36	0	9	35	80	0	80	0	0
Nez Perce	2,948	4,787	21,402	11,940	41,077	405	40,657	15	0
Payette	411	2,732	2,688	22	5,853	1,142	4,711	0	0
Salmon	6,806	914	0	0	7,720	4,246	3,474	0	0
Sawtooth	426	41	0	0	467	152	315	0	0
Targhee	11	14,181	0	0	14,192	0	14,192	0	0
Subtotal	44,920	43,366	78,684	64,505	231,475	21,890	184,957	3,489	21,139
Illinois									
Shawnee (subtotal	0	50	453	0	503	450	0	0	53
Indiana									
Hoosier (subtotal)	0	0	313	727	1,040	755	285	0	0

See footnotes at end of table.

Table 21--Timber stand improvement needs as of October 1, 1998, by State, national forest, cubic foot productivity class, and type of treatment 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Cubic foot productivity classes 3/ 0-49	50-84	85-119	120+	Total	Release subtotal	Thinning subtotal	Fertilization subtotal	Pruning subtotal
					Acres				
Kentucky									
Daniel Boone (subtotal)	19	746	2,717	204	3,686	410	3,244	0	32
Louisiana									
Kisatchie (subtotal)	0	1,083	3,029	2,520	6,632	2,447	4,185	0	0
Maine									
White Mountain (subtotal)	6	36	15	13	70	11	59	0	0
Michigan									
Hiawatha	779	6,558	3,450	42	10,829	4,269	1,186	0	5,374
Huron-Manistee	1,260	1,936	296	0	3,492	727	2,706	0	59
Ottawa	185	743	296	66	1,290	1,290	0	0	0
Subtotal	2,224	9,237	4,042	108	15,611	6,286	3,892	0	5,433
Minnesota									
Chippewa	776	11,788	4,895	14	17,473	6,609	0	0	10,864
Superior	2,548	0	0	0	2,548	2,548	0	0	0
Subtotal	3,324	11,788	4,895	14	20,021	9,157	0	0	10,864
Mississippi									
NFs in Mississippi (subtotal)	382	333	2,960	3,059	6,734	4,813	1,627	294	0
Missouri									
Mark Twain (subtotal)	0	15,778	186	0	15,964	1,315	14,574	0	75
Montana									
Beaverhead & Deerlodge	25,445	15,134	1,482	127	42,188	225	41,963	0	0
Bitterroot	5,601	10,091	5,048	218	20,958	2,963	17,995	0	0
Custer	1,367	5	54	0	1,426	114	1,312	0	0
Flathead	14,738	12,294	39,710	8,016	74,758	604	73,403	0	751
Gallatin	469	5,345	0	0	5,814	221	5,593	0	0
Helena	930	576	428	70	2,004	1	1,993	10	0
Idaho Panhandle	10	0	213	347	570	0	501	0	69

See footnotes at end of table.

Table 21--Timber stand improvement needs as of October 1, 1998, by State, national forest, cubic foot productivity class, and type of treatment 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Cubic foot productivity classes 3/ 0-49	50-84	85-119	120+	Total	Release subtotal	Thinning subtotal	Fertilization subtotal	Pruning subtotal
					Acres				
Montana (continued)									
Kootenai	7,367	32,836	37,582	1,315	79,100	918	78,146	0	36
Lewis and Clark	2,783	1,604	861	6	5,254	51	5,203	0	0
Lolo	3,817	8,712	7,987	1,493	22,009	858	21,144	0	7
Subtotal	62,527	86,597	93,365	11,592	254,081	5,955	247,253	10	863
Nebraska									
Nebraska (subtotal)	0	0	0	0	0	0	0	0	0
Nevada									
Humboldt	0	0	0	0	0	0	0	0	0
Inyo	0	0	0	0	0	0	0	0	0
Lake Tahoe Basin	0	0	0	324	324	0	324	0	0
Toiyabe	0	0	0	0	0	0	0	0	0
Subtotal	0	0	0	324	324	0	324	0	0
New Hampshire									
White Mountain (subtotal)	111	121	67	24	323	16	307	0	0
New Mexico									
Carson	2,828	1,452	322	0	4,602	880	3,722	0	0
Cibola	2,306	0	0	0	2,306	0	2,306	0	0
Gila	3,294	480	0	0	3,774	0	3,774	0	0
Lincoln	127	1,681	39	0	1,847	95	1,752	0	0
Sante Fe	8,584	819	0	0	9,403	481	8,922	0	0
Subtotal	17,139	4,432	361	0	21,932	1,456	20,476	0	0
New York									
Green Mountain (subtotal)	0	58	653	0	711	58	653	0	0
North Carolina									
NFs in North Carolina (subtotal)	650	1,934	514	2,914	6,012	3,245	1,891	876	0

See footnotes at end of table.

Table 21--Timber stand improvement needs as of October 1, 1998, by State, national forest, cubic foot productivity class, and type of treatment 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Cubic foot productivity classes 3/ 0-49	50-84	85-119	120+	Total	Release subtotal	Thinning subtotal	Fertilization subtotal	Pruning subtotal
					Acres				
Ohio									
Wayne (subtotal)	26	530	1,001	2,528	4,085	1,455	1,292	0	1,338
Oklahoma									
Ouachita (subtotal)	0	35	227	207	469	302	167	0	0
Oregon									
Deschutes	20,921	6,229	610	399	28,159	3,604	19,297	71	5,187
Fremont	8,513	3,370	879	0	12,762	2,171	10,591	0	0
Klamath	12	208	607	895	1,722	900	822	0	0
Malheur	3,405	3,677	0	0	7,082	816	6,238	0	28
Mt. Hood	31	18,911	10,989	1,845	31,776	618	16,919	11,824	2,415
Ochoco	7,208	7,298	12	0	14,518	370	12,570	0	1,578
Rogue River	0	3,808	24,318	1,375	29,501	5,204	15,325	2,967	6,005
Siskiyou	68	699	16,056	3,597	20,420	4,270	3,831	6,445	5,874
Siuslaw	0	0	0	6,300	6,300	2,900	2,540	0	860
Umatilla	302	6,244	1,702	499	8,747	148	8,540	0	59
Umpqua	0	6,595	29,565	10,508	46,668	766	26,369	16,611	2,922
Wallowa-Whitman	15,597	49,633	3,882	0	69,112	7,898	60,293	0	921
Willamette	81	5,339	59,430	89,945	154,795	13,261	33,377	74,652	33,505
Winema	3,795	12,787	3,903	0	20,485	1,000	19,215	0	270
Subtotal	59,933	124,798	151,953	115,363	452,047	43,926	235,927	112,570	59,624
Pennsylvania									
Allegheny (subtotal)	144	1,382	1,100	573	3,199	3,199	0	0	0
Puerto Rico									
Caribbean (subtotal)	0	300	798	0	1,098	498	600	0	0
South Carolina									
Francis Marion and Sumter (subtotal)	0	75	4,726	756	5,557	3,075	200	2,282	0

See footnotes at end of table.

Table 21--Timber stand improvement needs as of October 1, 1998, by State, national forest, cubic foot productivity class, and type of treatment 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Cubic foot productivity classes 3/ 0-49	50-84	85-119	120+	Total	Release subtotal	Thinning subtotal	Fertilization subtotal	Pruning subtotal
					Acres				
South Dakota									
Black Hills (subtotal)	3,904	402	0	0	4,306	0	4,306	0	0
Tennessee									
Cherokee (subtotal)	5	1,524	447	2,006	3,982	3,129	853	0	0
Texas									
NFs in Texas (subtotal)	0	702	1,691	1,442	3,835	3,254	581	0	0
Utah									
Ashley	8,252	0	0	0	8,252	0	8,252	0	0
Dixie	3,380	1,253	0	0	4,633	1,155	3,478	0	0
Fishlake	520	205	0	0	725	725	0	0	0
Manti-La Sal	69	367	1,331	200	1,967	0	1,967	0	0
Uinta	0	233	45	0	278	278	0	0	0
Wasatch-Cache	171	526	0	0	697	146	551	0	0
Subtotal	12,392	2,584	1,376	200	16,552	2,304	14,248	0	0
Vermont									
Green Mountain (subtotal)	744	855	109	0	1,708	450	1,258	0	0
Virginia									
George Washington and Jefferson (subtotal)	668	6,589	1,043	1,671	9,971	2,618	7,290	0	63
Washington									
Colville	487	4,919	8,088	744	14,238	1,165	12,568	0	505
Gifford Pinchot	0	16,929	34,629	7,810	59,368	355	34,485	14,114	10,414
Idaho Panhandle	1,333	392	4,555	2,417	8,697	126	8,555	0	16
Mt. Baker-Snoqualmie	0	40	2,936	1,732	4,708	61	2,865	1,488	294
Okanogan	24,642	4,662	769	0	30,073	3,712	25,372	0	989

See footnotes at end of table.

Table 21--Timber stand improvement needs as of October 1, 1998, by State, national forest, cubic foot productivity class, and type of treatment 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Cubic foot productivity classes 3/ 0-49	50-84	85-119	120+	Total	Release subtotal	Thinning subtotal	Fertilization subtotal	Pruning subtotal
					Acres				
Washington (continued)									
Olympic	0	621	15,542	1,306	17,469	84	14,206	2,589	590
Umatilla	105	6,859	111	24	7,099	100	6,645	0	354
Wenatchee	1,136	18,539	3,616	2,683	25,974	3,502	14,267	6,353	1,852
Subtotal	27,703	52,961	70,246	16,716	167,626	9,105	118,963	24,544	15,014
West Virginia									
George Washington and Jefferson	202	130	0	209	541	518	23	0	0
Monongahela	91	641	965	569	2,266	1,640	626	0	0
Subtotal	293	771	965	778	2,807	2,158	649	0	0
Wisconsin									
Chequamegon	246	896	312	185	1,639	1,539	0	0	100
Nicolet	173	798	636	0	1,607	1,234	223	0	150
Subtotal	419	1,694	948	185	3,246	2,773	223	0	250
Wyoming									
Bighorn	13,214	362	0	0	13,576	2,683	10,893	0	0
Black Hills	688	322	0	0	1,010	0	1,010	0	0
Bridger-Teton	0	36	680	0	716	0	716	0	0
Medicine Bow and Routt	7,040	162	13	0	7,215	364	6,851	0	0
Shoshone	147	108	0	0	255	153	102	0	0
Targhee	43	87	0	0	130	0	130	0	0
Wasatch-Cache	232	27	0	0	259	0	259	0	0
Subtotal	21,364	1,104	693	0	23,161	3,200	19,961	0	0
Total	309,787	504,510	586,493	476,692	1,877,482	401,137	1,207,415	152,566	116,364

1/ Data source is Refor. & TSI Needs Report (2400-K) Table 1. This information is required by the National Forest Management Act of 1976, Sec.4d(1).

2/ Unlisted States had no reforestation needs as of October 1, 1998.

3/ Cubic foot productivity class refers to the dubic feet of wood produced per acre per year in a natural unmanaged stand.

Table 22--Timber stand improvement program needs--fiscal years 1998-2000 1/

	Current and Projected	Prior Year Projected 2/
	1,000 acres	*1,000 acres*
Fiscal year 1998		
10/1/97 balance	1,821	1,821
New needs	355	400
Actual accomplishments	(300)	(260)
10/1/98 balance	1,876	1,961
Fiscal year 1999		
10/1/98 balance	1,876	
New needs	375	
Projected accomplishments	(219)	
10/1/99 balance	2,032	
Fiscal year 2000		
10/1/99 balance	2,032	
New needs	350	
Projected accomplishments	(233)	
Projected 10/1/00 balance 3/	2,149	

1/ Data source is Reforestation & TSI Needs Report (2400-K). This information is required by the National Forest Management Act of 1976, Section 4d(1).
2/ Projections in FY 1997 Report of the Forest Service.
3/ This represents over 9 years of future projected accomplishments.

Table 23--Fuels treatment acreage accomplished by appropriation--fiscal year 1998

Region	Accomplishment		
	Fire preparedness	Brush disposal funds	Total
Northern (R-1)	117,062	19,202	136,264
Rocky Mountain (R-2)	52,422	4,834	57,256
Southwestern (R-3)	106,715	7,526	114,241
Intermountain (R-4)	80,491	5,967	86,458
Pacific Southwest (R-5)	76,629	20,777	97,406
Pacific Northwest (R-6)	109,302	53,155	162,457
Southern (R-8)	932,021	0	932,021
Eastern (R-9)	14,422	4,042	18,464
Alaska (R-10)	229	0	229
Total	1,489,293	115,503	1,604,796

Table 24--Acres of State and private lands burned--calendar year 1997

State, Commonwealth, or Territory	Lightning fires	Person-caused fires	Total fires	Acres burned
	Number	*Number*	*Number*	*Number*
Alabama	12	2,988	3,000	23,933
Alaska	141	421	562	1,058,911
Arizona	87	347	434	4,426
Arkansas	34	1,233	1,267	13,925
California	251	6,552	6,803	61,562
Colorado	169	1,436	1,605	16,703
Connecticut	1	88	89	611
Delaware	2	40	42	515
Florida	525	3,502	4,027	146,146
Georgia	182	7,220	7,402	22,483
Guam	0	516	516	934
Hawaii	2	67	69	378
Idaho	121	133	254	13,241
Illinois	0	296	296	1,078
Indiana	6	843	849	2,426
Iowa	6	2,551	2,557	4,261
Kansas	166	5,003	5,169	75,110
Kentucky	0	913	913	14,475
Louisiana	10	1,953	1,963	14,254
Maine	31	628	659	910
Maryland	22	534	556	1,833
Massachusetts	10	3,799	3,809	4,457
Michigan	16	487	503	2,066
Minnesota	13	1,850	1,863	17,065
Mississippi	10	2,169	2,179	23,801
Missouri	11	2,351	2,362	19,142
Montana	364	214	578	3,430
Nebraska	84	1,099	1,183	23,458
Nevada	27	48	75	418
New Hampshire	14	712	726	348
New Jersey	25	1,523	1,548	4,928
New Mexico	154	457	611	132,790
New York	16	294	310	1,218
North Carolina	124	4,412	4,536	15,734
North Dakota	73	718	791	16,503
Ohio	5	952	957	4,698
Oklahoma	7	1,374	1,381	34,552
Oregon	266	550	816	1,661
Pennsylvania	27	940	967	4,022
Puerto Rico	0	0	0	0
Rhode Island	1	113	114	120
South Carolina	34	3,170	3,204	21,729
South Dakota	36	125	161	2,564

Table 24--Acres of State and private lands burned--calendar year 1997

State, Commonwealth, or Territory	Lightning fires	Person-caused fires	Total fires	Acres burned
	Number	*Number*	*Number*	*Number*
Tennessee	10	1,421	1,431	12,746
Texas	15	635	650	8,446
Utah	198	193	391	12,007
Vermont	2	142	144	236
Virginia	38	1,204	1,242	5,006
Washington	119	538	657	4,650
West Virginia	3	749	752	8,031
Wisconsin	15	1,854	1,869	2,600
Wyoming	291	447	738	20,016
Total	3,776	71,804	75,580	1,886,557

Table 25--Status of NFS acres within grazing allotments with range vegetation management objectives--fiscal year 1998

Region	Total number of allotments	Acres with range vegetation management objectives	Acres meeting or moving toward FP objectives	Acres not meeting or moving toward FP objectives	Acres of undetermined status	Acres monitored in FY 1998
Northern (R-1)	1,552	4,634,797	3,878,594	768,887	0	1,310,459
Rocky Mountain (R-2)	2,221	11,518,142	8,729,033	545,078	2,242,771	2,881,654
Southwest (R-3)	1,393	18,037,916	11,475,325	3,931,528	2,636,063	6,181,724
Intermountain (R-4)	1,706	19,547,296	15,323,356	1,353,981	2,799,421	5,224,344
Pacific Southwest (R-5)	731	7,111,395	3,629,212	179,148	3,305,035	2,006,051
Pacific Northwest (R-6)	711	10,252,719	7,370,236	290,202	2,587,964	2,823,446
Southern (R-8)	454	1,169,953	928,331	177,313	64,642	251,176
Eastern (R-9)	15	64,835	60,933	22	3,880	50,349
Total	8,783	72,337,053	51,395,020	7,246,159	13,639,776	20,729,203

Table 25--Status of NFS acres within grazing allotments with range vegetation management objectives--fiscal year 1998--Continued

Region	Total riparian acres	Riparian acres meeting or moving toward FP objectives	Riparian acres not meeting or moving toward FP objectives	Riparian acres of undetermined status	Riparian acres monitored in FY 1998
Northern (R-1)	193,904	142,175	49,457	2,272	56,262
Rocky Mountain (R-2)	517,620	355,841	36,880	124,899	116,495
Southwest (R-3)	244,519	154,670	59,249	30,600	78,557
Intermountain (R-4)	620,770	489,984	63,065	67,721	185,600
Pacific Southwest (R-5)	354,209	198,159	18,991	137,059	87,473
Pacific Northwest (R-6)	474,905	312,927	27,498	134,480	116,312
Southern (R-8)	59,785	31,011	2,301	26,473	2,886
Eastern (R-9)	860	860	0	0	860
Total	2,466,572	1,685,627	257,441	523,504	644,445

Table 26--Pesticide use report-fiscal year 1998

Common Name	Management Objective	Treatment Unit	Units Treated	Quantity Used Pounds 1/
Fungicides and Fumigants:				
Basamid	Soil Fumigation	Acres	13.71	4,704.00
Benomyl	Nursery Disease Control	Acres	47.01	46.01
Borax	Disease Control	Acres	544.00	410.00
	Fungus Control	Acres	37,706.50	28,871.00
	Seed Orchard Protection	Acres	7.00	5.00
Carboxin/Thiram	Nursery Disease Control	Square Ft	300.00	.48
Chloropicrin	Nursery Disease Control	Acres	17.70	7,060.00
	Soil Fumigation	Acres	5.50	834.50
Chlorothaloni	Disease Control	Acres	30.75	4.90
	Nursery Disease Control	Acres	16.09	65.64
	Seed Orchard Protection	Trees	400.00	2.00
Daconil	Fungus Control	Acres	38.25	57.38
	Seed Orchard Protection	Acres	10.00	.05
Dazomet	Nursery Disease Control	Acres	49.30	17,400.00
	Soil Fumigation	Acres	11.32	3,997.62
Dicloran	Nursery Disease Control	Acres	.69	.75
	Nursery Disease Control	Square Ft	47,392.00	10.76
Dimethyl benzyl	Nursery Disease Control	Acres	.20	.50
Iprodione	Nursery Disease Control	Acres	3.05	3.86
Metalaxyl	Nursery Disease Control	Square Ft	1,096.00	1.02
Methyl bromide	Nursery Disease Control	Acres	68.00	18,763.00
	Soil Fumigation	Acres	1.75	1,683.15
Propiconazole	Fungus Control	Acres	21.83	3.43
	Nursery Disease Control	Acres	50.15	1.35
Syllit	Fungus Control	Acres	7.00	9.10
Thiophanate-methyl	Fungus Control	Acres	95.50	47.75
	Nursery Disease Control	Acres	6.30	3.40
	Nursery Disease Control	Square Ft	90,952.00	9.00
Thiram	Nursery Disease Control	Lbs. of Seed	103.00	4.31
Triadimefon	Nursery Disease Control	Acres	30.00	16.79
	Nursery Disease Control	Lbs. of Seed	199.00	.50
	Nursery Disease Control	Square Ft	396.00	.02
Vinclozolin	Nursery Disease Control	Square Ft	13,432.00	1.80
			---	---
Total 1998 Fungicides and Fumigants:		Acres	38,781.60	
		Lbs. of Seed	302.00	
		Square Ft	153,568.00	
		Trees	400.00	
			---	---
				84,019.14 lbs

Table 26--Pesticide use report-fiscal year 1998--Continued

Common Name	Management Objective	Treatment Unit	Units Treated	Quantity Used Pounds 1/
Herbicides, Algicides, and Plant Growth Regulators:				
2,4-D	Agricultural Weed Control	Acres	58.70	85.06
	Conifer Release	Acres	.00	4.00
	Housekeeping/Facilities Mtc	Acres	8.00	11.65
	Noxious Weed Control	Acres	9,199.27	8,931.82
	Nursery Weed Control	Acres	30.00	7.90
	Right-of-Way Veg Mgmt	Acres	1.00	97.30
	Seed Orchard Protection	Acres	81.60	140.20
Bromacil	Housekeeping/Facilities Mtc	Acres	6.50	10.90
	Right-of-Way Veg Mgmt	Acres	2.50	6.00
Chlorsulfuron	Noxious Weed Control	Acres	111.00	9.84
Chorothalonil	Nursery Disease Control	Acres	23.00	34.50
Clopyralid	Housekeeping/Facilities Mtc	Acres	25.00	7.50
	Noxious Weed Control	Acres	4,159.10	850.79
	Right-of-Way Veg Mgmt	Acres	8.00	5.58
Dicamba	Noxious Weed Control	Acres	6,550.17	1,953.89
	Noxious Weed Control	Lbs. of Seed	.00	10.04
	Nursery Weed Control	Acres	2.25	2.25
Dimethyl phenylenebis	Noxious Weed Control	Acre	28.14	11.70
	Nursery Disease Contro	Acres	1.00	.25
Diuron	Housekeeping/Facilities Mtc	Acres	626.50	19.70
	Right-of-Way Veg Mgmt	Acres	40.00	192.00
Flumetsulam	Noxious Weed Control	Acres	.00	.21
	Right-of-Way Veg Mgmt	Acres	5.58	1.96
Fosamine ammonium	Noxious Weed Control	Acres	78.70	40.89
	Right-of-Way Veg Mgmt	Acres	34.00	1,259.20
Glyphosate	Agricultural Weed Control	Acres	2,080.00	129.00
	Animal Damage Control	Acres	.30	.30
	Aquatic Weed Control	Acres	.50	1.00
	Conifer Release	Acres	6,324.00	11,711.40
	Hardwood Control	Acres	89.00	64.00
	Housekeeping/Facilities Mtc	Acres	402.30	617.34
	Noxious Weed Control	Acres	1,076.46	481.23
	Nursery Weed Control	Acres	492.00	1,235.10
	Recreation Improve	Acres	2.00	4.50
	Right-of-Way Veg Mgmt	Acres	273.75	636.99
	Seed Orchard Protection	Acres	155.35	269.38
	Site Preparation	Acres	4,292.30	9,546.39
	Site Preparation	Lbs. of Seed	147.00	81.00
	Wildlife Habitat Improve	Acres	307.60	1,249.52
Halosulfonmethyl	Nursery Weed Control	Acres	.50	.03
Hexazinone	Animal Damage Control	Acres	.30	.45
	Conifer Release	Acres	1,963.00	3,455.20
	Housekeeping/Facilities Mtc	Acres	41.5	.18
	Research	Acres	23.00	12.50
	Site Preparation	Acres	5,719.00	12,289.60

Table 26--Pesticide use report-fiscal year 1998--Continued

Common Name	Management Objective	Treatment Unit	Units Treated	Quantity Used Pounds 1/	
Imazapyr	Conifer Release	Acres	1,810.00	274.00	
	Conifer/Hardwood Release	Acres	591.00	31.60	
	Housekeeping/Facilities Mtc	Acres	12.00	4.00	
	Noxious Weed Control	Acres	5.00	6.00	
	Right-of-Way Veg Mgmt	Acres	72.40	41.10	
	Site Preparation	Acres	1,802.00	687.96	
Imidizole	Noxious Weed Control	Acres	90.00	54.53	
Metsulfuron-methyl	Noxious Weed Control	Acres	2,909.31	100.57	
Oryzalin	Noxious Weed Control	Acres	.00	1.00	
Oxyfluorfen	Housekeeping/Facilities Mtc	Acres	2.50	1.00	
	Nursery Weed Control	Acres	222.74	325.16	
Paraquat	Housekeeping/Facilities Mtc	Acres	5.00	.63	
Picloram	Agricultural Weed Control	Acres	141.00	12.50	
	Noxious Weed Control	Acres	30,667.28	12,248.95	
Prometon	Recreation Improve	Acres	2.00	1.50	
Rhinocyllus conicus	Noxious Weed Control	Trtmnt Stations	500.00	500.00	Insects
Sethoxydim	Nursery Weed Control	Acre	38.56	41.01	
Simazine	Nursery Weed Control	Acres	15.98	4.20	
Sodium Bentazon	Nursery Weed Control	Acres	.10	.06	
Sulfometuron-methyl	Conifer Release	Acres	.00	16.80	
	Housekeeping/Facilities Mtc	Acres	5.00	5.00	
	Noxious Weed Control	Acres	9.20	.56	
	Right-of-Way Veg Mgmt	Acres	.00	6.00	
	Site Preparation	Acres	478.00	190.44	
Tebuthiuron	Noxious Weed Control	Acres	5.00	.60	
Triclopyr	Agricultural Weed Contro	Acres	300.00	200.00	
	Conifer Release	Acres	6,525.00	6,587.20	
	Conifer/Hardwood Release	Acres	117.00	135.00	
	Conifer/Hardwood Thinning	Acres	109.00	81.00	
	Hardwood Control	Acres	1,217.00	866.70	
	Housekeeping/Facilities Mtc	Acres	128.50	96.00	
	Noxious Weed Control	Acres	118.50	388.67	
	Research	Acres	74.30	27.06	
	Right-of-Way Veg Mgmt	Acres	368.00	818.00	
	Seed Orchard Protection	Acres	.40	.70	
	Site Preparation	Acres	10,244.00	9,237.25	
	Wildlife Habitat Improve	Acres	1,918.00	680.90	
Total 1998 Herbicides, Algicides, Plant Growth Reg.:		Acres	105,758.54		
		Lbs. of Seed	147.00		
		Trtmnt Stations	500.00		
				500.00	Insects
				90,075.38	lbs

Table 26--Pesticide use report-fiscal year 1998--Continued

Common Name	Management Objective	Treatment Unit	Units Treated	Quantity Used Pounds 1/
Insecticides, Acaricides, and Pheromones:				
Acephate	Housekeeping/Facilities Mtc	Acres	.50	.11
	Insect Suppression	Acres	5.00	12.00
	Insect Suppression	Square Ft	1,108.00	.13
	Nursery Insect Control	Acres	5.00	3.75
	Nursery Insect Control	Ribes Plants	712.00	.15
	Nursery Insect Control	Square Ft	8,512.00	.50
Bacillus thuringiensis	Insect Eradication	Acres	1,615.00	10,260.00 BIU
	Nursery Insect Control	Acres	.20	16.00 BIU
	Seed Orchard Protection	Acres	13.00	80.00 BIU
Bifenthrin	Insect Eradication	Acres	16.00	2.00
	Insect Suppression	Square Ft	1,864.00	.08
Carbaryl	Insect Suppression	Acres	120.00	225.40
	Nursery Insect Control	Acres	3.00	5.40
	Nursery Insect Control	Seedlings	56,500.00	.75
	Seed Orchard Protection	Acres	8.00	4.10
Chlorpyrifos	Insect Eradication	Acres	16.00	2.00
	Insect Suppression	Acres	14.00	20.21
	Nursery Insect Control	Acres	18.83	15.33
Coumaphos	Insect Suppression	Head of Cattle	3,800.00	2.00
Crop oil	Insect Suppression	Acres	40.00	1,470.00
Cyfluthrin	Insect Suppression	Acres	4.00	.13
Cypermethrin	Insect Suppression	Acres	4.00	.19
DDVP	Research	Acres	10.00	.11
Diazinon	Housekeeping/Facilities Mtc	Acres	20.00	2.10
	Nursery Disease Control	Square Ft	1,000.00	.50
	Nursery Insect Control	Acres	37.00	4.00
	Vector/Plague Suppression	Acres	1,029.00	31.24
Dienochlor	Nursery Insect Control	Ribes Plants	60.00	.03
Dimethoate	Nursery Insect Control	Acres	23.50	11.76
Disparlure	Insect Suppression	Acres	685.00	25.50
Dursban	Seed Orchard Protection	Acres	4.00	1.70
Esfenvalerate	Nursery Insect Control	Acres	103.00	4.90
Fenbutatin-oxide	Insect Suppression	Square Ft	1,648.00	.20
	Nursery Insect Control	Ribes Plants	67.00	.05
Fenvalerate	Nursery Insect Control	Acres	.34	.03
Hydramethylnon	Insect Suppression	Acres	15.50	28.70
Lindane	Insect Suppression	Acres	.10	1.00
Malathion	Nursery Insect Control	Acres	.20	.28
	Seed Orchard Protection	Acres	20.00	5.00
N-octyl bicycloheptene	Insect Suppression	Acres	.00	.01
Nuclear polyhedrosis virus	Insect Eradication	Acres	1,500.00	3,750.00 x 10^12PIB
	Insect Suppression	Square Ft	1,108.00	.13 x 10^12PIB
Orthene	Nursery Insect Control	Acres	.57	1.25

Table 26--Pesticide use report-fiscal year 1998--Continued

Common Name	Management Objective	Treatment Unit	Units Treated	Quantity Used Pounds 1/
Permethrin	Seed Orchard Protection	Acres	27.24	1.53
Piperonyl-butoxide	Insect Suppression	Acres	.00	.00
Potassium salts	Insect Suppression	Acres	27.00	1,402.00
Pyrethrins	Insect Suppression	Acres	1.00	.00
		Acres	5,385.98	
		Head of Cattle	3,800.00	
		Ribes Plants	839.00	
		Seedlings	56,500.00	
		Square Ft	15,588.00	
				10,356.00 BIU
				3,750.13 x 10^12PIB
				3,286.13 lbs

Table 26--Pesticide use report-fiscal year 1998--Continued

Common Name	Management Objective	Treatment Unit	Units Treated	Quantity Used Pounds 1/
Predacide, Piscicides and Repellents:				
Putrescent egg solids	Animal Damage Control	Acres	10,074.00	1,372.36
Rotenone	Fish Eradication	Stream Miles	32.00	19.90
Thiram	Animal Damage Control	Acres	2.00	28.00
	Animal Damage Control	Lbs. of Seed	991.00	80.00
Thymol	Animal Damage Control	Acres	2.00	23.00
Zinc phosphide	Animal Damage Control	Acres	920.06	6.40
Total 1998 Predacide, Piscicides and Repellents:		Acres	10,998.06	
		Lbs. of Seed	991.00	
		Stream Miles	32.00	
				1,529.65 lbs

Table 26--Pesticide use report-fiscal year 1998--Continued

Common Name	Management Objective	Treatment Unit	Units Treated	Quantity Used Pounds 1/
Rodenticides:				
Bromadiolone	Housekeeping/Facilities Mtc	Acres	23.00	.14
Diphacinone	Housekeeping/Facilities Mtc	Acres	80.00	.03
	Recreation Improve	Acres	10.00	.50
	Seed Orchard Protection	Acres	78.00	.03
Strychnin	Animal Damage Control	Acres	39,228.06	324.45
	Seed Orchard Protection	Acres	14.00	.01
Total 1998 Rodenticides:		Acres	39,433.06	330.16 lbs

Grand total 1998 units treated

Acres	200,357.24
Head of Cattle	3,800.00
Lbs. of Seed	1,440.00
Ribes Plants	839.00
Seedlings	56,500.00
Square Ft	169,156.00
Stream Miles	32.00
Trtmnt Stations	500.00
Trees	400.00

Grand total 1998 amounts of active ingredients used

10,356.00 BIU
500.00 Insects
3,750.13 x 10^12 PIB
179,240.46 lbs

1/ Pounds of active ingredient, unless other units are indicated: BIU (billion international units), PIB (polyhedral inclusion bodies), Insects.

NOTE: Totals may not be exact due to rounding.


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Table 27--Total recreation visits on National Forest System lands by State--fiscal years 1994-98

State, Commonwealth, or Territory 2/	1998 1/	1997 1/	1996	1995	1994
			1,000 visits 3/		
Alabama			1,406.0	1,242.9	1,277.3
Alaska			17,181.0	10,648.2	12,912.9
Arizona			72,044.0	72,196.9	80,471.8
Arkansas			5,909.0	5,448.8	5,260.3
California			195,880.0	181,032.6	178,676.2
Colorado			60,488.1 4/	60,488.1	62,741.5
Florida			8,878.0	9,472.0	9,472.3
Georgia			8,332.0	8,768.4	8,456.1
Idaho			23,201.0	22,252.6	21,526.7
Illinois			1,034.0	985.0	985.0
Indiana			525.0	510.0	230.0
Kansas			184.0	181.3	180.0
Kentucky			5,670.0	5,590.7	5,380.4
Louisiana			1,748.0	1,737.1	1,951.8
Maine			1,000.0	1,000.0	397.3
Michigan			9,997.0	8,943.6	9,317.0
Minnesota			12,833.0	8,896.9	8,743.8
Mississippi			3,827.0	2,632.2	2,517.0
Missouri			7,299.0	6,467.6	6,041.6
Montana			31,836.0	30,820.8	27,106.4
Nebraska			528.0	618.3	766.8
Nevada			21,423.0	24,169.0	22,867.3
New Hampshire			5,500.0	5,500.0	11,347.0
New Mexico			12,644.0	12,685.5	12,438.5
New York			19.0	51.7	17.2
North Carolina			20,935.0	19,905.8	18,043.8
North Dakota			387.0	385.0	375.0
Ohio			900.0	900.0	1,000.0
Oklahoma			1,868.0	1,790.3	1,799.6
Oregon			97,465.0 5/	97,465.7	97,465.7
Pennsylvania			13,837.0	14,795.5	11,630.0
Puerto Rico			630.0	700.0	963.5
South Carolina			2,532.0	2,549.4	2,519.8
South Dakota			6,173.0	6,022.3	6,082.4
Tennessee			9,911.0	9,504.6	8,875.8

Table 27--Total recreation visits on National Forest System lands by State--fiscal years 1994-98--Continued

State, Commonwealth, or Territory 2/	1998 1/	1997 1/	1996	1995	1994
			1,000 visits 3/		
Texas			3,712.0	3,852.8	3,715.9
Utah			44,105.0	43,554.5	46,178.5
Vermont			2,699.0 5/	2,698.0	3,434.7
Virginia			18,755.0	17,862.4	17,861.4
Washington			97,456.0 5/	97,456.0	97,456.0
West Virginia			4,284.0	4,156.3	4,413.2
Wisconsin			9,981.0	10,134.4	9,425.6
Wyoming			14,266.0	13,683.9	12,915.8
Total			859,282.1	829,757.1	835,238.9

1/ FY 1997 and 1998 data unavailable.
2/ Unlisted States have no Forest Service recreation programs.
3/ One visit is an entry of one person upon a national forest for the purpose of participating in one or more recreation activity for an unspecified period of time. Only the "primary" activity of the recreation visitor is recorded.
4/ Visits for Colorado are for 1995; data not available for 1996.
5/ Visits for Oregon and Washington are 1994 data; 1995 and 1996 data not available.

Table 28--Trail miles on the National Forest System by State--fiscal years 1996-98

State, Commonwealth, or Territory 2/	1998 1/			1997 1/			1996		
	Total	Construct/ Reconst 3/	Maintained	Total	Construct/ Reconst 3/	Maintained	Total	Construct/ Reconst 3/	Maintained
Alabama							294.0	21.0	160.0
Alaska							861.0	34.0	394.0
Arizona							4,537.0	74.0	1,110.0
Arkansas							961.0	12.0	536.0
California							18,158.0	316.0	8,662.0
Colorado							9,551.0	75.0	5,233.0
Florida							442.0	4.0	420.0
Georgia							760.0	4.0	427.0
Idaho							20,269.0	377.0	8,704.0
Illinois							302.0	24.0	64.0
Indiana							225.0	6.0	225.0
Kansas							56.0	0.0	31.0
Kentucky							511.0	12.0	142.0
Louisiana							323.0	30.0	167.0
Maine							134.0	0.0	134.0
Michigan							2,711.0	6.0	1,446.0
Minnesota							2,198.0	18.0	2,198.0
Mississippi							352.0	6.0	145.0
Missouri							747.0	36.0	747.0
Montana							18,024.0	137.0	10,399.0
Nebraska							82.0	2.0	82.0
Nevada							1,665.0	39.0	182.0
New Hampshire							1,543.0	18.0	1,543.0
New Mexico							4,389.0	28.0	926.0
New York							38.0	2.0	38.0
North Carolina							1,713.0	6.0	97.0
North Dakota							53.0	14.0	35.0
Ohio							323.0	12.0	263.0
Oklahoma							195.0	1.0	123.0
Oregon							11,494.0	115.0	7,905.0
Pennsylvania							655.0	1.0	655.0
Puerto Rico							24.0	1.0	7.0
South Carolina							431.0	7.0	166.0
South Dakota							403.0	11.0	292.0
Tennessee							741.0	6.0	79.0
Texas							275.0	50.0	43.0
Utah							6,431.0	74.0	3,351.0
Vermont							1,027.0	21.0	832.0
Virginia							1,867.0	11.0	249.0
Washington							9,117.0	38.0	6,873.0
West Virginia							983.0	0.0	742.0
Wisconsin							1,699.0	12.0	1,133.0
Wyoming							6,523.0	35.0	2,547.0
Total							133,087.0 4/	1,696.0	69,507.0

1/ FY 1997 and 1998 data unavailable.

2/ Unlisted States have no Forest Service recreation programs

3/ Miles constructed include construction of new trails and reconstruction of existing trails. The predominant activity is reconstruction, funds used are appropriated.

4/ In FY 1996, does not include 454 contributed miles.

Table 29--Payment of States from national forest receipts--fiscal years 1996-98 1/

State, Commonwealth, or Territory 2/	FY 1998	FY 1997	FY 1996
		Dollars actual	
Alabama	1,132,837.61	964,419.35	2,049,877.80
Alaska	1,820,091.50	1,186,861.51	5,905,519.94
Arizona	2,112,822.86	2,214,865.38	1,631,749.08
Arkansas	6,583,562.29	5,954,070.48	6,648,382.02
California	30,533,384.80	33,962,946.42	36,157,525.82
Colorado	5,045,264.85	4,387,767.22	5,955,613.62
Florida	1,434,607.96	999,545.83	1,066,315.90
Georgia	328,311.76	698,906.48	907,778.79
Idaho	12,468,422.21	14,267,098.19	17,457,711.74
Illinois	394,100.70	17,395.99	27,727.21
Indiana	138,294.11	25,818.99	7,410.94
Kentucky	254,852.82	433,327.54	494,031.96
Louisiana	2,360,550.67	2,948,815.75	2,735,547.25
Maine	37,218.91	29,962.76	34,773.87
Michigan	2,995,680.41	2,759,083.22	2,384,195.64
Minnesota	3,412,495.17	2,921,889.97	3,179,462.34
Mississippi	5,399,465.46	4,919,049.16	8,276,153.99
Missouri	1,237,033.09	1,149,262.82	1,231,668.46
Montana	10,366,665.72	8,558,089.72	9,383,236.30
Nebraska	33,188.25	31,738.20	30,563.25
Nevada	329,556.48	387,649.20	298,540.38
New Hampshire	548,524.95	440,059.80	510,233.26
New Mexico	854,154.64	923,233.20	652,646.23
New York	2,215.54	6,389.69	6,375.28
North Carolina	594,302.06	653,563.62	692,308.54
North Dakota	57.33	63.44	82.02
Ohio	2,241.43	16,379.83	11,399.70
Oklahoma	1,034,363.08	1,016,643.21	883,416.06
Oregon	85,505,449.53	92,242,534.29	95,238,952.66
Pennsylvania	5,800,446.38	5,998,106.69	6,207,364.12
Puerto Rico	24,408.87	22,527.37	20,837.85
South Carolina	557,227.68	1,292,387.27	960,281.44
South Dakota	3,663,436.84	3,814,006.24	2,349,598.42
Tennessee	326,855.64	440,144.51	319,484.79
Texas	5,620,631.20	2,264,469.21	4,337,308.72
Utah	1,511,626.92	1,598,864.83	1,831,244.84
Vermont	435,564.94	225,878.43	256,960.60
Virginia	767,354.09	789,579.79	822,089.27
Washington	27,073,257.08	28,425,142.05	29,429,025.66
West Virginia	1,944,308.51	1,623,548.54	1,860,935.47
Wisconsin	2,165,773.84	1,861,110.53	1,621,386.26
Wyoming	2,184,110.74	1,849,057.36	1,844,048.53
Total	229,034,718.92	234,322,254.08	255,719,766.02

1/ Data source: All Service Receipts - ASR-09-3.

Table 30--Summary of selected cooperative forest management and processing program activities--selected fiscal years--1945-98

Fiscal year	Woodland owners assisted	Timber sale assistance-volume marked	Loggers and processors assisted
	Number	*MBF 1/*	*Number*
1945	8,093	411,330	0
1950	22,828	518,566	0
1955	34,828	549,373	8,182
1960	82,188	569,178	8,099
1965	99,074	716,950	9,248
1970	115,197	1,225,520	13,620
1971	127,828	860,950	14,627
1972	274,001	955,627	5,290
1973	106,422	1,578,664	4,855
1974	117,990	907,311	5,353
1975	140,940	677,532	5,405
1976	105,184	596,599	15,318
1976-77 (T.Q.)f 2/	25,253	220,649	5,849
1977	133,619	921,171	29,101
1978	165,329	1,120,743	12,749
1979	183,585	755,103	11,393
1980	176,385	870,964	11,582
1981	164,279	683,181	18,609
1982	141,472	841,475	15,470
1983	136,265	872,125	8,717
1984	151,539	1,033,440	10,082 3/
1985	134,338	913,411	- 4/
1986	137,753	855,813	-
1987	158,353	1,225,896	-
1988	167,432	890,581	-
1989	153,855	1,242,564	-
1990	148,673	1,597,931	-
1991	153,090	1,697,861	-
1992	190,211	791,462	-
1993	190,256	950,178	-
1994	152,189	1,313,946	-
1995	192,618	1,274,902	-
1996	214,517	1,372,380	-
1997	186,824	1,864,805	-
1998	146,746	2,380,079	-

1/ MBF = thousand board feet.
2/ Transition quarter.
3/ Not all States reported.
4/ - = inadequate data due to lack of State grants in wood utilization program.





Table 31--Summary of selected cooperative forest management and processing activities by region--fiscal year 1998 (NIPF lands)

Assistance activity	Unit of measure	Regions R-1 Northern	R-2 Rocky Mountain	R-3 South-western	R-4 Inter-mountain	R-5 Pacific Southwest	IF Puerto Rico
Woodland owners assisted	Number	2,365	7,002	317	570	4,895	427
Forest management plans prepared 1/	Number	91	409	45	127	5	5
	Acres	5,660	22,289	20,219	94,048	18,335	71
Reforestation:							
Planting	Acres	4,261	16,647	404	61	11,471	39
Seeding	Acres	342	568	30	0	0	0
Timber stand improvement 2/	Acres	4,867	2,099	430	6	6,596	56
Outdoor recreation development	Acres	247	639	6,842	635	33	165
Wildlife habitat development	Acres	2,734	3,803	11,625	3,184	866	26
Timber sale assistance volume harvested	MBF	31,569	5,199	122	13,660	96	0
	MCF	7,699	2,901	438	0	0	0
Urban forestry assistance activities	Urban areas assisted	552	960	283	132	1,017	146
Referrals to consulting foresters	Number	168	288	64	27	166	

See footnotes at end of table.

Table 31--Summary of selected cooperative forest management and processing activities by region--fiscal year 1998 (NIPF lands)--Continued

Assistance activity	Unit of measure	Regions R-6 Pacific Northwest	R-8 Southern	R-10 Alaska	NA Northeastern Area	Total
Woodland owners assisted	Number	4,881	50,836	78	75,375	146,746
Forest management plans prepared 1/	Number	187	21,527	4	5,398	27,798
	Acres	5,512	1,303,635	631	336,118	1,806,518
Reforestation:						
Planting	Acres	24,336	1,018,741	2,397	65,348	1,143,705
Seeding	Acres	0	71,912	0	629	73,481
Timber stand improvement 2/	Acres	18,050	151,186	2,838	79,333	265,461
Outdoor recreation development	Acres	240	136,679	0	31,791	177,271
Wildlife habitat development	Acres	7,949	282,401	63	145,354	458,005
Timber sale assistance volume harvested	MBF	13,044	579,439	4,471	1,732,479	2,380,079
	MCF	0	90,409	0	27,323	128,770
Urban forestry assistance activities	Urban areas assisted	247	2,452	14	4,233	10,036
Referrals to consulting foresters	Number	666	8,142	8	13,152	22,681

1/ Forest stewardship program plans and acres separately recorded in table 10.
2/ TSI acres were for nonindustrial private landowners only.

Table 32--Summary of selected cooperative forest management and processing activities by State--fiscal year 1998

State, Commonwealth, or Territory	Woodland owners assisted	Reforestation assistance	Timber stand improvement assistance	Timber sale assistance--harvest volume	State nursery production
	Number	*Acres*	*Acres*	*1,000 cubic feet*	*1,000 trees*
Alabama	14,854	162,330	76,647	0	41,500
Alaska	78	2,397	2,838	0	0
American Samoa	167	24	2	0	0
Arizona	193	12	430	438	0
Arkansas	5,030	47,000	350	0	15,000
California	3,402	10,318	2,144	0	2,230
Colorado	4,397	5,606	776	2,852	2,078
Connecticut	522	127	8,573	0	550
Delaware	157	1,123	0	0	0
Florida	167	67,322	1,153	567	24,821
Federated States of Micronesia	193	37	0	0	0
Georgia	484	259,194	7,613	0	47,447
Guam	38	20	0	0	0
Hawaii	488	983	1,450	0	585
Idaho	960	1,203	2,653	2,742	517
Illinois	6,961	8,392	12,661	0	0
Indiana	4,476	1,290	9,743	0	4,500
Iowa	4,191	6,393	3,206	0	2,726
Kansas	916	1,463	251	48	186
Kentucky	2,506	3,602	26,084	0	6,500
Louisiana	5,288	27,820	4,491	893	40,282
Maine	9,675	927	4,732	0	0
Marshall Islands	504	20	3,000	0	800
Maryland	3,285	6,250	5,375	0	2,642
Massachusetts	3,196	14	20,455	0	0
Michigan	1,650	0	0	0	4,500
Minnesota	4,831	8,699	3,566	0	12,000
Mississippi	0	243,188	26,912	0	0
Missouri	0	2,250	0	0	0
Montana	1,127	418	1,535	4,545	726
Nebraska	1,060	4,089	177	0	0
Nevada	337	61	6	0	206
New Hampshire	2,387	0	0	0	0
New Jersey	881	105	0	0	417
New Mexico	123	392	0	0	157
New York	3,503	197	1,646	0	2,837
North Carolina	8,803	77,367	5,509	0	31,252
North Dakota	278	2,640	679	412	1,329
Northern Mariana Islands	4	6	0	0	0
Ohio	4,298	2,571	4,247	0	4,770
Oklahoma	1,118	5,568	2,072	22	7,686
Oregon	2,257	0	0	0	0
Palau	100	63	0	0	0
Pennsylvania	6,147	2,995	0	4,035	0
Republic of the Marshall Islands	0	0	0	0	0
Puerto Rico	425	39	56	0	0

Table 32--Summary of selected cooperative forest management and processing activities by State--fiscal year 1998--Continued

State, Commonwealth, or Territory	Woodland owners assisted	Reforestation assistance	Timber stand improvement assistance	Timber sale assistance--harvest volume	State nursery production
	Number	*Acres*	*Acres*	*1,000 cubic feet*	*1,000 trees*
Rhode Island	146	37	384	621	0
South Carolina	5,030	48,373	0	0	23,278
South Dakota	482	4,464	230	1	0
Tennessee	2,684	9,717	355	762	13,000
Texas	1,220	67,260	0	129	26,000
Utah	233	0	0	0	0
Vermont	2,044	45	4,745	0	0
Virgin Islands	2	0	0	0	0
Virginia	3,652	0	0	88,036	44,408
Washington	2,624	24,336	18,050	0	11,000
West Virginia	6,650	1,980	0	0	0
Wisconsin	10,375	21,953	0	22,667	20,625
Wyoming	147	1,025	665	0	0
Total	146,746	1,143,705	265,461	128,770	396,555

Table 33--Timber offered, sold, and harvested--fiscal years 1994-98 1/

	1998	1997	1996	1995	1994
Offered					
Volume (billion board feet)	3.4	4.0	4.0	4.0	3.4
Volume (billion cubic feet) 2/	(0.65)	(0.76)	(0.75)	(0.77)	(0.65)
Sold					
Number of sales 3/	165,697	232,110	190,123	216,272	215,004
Volume (billion board feet)	3.0	3.7	3.4	2.9	3.1
Volume (billion cubic feet) 4/	(0.59)	(0.74)	(0.68)	(0.58)	(0.61)
Value (million dollars) 5/	365.6	494.0	450.5	369.7	508.9
Harvested					
Volume (billion board feet)	3.3	3.3	3.7	3.9	4.8
Volume (billion cubic feet) 4/	(0.66)	(0.66)	(0.74)	(0.77)	(0.96)
Value (million dollars) 5/	445.8	498.0	544.3	616.1	783.0

1/ Offer data comes from the Periodic Timber Sale Accomplishment Report. Sold and Harvest data comes from cut and sold data in the Automated Timber Sale Accounting System (ATSA).

2/ FY 1996 - FY 1998 data come from the Sales Tracking and Accomplishment Reporting System (STARS). FY 1994 - FY 1995 data use conversion factors from the 1990 RPA Program, which vary by region.

3/ Convertible products sales only.

4/ Until cubic information is available from the cut and sold report, conversion from BBF to BCF is calculated at 5 BF per CF, then rounded. Data for FY 1994-96 has been changed here to reflect this.

5/ Convertible products sales only. Includes reforestation, stand improvement, and timber salvage deposits. Does not include value of roads or brush disposal.

Table 34--Timber offered, sold, and harvested by region--fiscal years 1997-98

	1998						1997					
	Offered 1/		Sold 2/ 3/		Harvested 4/		Offered 1/		Sold 2/ 3/		Harvested 4/	
	MMBF	MMCF	MMBF	MMCF	MMBF	MMCF	MMBF	MMCF	MMBF	MMCF	MMBF	MMCF
Northern (R-1)	290.7	63.0	277.6	55.5	362.8	72.6	417.0	88.4	429.3	85.9	316.7	63.3
Rocky Mountain (R-2)	174.5	35.3	165.2	33.0	154.4	30.9	223.0	45.4	169.3	33.9	123.6	24.7
Southwestern (R-3)	148.5	26.4	102.9	20.6	93.8	18.8	123.9	21.6	88.9	17.8	83.3	16.7
Intermountain (R-4)	196.6	35.8	138.1	27.6	169.5	33.9	191.3	35.7	195.1	39.0	221.2	44.2
Pacific Southwest (R-5)	463.6	91.0	425.3	85.1	474.2	94.8	667.3	126.0	597.9	119.6	505.2	101.0
Pacific Northwest (R-6)	789.7	152.2	652.3	130.5	662.4	132.5	951.2	186.7	870.5	174.1	767.9	153.6
Southern (R-8)	649.7	118.1	667.3	133.5	636.7	127.3	682.4	124.1	606.6	121.3	571.6	114.3
Eastern (R-9)	514.7	82.9	502.3	100.5	622.7	124.5	568.1	91.5	568.3	113.7	587.0	117.4
Alaska (R-10)	187.2	41.0	24.3	4.9	121.2	24.2	177.0	43.5	161.5	32.3	108.8	21.8
Total 5/	3,415.3	645.8	2,995.3	591.1	3,297.8	659.6	4,001.1	762.8	3,687.7	737.5	3,285.3	657.1

MMBF = million board feet; MMCF = million cubic feet.

1/ Sales offered for the fiscal year being displayed. Offer data comes from the Periodic Timber Sale Accomplishment Report.

2/ Includes sales offered in prior fiscal years and sold in the fiscal year being displayed, and miscellaneous small sales that were previously offered and/or sold and were reoffered and sold in the fiscal year being displayed. Does not include the volume of long-term sales released for harvesting.

3/ Sold and offered will not be equal since some sales were not sold (awarded) in the same fiscal year in which they were offered. Some sales did not receive any bids, or were withdrawn. Sold data comes from the cut and sold report. Conversion is 5 BF per CF until cubic data can be geenrated from cut and sold report.

4/ Includes the volume harvested on long-term sales. Harvest data comes from the cut and sold report. Conversion is 5 BF per CF until cubic data can be generated from cut and sold report.

5/ Totals are actual; Regional figures are rounded and may not add to totals.

Table 35--Timber sold and harvested by State--fiscal year 1998 1/

State or Commonwealth 2/	Timber sold				Timber harvested		
	Sales	Volume		Bid value 3/	Volume		Receipts 3/
		MMBF	*MMCF*		*MMBF*	*MMCF*	
Alabama	582	28.7	5.734	$3,618,839	32.8	6.569	$4,310,973
Alaska	153	24.3	4.857	$1,202,513	121.2	24.239	$5,028,693
Arizona	10,591	73.4	14.676	$3,906,340	63.3	12.661	$2,996,046
Arkansas	1,700	173.0	34.596	$38,704,469	152.5	30.492	$26,310,829
California	34,227	421.5	84.307	$39,370,802	474.3	94.863	$56,027,662
Colorado	7,542	67.2	13.449	$4,456,105	58.1	11.622	$4,852,254
Florida	91	42.7	8.531	$4,760,903	51.2	10.246	$4,801,932
Georgia	557	19.6	3.926	$2,127,256	13.8	2.750	$1,012,180
Idaho	15,598	207.1	41.410	$32,011,161	252.2	50.448	$41,414,726
Illinois	48	0.1	0.011	$535	0.1	0.018	$4,588
Indiana	54	0.3	0.067	$4,793	5.7	1.146	$542,316
Kentucky	628	1.3	0.260	$27,071	9.4	1.886	$770,236
Louisiana	295	58.2	11.635	$12,334,261	48.5	9.709	$7,761,088
Maine	2	1.7	0.341	$123,099	2.1	0.416	$106,580
Michigan	605	185.2	37.031	$12,921,563	190.6	38.112	$11,830,858
Minnesota	177	115.5	23.101	$6,987,906	117.6	23.517	$7,683,829
Mississippi	441	122.0	24.399	$23,680,483	112.7	22.550	$18,728,292
Missouri	690	44.5	8.905	$5,388,291	52.3	10.452	$5,522,101
Montana	11,082	151.0	30.194	$19,143,960	220.2	44.045	$35,030,084
Nebraska	9	0.0	0.005	$1,515	0.0	0.004	$190
Nevada	1,767	5.6	1.119	$685,033	2.8	0.552	$132,465
New Hampshire	248	17.3	3.452	$1,194,224	24.8	4.962	$1,494,917
New Mexico	17,686	29.4	5.886	$815,826	30.4	6.078	$668,763
New York	8	0.0	0.004	$689	0.0	0.003	$649
North Carolina	895	29.6	5.926	$2,548,794	26.1	5.228	$1,895,139
North Dakota	45	0.1	0.012	$610	0.1	0.012	$610
Ohio	132	0.3	0.054	$15,496	0.2	0.037	$2,669
Oklahoma	45	14.1	2.810	$3,011,702	11.2	2.234	$1,973,200
Oregon	23,796	508.4	101.673	$69,786,306	519.1	103.814	$98,251,169
Pennsylvania	106	9.8	1.961	$5,517,831	51.1	10.216	$21,029,286
South Carolina	268	28.0	5.607	$2,765,011	18.6	3.722	$2,052,044
South Dakota	1,633	76.6	15.320	$9,751,255	60.7	12.143	$13,403,411
Tennessee	236	12.2	2.433	$1,262,610	12.4	2.474	$1,089,672
Texas	310	120.8	24.153	$20,834,795	118.2	23.633	$19,261,741
Utah	5,787	45.7	9.144	$4,584,172	46.7	9.342	$3,247,748
Vermont	89	5.8	1.158	$1,364,557	5.9	1.174	$1,239,407
Virginia	2,197	16.8	3.357	$1,300,661	28.3	5.658	$2,557,914
Washington	4,943	143.9	28.790	$17,033,681	145.8	29.157	$22,417,964
West Virginia	599	10.5	2.105	$2,008,186	25.7	5.138	$5,586,295
Wisconsin	1,224	111.9	22.389	$7,527,040	147.9	29.587	$9,197,324
Wyoming	18,611	31.4	6.270	$2,773,718	43.3	8.659	$5,535,814
Total	165,697	2,955.3	591.058	$365,554,063	3,297.8	659.567	$445,773,656

MMBF = million board feet. MMCF = million cubic feet. Conversion is 5 BF per CF until cubic data is available.
Columns may not add due to rounding.

1/ Data source is the cut and sold report. Excludes nonconvertible special forest products.
2/ Unlisted States had no timber sold or harvested in FY 1998.
3/ Includes reforestation and stand improvement costs and timber salvage. Does not include value of roads or brush disposal.

Table 36--Uncut timber volume under contract by region (all products)--fiscal years 1994-98

Region	1998 1/		1997 1/		1996 1/		1995 1/		1994 2/	
	MMBF /3	MMCF /4	MMBF /3	MMCF /4	MMBF /3	MMCF /4	MMBF /3	MMCF /5	MMBF /3	MMBF /5
Northern (R-1)	576	121	650	163	568	142	555	136	706	173
Rocky Mountain (R-2)	423	94	389	74	350	78	461	105	507	116
Southwest (R-3)	96	19	88	18	84	17	116	19	135	23
Intermountain (R-4) /6	360	63	405	71	417	73	512	105	417	85
Pacific Southwest (R-5) /7	710	142	807	161	775	149	793	123	871	135
Pacific Northwest (R-6)	1,338	266	1,353	268	1,289	248	1,148	225	1,594	313
Southern (R-8)	928	169	907	165	871	158	1,159	216	1,140	213
Eastern (R-9)	1,244	202	1,363	220	1,388	225	1,475	239	1,607	260
Alaska (R-10) /8	230	57	264	66	149	37	103	26	63	16
Total	5,906	1,132	6,226	1,206	5,891	1,127	6,322	1,194	7,040	1,334

1/ Data source is the Automated Timber Sale Accounting System (ATSA), rather than regional calculations.
2/ Some numbers have changed from the 1994 Report due to replacement of regional information with more auditable data obtained from the ATSA.
3/ Volume (million board feet) in local scale.
4/ Conversions from million board feet to cubic feet (MMCF) based on actual regional conversion factors, which vary by region.
5/ Million cubic feet (MMCF) conversions based on 1990 RPA Program, which vary by region.
6/ Shows sawlog volume only for FY 1994-1996. All convertible products data not available.
7/ Shows sawlog volume only for FY 1996. 1997 data changed to include all convertible products.
8/ Long-term sale not included.

Table 37--Forestland Management funding--fiscal years 1996-98 1/

	1998	1997	1996
		1,000 dollars	
Timber sales management	209,000	196,000	188,641
Forestland vegetation management	65,765	55,768	51,740
Road construction (timber-related)			
Forest Service construction	47,400	59,000	57,000
Purchaser construction 2/	0	(36,854)	(41,291)
Purchaser construction by the Forest Service 3/	4,228	5,945	6,209
Subtotal, Road construction	51,628	64,945	63,209
Total, appropriated accounts	326,393	316,713	303,590
Special accounts 4/			
Timber salvage sales	147,900	174,024	204,649
K-V reforestation & timber stand improvement	121,810	140,564	142,811
Reforestation trust fund	30,000	30,000	30,000
Total, Special accounts	299,710	344,588	377,460
Total	626,103	661,301	681,050

1/ Data source is each fiscal year's final program budget advice or budget authority.
2/ Not included in totals.
3/ FY 1997 data has been corrected.
4/ Include General Administration expenses.

Table 38--Sold value of special forest products--fiscal year 1998 1/

Product Category	Sold Value
	Actual dollars
Christmas Trees	1,324,325
Transplants (Wildlings)	39,829
Limbs and Boughs	172,718
Foliage	2,674
Bark	766
Cones, Green	4,329
Cones, Dry	9,888
Seed	661
Nuts and Seed	2,010
Fruits and Berries	934
Tree Sap	920
Roots	145
Mushrooms	155,275
Fungi	155
Mosses	13,157
Herbs	50
Ferns	50
Wildflowers	2,838
Grass	54,710
Aquatic Plants	10
Other Plants	57,636
Miscellaneous	1,134,546
Total	2,977,626

1/ Data source is final fiscal year cut and sold report . Includes all products not convertible to board foot or cubic units. Values have been rounded and may not equal the actual total shown.

Table 39--Authorized grazing use in head months by State--fiscal year 1998 1/

State, Commonwealth, or Territory 2/	Cattle	Domestic Horses	Sheep	Wild Horses	Wild Burros	Total
Alabama	303	33				336
Arizona	723,978	7,872	47,385		288	779,523
Arkansas	4,160	12			12	4,184
California	293,376	2,159	155,700	9,153	480	460,868
Colorado	593,907	2,558	445,914			1,042,379
Florida	600					600
Georgia	3,091					3,091
Idaho	442,272	4,807	532,074			979,153
Illinois	101					101
Indiana	34					34
Kansas	31,905					31,905
Louisiana	15,916					15,916
Michigan	1,752					1,752
Minnesota	41					41
Mississippi	2,705					2,705
Missouri	26,850					26,850
Montana	420,212	7,829	49,335			477,376
Nebraska	105,479	8				105,487
Nevada	155,020	347	166,744	16,377	2,603	341,091
New Mexico	749,223	3,979	79,974			833,176
New York	7,751					7,751
North Dakota	391,513	3,308				394,821
Ohio	709					709
Oklahoma	19,523	111				19,634
Oregon	335,644	583	64,966	1,860		403,053
South Dakota	389,493	85	19,321			408,899
Texas	32,469	54				32,523
Utah	335,358	1,455	513,261			850,074
Vermont	108					108
Virginia	6,656	1,469				8,125
Washington	65,643	50	35,456			101,149
West Virginia	5,688	40	321			6,049
Wyoming	433,442	6,673	369,419			809,534
Total	5,594,922	43,432	2,479,870	27,390	3,383	8,148,997

1/ A head month (HM) is the billing unit for permitted grazing and is equal to 1 month's occupancy. Reflects paid permits only for domestic livestock use.

2/ Unlisted States had no Forest Service grazing program in 1998.

Table 40--Annual grazing statistics--fiscal year 1998

	Permittees 1/	Cattle		Horses and burros		Sheep and goats		Total	
		Number	*HM's 2/ AUM's 3/*	*Number*	*HM's 2/ AUM's 3/*	*Number*	*HM's 2/ AUM's 3/*	*Number*	*HM's 2/ AUM's 3/*
Permitted to graze		1,262,000	6,326,792	10,019	46,863	966,221	2,883,895	2,238,240	9,257,550
			8,010,441		55,474		836,661		8,902,576
Authorized to graze:	8,342	1,190,730	5,594,922	9,520	43,432	902,010	2,479,870	2,102,260	8,118,224
Paid permits 4/			7,044,765		51,329		719,603		7,815,697
Free use	51	2,430	6,034	518	5,343	6,750	18,860	9,698	30,237
			7,820		6,404		4,979		19,203
Private land permits	103	43,447	222,090	385	3,656	5,815	36,295	49,647	262,041
			283,225		4,385		10,155		297,765
Crossing	2	1,640	160	95	3		1,677	1,735	1,840
			206		4		362		
Total Authorized 5/	8,395	1,194,800	5,601,116	10,133	48,778	908,760	2,500,407	2,113,693	8,150,301
			7,052,791		57,737		724,944		7,834,900
Wild horses				2,650	27,390			2,650	27,390
					27,390				27,390
Wild burros				278	3,383			278	3,383
					3,383				3,383

1/ Permittees holding paid permits are not counted in other categories.
2/ A head month is the billing unit for permitted grazing and is equal to 1 month's occupancy.
3/ An animal unit month (AUM) is the amount of forage required by a 1,000 lb. cow, or equivalent, for 1 month.
4/ Includes term and temporary grazing permits and all other paid permits (e.g., transportation, research, working animals, special uses, etc.).
5/ Private land and wild horse and burro data not included in totals.

Table 41--Energy mineral workload and production--fiscal years 1994-98

Fiscal year	Acres under lease	Oil production 1/	Gas production 1/	Coal production 1/
	Millions	*Barrels*	*1,000 cu. ft.*	*Short tons*
1994	6.5	12,400,000	325,400,000	114,500,000
1995	6.0	12,000,000	325,000,000	115,000,000
1996	5.9	10,000,000	300,000,000	115,000,000
1997	5.4	10,000,000	250,000,000	115,000,000
1998 2/	5.8	18,500,000	150,000,000	75,000,000

1/ Estimates for all years prior to 1998.
2/ Minerals Management Service (MMS) data.

Table 42--Miles of landline location by region--fiscal year 1998 1/

Region	Total Miles of Boundary Line	Miles Marked 1998	Total Miles Marked thru 1997	Miles Marked Marked thru 1998	Miles Maintained 1998
Northern (R-1)	27,725	221	9,700	9,921	89
Rocky Mountain (R-2)	44,086	167	6,560	6,727	66
Southwestern (R-3)	18,053	73	5,836	5,909	23
Intermountain (R-4)	20,960	84	5,122	5,206	59
Pacific Southwest (R-5)	26,700	71	12,719	12,790	95
Pacific Northwest (R-6)	25,627	91	16,573	16,664	20
Southern (R-8)	41,234	76	35,629	35,705	1,626
Eastern (R-9)	42,071	171	12,990	13,161	85
Alaska (R-10)	2,602	96	1,843	1,939	28
Total	249,058	1,050	106,972	108,022	2,091

1/ Totals include accomplishment from the NFLL appropriation, all contributing benefiting functions, and cooperative and cost-sharing activities.

Table 43--Road maintenance accomplishments--fiscal year 1998

Region	Cost	Miles fully maintained 1/	Total miles 2/
	1,000 dollars	*Miles*	*Miles*
Northern (R-1)	8,552	25,444	49,966
Rocky Mountain (R-2)	7,134	6,516	31,167
Southwest (R-3)	7,861	16,040	56,010
Intermountain (R-4)	7,260	11,470	38,403
Pacific Southwest (R-5)	14,768	15,533	44,398
Pacific Northwest (R-6)	18,655	32,504	93,879
Southern (R-8)	8,634	19,995	35,997
Eastern (R-9)	6,090	15,305	30,121
Alaska (R-10)	1,629	1,419	3,577
Total	80,583	144,226	383,518

1/ Includes miles of road maintained at a level consistent with current use.
2/ Road mile changes include roads acquired through land and right-of-way purchases, inventory revisions, addition of unclassified roads, and new construction.
3/ Does not include expeditures by the Washington Office or other units.

Table 44--Road and bridge construction and reconstruction--fiscal year 1998

Region	Cost 1/	From Appropriated Roads Funds			
		Construction		Reconstruction	
		Roads	Bridges	Roads	Bridges
		Miles	No.	Miles	No.
	1,000 dollars				
Northern (R-1)	6,692	0.2	0	39.5	1
Rocky Mountain (R-2)	4,956	0.0	0	13.3	0
Southwest (R-3)	7,270	0.2	0	48.3	0
Intermountain (R-4)	6,145	0.3	1	38.6	0
Pacific Southwest (R-5)	10,926	0.7	0	62.3	0
Pacific Northwest (R-6)	20,289	8.0	0	40.7	0
Southern (R-8)	9,843	0.9	0	20.7	1
Eastern (R-9)	8,298	0.2	0	64.7	3
Alaska (R-10)	9,098	0.7	0	8.6	0
Total	83,517	11.2	1	336.7	5

See footnotes at end of table.

Table 44--Road and bridge construction and reconstruction--fiscal year 1998--Continued

Region	Cost 1/	By Timber Purchasers 2/			
		Construction		Reconstruction	
		Roads	Bridges	Roads	Bridges
		Miles	No.	Miles	No.
	1,000 dollars				
Northern (R-1)	5,224	29.1	0	445.7	0
Rocky Mountain (R-2)	2,411	28.8	0	147.5	1
Southwest (R-3)	379	1.2	0	12.0	0
Intermountain (R-4)	1,775	21.5	0	108.1	0
Pacific Southwest (R-5)	5,754	16.1	1	250.7	0
Pacific Northwest (R-6)	8,264	45.9	0	624.5	1
Southern (R-8)	11,631	29.1	0	593.5	1
Eastern (R-9)	3,229	22.9	1	96.3	0
Alaska (R-10)	307	5.7	2	44.0	1
Total	38,974	200.3	4	2,322.3	4

1/ Includes field expeditures for engineering and program support for appropriated and timber purchaser roads. Does not include expenditures by the Washington Office and other units.

2/ Does not include 3.1 miles of construction, and 73.1 miles of reconstruction turned back to the Forest Service (Purchaser Election Program).

Table 45--Purchaser election roads constructed by the Forest Service--fiscal year 1998

Region	Cost	Construction		Reconstruction	
		Roads	Bridges	Roads	Bridges
		Miles	No.	Miles	No.
	1,000 dollars				
Northern (R-1)	45	0.6	0	11.1	0
Rocky Mountain (R-2)	0	0.0	0	0.0	0
Southwest (R-3)	0	0.0	0	0.0	0
Intermountain (R-4)	272	1.3	0	7.3	0
Pacific Southwest (R-5)	643	0.0	0	26.4	0
Pacific Northwest (R-6)	9	0.6	0	0.0	0
Southern (R-8)	552	0.0	0	24.6	0
Eastern (R-9)	149	0.6	0	3.7	0
Alaska (R-10)	276	0.0	0	0.0	0
Total 1/	1,946	3.1	0	73.1	0

1/ Does not include General Administration expenses.

Table 46--Summary of Forest Service senior, youth, and volunteer programs--fiscal year 1998

	Program funding	Value of work accomplished	Persons served	Women	Minority	Work accomplished	Placement	Return per dollar invested
	Million dollars	*Million dollars*	*Number*	*Percent*	*Percent*	*Person years*	*Percent*	*Dollars*
Youth Conservation Corps 1/	Unfunded	1.6	594	43	16	84	NA	0.88
Job Corps 2/	98.6	17.2	9,373	19	45	3,828	82	NA
Senior Community Service Employment Program 2/	28.4	40.7	5,484	44	22	2,291	24	1.43
Volunteers in the National Forests 3/	Unfunded	38.3	98,271	33	11	2,263	NA	NA
Hosted programs 4/	Unfunded	11.3	11,976	30	24	699	NA	NA
Total	127	109.1	125,698	NA	NA	9,165	NA	NA

1/ Funds were not directly appropriated for Youth Conservation Corps; the Congress earmarked not less than $1 million to be expended from funds available to the Forest Service. The Forest Service operated a $1.8 million YCC program.
2/ Statistics for 1997 program year (July 1, 1997, through June 30, 1998).
3/ Statistics include 265 Touch America Project (TAP) enrollees and 105 international volunteers.
4/ Includes Camp TIPS, operated as the only Youth Forest Camp.

Table 47--Number and percent of all permanent and excepted-conditional employees by race/national origin and gender as of September 26, 1998 1/

Race/National Origin	Women	Men	Total	Percent
American Indian/Alaskan Native	529	843	1,372	4.8%
Asian/Pacific Islander	216	228	444	1.6%
African American	608	576	1,184	4.2%
Hispanic	584	1,072	1,656	5.8%
Caucasian	9,274	14,571	23,845	83.7%
Total	11,211	17,290	28,501	
Targeted Disabilities	144	213	357	1.3%
Percent by Gender	40.3%	59.7%		

1/ Excepted-conditional include cooperative education students and excepted appointments of people with disabilities.

Table 48--Workforce EEO profile by pay levels, as of September 26, 1998 1/

	Race/National Origin											
	American Indian/ Alaskan Native		Asian/ Pacific Islander		African American		Hispanic		Caucasian		Total	
GS Pay Level	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
GS-1	0	0	0	0	0	0	1	0	1	0	2	0
GS-2	0	0	0	0	0	1	0	0	1	3	1	4
GS-3	6	3	2	2	4	4	7	2	47	25	66	36
GS-4	41	22	14	8	36	28	53	35	499	141	643	234
GS-5	102	95	24	10	70	56	97	132	1,208	740	1,501	1,033
GS-6	69	105	15	11	73	39	58	100	873	820	1,088	1,075
GS-7	96	135	35	16	104	101	127	157	1,502	1,607	1,864	2,016
GS-8	17	31	5	3	28	9	13	28	298	377	361	448
GS-9	99	175	41	42	88	120	88	200	1,891	3,137	2,207	3,674
GS-10	1	10	1	1	0	3	1	8	18	153	21	175
GS-11	62	108	37	47	73	63	73	154	1,532	2,995	1,777	3,367
GS-12	15	52	24	36	64	45	35	93	737	1,747	875	1,973
GS-13	13	33	14	30	45	48	22	67	432	1,294	526	1,472
GS-14	1	12	4	9	14	9	4	26	124	461	147	517
GS-15	0	4	0	2	3	8	2	11	44	231	49	256
GS-18 & SES	0	1	0	1	4	4	1	0	10	29	15	35
WG, WL & WS	7	57	0	10	2	38	2	59	57	808	68	972
Other 2/	0	0	0	0	0	0	0	0	0	3	0	3
Total	529	843	216	228	608	576	584	1,072	9,274	14,571	11,211	17,290

1/ Grand total is 28,501 (includes permanent full-time and permanent part-time employees only, including WG, WL, WS).
2/ Non-GS/GM/SES/WG/WL/WS as GS-16 equivalents.

Table 49--Number of paid employees by occupational category for selected fiscal years 1/

Occupation	1998 2/	1997	1996	1995	1994
Professional	11,330	11,038	11,327	11,441	11,830
Administrative	4,610	4,512	4,519	4,627	4,330
Technical	19,145	19,134	20,172	21,970	23,094
Clerical	2,881	2,821	3,050	3,234	3,312
Other	515	195	312	353	558
Wage System	2,180	2,073	2,042	2,060	2,446
Total	40,661	39,773	41,422	43,685	45,570
Full-time equivalents (FTE's) 3/	34,798	36,311	37,205	38,330	40,612

1/ The above data include permanent, summer, seasonal, cooperative education students, stay-in-school, and many other types of employees. These data do not include employees excluded from agency ceilings, such as volunteers (who are not paid salary), the Senior Community Service Employment Program (who are paid by the Department of Labor), and employees in special employment categories.
2/ Includes special employment categories
3/ One Full-Time Equivalent (FTE) equals 2,080 paid hours of employment. These data include emergency FTE's.

Table 50--Number of paid employees by type of appointment for selected fiscal years

Type of Appointment	1998 1/	1997	1996	1995	1994
Permanent 2/	28,170	29,558	30,347	30,676	30,978
Nonpermanent 3/	12,491	10,215	11,075	13,009	14,592
Total	40,661	39,773	41,422	43,685	45,570

1/ Includes special employment categories
2/ Permanent are those employees who have career or career-conditional appointments.
3/ Nonpermanent employees who count in agency ceilings, such as summer, temmporary, excepted, term, seasonal and similar types of employees. These data do not include volunteers (who are not paid salary), and the Senior Community Service Employment Program (who are paid by the Department of Labor), and employees in special employment categories.

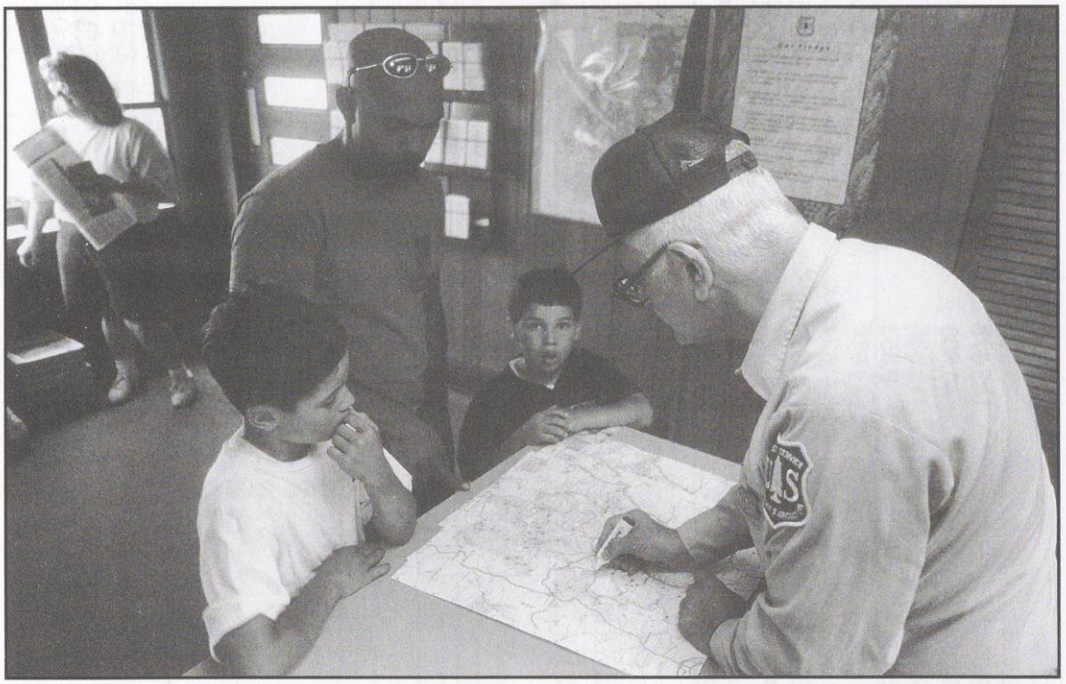




Table 51--Summary statement of receipts and obligations--fiscal years 1997-98 1/

	1998		1997		Percent change 1997 to 1998	
	Receipts	Obligations	Receipts	Obligations	Receipts	Obligations
National forest programs			*1,000 constant 1998 dollars*			
Cash receipts:						
Sale of timber and use of other forest resources	270,784		202,321		25	
Use of national grasslands & land utilization areas	23,015		25,004		(9)	
Timber sale area betterment (K-V) 2/	129,094		143,978		(12)	
Cooperative work for others	38,561		40,609		(5)	
Brush disposal	22,526		19,885		12	
Miscellaneous (sales, rentals, damages, etc.) 3/	5,054		9,853		(95)	
Restoration of forest lands and improvements	758		594		22	
Golden Eagle passports	183		624		(241)	
Timber salvage sales	123,342		181,829		(47)	
Operation and maintenance of quarters	4,876		7,084		(45)	
Gifts, donations, and bequests	713		812		(14)	
Subtotal	618,906		632,591		(2)	
Cash receipts from NFS lands collected in conjunction with, and deposited to, accounts of other agencies	130,237		161,679		(24)	
Noncash income (roads built by timber purchasers)	38,974		37,812		3	
Total cash receipts	788,117		832,082		(6)	
Obligations						
Operating costs		2,254,686		2,788,547		(24)
Capital outlay		14,133		3,545		75
Total obligations		2,268,819		2,792,092		(23)
Other Forest Service programs						
Forest Research programs:						
Forest research		170,645		194,540		(14)
Research construction		(5)		8		264
Cooperative research work		0		(4)		0
Gifts, donations, and bequests for forest rangeland research	4	422		739		(75)
Tongass Timber Supply Fund		0		0		0
Subtotal	4	171,062		195,283		(14)

See footnotes at end of table.

Table 51--Summary statement of receipts and obligations--fiscal years 1997-98 1/--Continued

	1998		1997		Percent change 1997 to 1998	
	Receipts	Obligations	Receipts	Obligations	Receipts	Obligations
			1,000 constant 1998 dollars			
State and Private Forestry programs						
State and Private Forestry cooperation		155,170		155,597		(0)
Rural community fire protection		1,875		1,308		30
Flood prevention and watershed protection		2,574		2,104		18
Licensee programs (Woodsy Owl and Smokey Bear)	83	99	163	64	(96)	35
Forestry Incentives and other programs 4/		1,041		1,485		
Subtotal	83	160,759	163	160,558	(96)	0
International Forestry Programs						
International Forestry		0	0	0		
Subtotal	0	0	0	0		
Human Resource programs						
Job Corps		91,668		96,346		(5)
Senior Community Service Employment		25,498		27,546		(8)
Subtotal	0	117,166	0	123,892		(6)
Grand total, all programs	0	2,717,806	832,245	3,271,824	0	(20)
Cash receipts distributed to States, counties and Puerto Rico						
Payments to States and Puerto Rico		227,768		239,115		(5)
Payments to Minnesota		1,267		1,300		(3)
Payments to counties (National Grasslands and Land Utilization Areas)		6,045		4,766		21
Total	0	235,080	0	245,181		(4)
Internal equipment and supply service (Working Capital)	137,615	130,139	141,193	173,971	(3)	(34)
Reimbursements for work performed for government and others included above	0	172,522	0	189,848		(10)

1/ Obligations were incurred on a "charged-as-worked" basis.
2/ K-V = Knutson-Vandenberg.
3/ Includes sale of personal propety and acquisitions of lands to complete land exchanges.
4/ Includes Resource Conservation and Development, and Pesticide Impact assessment funds transferred from Agricultural Research Service.

Table 52--Statement of receipts--fiscal years 1994-98

	1998	1997	1996	1995	1994
Receipts from sale and use of forest resources			*1,000 dollars actual*		
Timber and forest products	207,938	197,194	195,000	303,046	431,615
Grazing	6,992	6,972	7,352	8,756	11,056
Land uses	9,353	8,149	4,664	6,246	5,960
Recreation	42,959	45,275	47,618	46,427	47,762
Power	2,433	1,756	1,894	1,607	1,657
Minerals	24,124	25,408	17,007	20,663	16,817
Subtotal	293,799	284,754	273,535	386,745	514,867
Receipts from deposits for expenditures on national forests					
Timber sale area betterment	129,094	140,329	157,897	177,951	225,381
Timber salvage sales	123,342	177,221	181,243	135,640	163,281
Brush disposal	22,526	19,381	17,821	16,135	22,498
Restoration of Forest Service lands and improvements	758	579	4,920	972	358
Cooperative work	38,561	39,580	42,803	37,246	43,023
Operation and maintenance of quarters	4,876	6,904	6,468	6,504	6,452
Gifts, donations, and bequests	713	791	1,303	496	965
Subtotal	319,870	384,785	412,455	374,944	461,958
Other receipts					
Miscellaneous (sales, rents, etc.)	4,803	8,664	6,390	6,644	6,552
Golden Eagle passports	183	608	230	200	133
Sale of personal property	0	0	0	0	0
Royalties from sale of Smokey Bear and Woodsy Owl products	83	159	46	122	82
Acquisition of lands to complete exchanges	251	939	413	1,398	212
Gifts, donations, and bequests for forest rangeland research	4	55	5	5	18
Subtotal	5,324	10,425	7,084	8,369	6,997

See footnotes at end of table.

Table 52--Statement of receipts--fiscal years 1994-98--Continued

	1998	1997	1996	1995	1994
			1,000 dollars actual		
Other income					
Estimated collections by Department of Energy for power licenses on proclaimed national forest land	2,244	2,174	1,931	1,778	2,159
Estimated collections by Department of the Interior for mineral leases on proclaimed national forest land	127,993	155,408	169,240	253,600	213,812
Value of roads built by timber purchasers applied in lieu of cash payment for timber	38,974	36,854	41,291	47,896	68,275
Subtotal	169,211	194,436	212,462	303,274	284,246
Total	788,204	874,400	905,536	1,073,332	1,268,068
Other net deposits					
Monies advanced on active timber sales 1/					
Balance from previous year	122,039	151,141	193,563	190,554	217,585
Deposited current year	359,102	560,235	568,106	644,347	873,321
Transferred too other accounts	(360,059)	(548,438)	(610,528)	(641,338)	(900,352)
Balance on deposit	121,082	162,938	151,141	193,563	190,554
Amounts deposited pending disposition 2/					
Balance from previous year	8,038	19,292	29,868	18,680	25,079
Deposited current year	56,734	(6,810)	(8,065)	13,195	(5,411)
Transferred to other accounts	(6,300)	(1,343)	(2,511)	(2,008)	(988)
Balance on deposit	58,472	11,139	19,292	29,867	18,680
Subtotal	179,554	174,077	170,433	223,430	209,234
Total	967,758	1,048,477	1,075,969	1,296,762	1,477,302

1/ Timber sale deposits made by timber purchasers.
2/ Budget clearing account.

Table 53--Statement of receipts--fiscal year 1998

	National Forests	Oregon and California grant lands	National grasslands & LU Areas 1/	Other	Total
Receipts from sale and use of forest resources			*1,000 dollars actual*		
Timber and forest products	204,780	3,155	3		207,938
Grazing	6,314	2	676		6,992
Land uses	9,070	6	277		9,353
Recreation	42,827	106	26		42,959
Power	2,423	0	10		2,433
Minerals	2,101	0	22,023		24,124
Subtotal	267,515	3,269	23,015	0	293,799
Receipts from deposits for expenditures on national forests					
Timber sale area betterment	129,094				129,094
Timber salvage sales	123,342				123,342
Brush disposal	22,526				22,526
Restoration of Forest Service lands and improvements	758				758
Cooperative work	38,561				38,561
Operation and maintenance of quarters	4,876				4,876
Gifts, donations, and bequests	713				713
Subtotal	319,870	0	0	0	319,870
Other receipts					
Miscellaneous (sales, rents, etc.)				4,803	4,803
Golden Eagle passports				183	183
Sale of personal property				0	0
Royalties from sale of Smokey Bear and Woodsy Owl products				83	83
Acquisition of lands to complete exchanges				251	251
Gifts, donations, and bequests for forest rangeland research				4	4
Subtotal	0	0	0	5,324	5,324

See footnotes at end of table.

Table 53--Statement of receipts--fiscal year 1998--Continued

	National Forests	Oregon and California grant lands	National grasslands & LU Areas 1/	Other	Total
			1,000 dollars actual		
Other income					
Estimated collections by Department of Energy for power licenses on proclaimed national forest land	2,244				2,244
Estimated collections by Department of the Interior for mineral leases on proclaimed national forest land	127,993				127,993
Value of roads built by timber purchasers applied in lieu of cash	38,974				38,974
Subtotal	169,211	0	0	0	169,211
Total	756,596	3,269	23,015	5,324	788,204
Other net deposits					
Monies advanced on active timber sales 1/					0
Balance from previous year	122,039				122,039
Deposited current year	359,102				359,102
Transferred too other accounts	(360,059)				(360,059)
Balance on deposit	121,082	0	0	0	121,082
Amounts deposited pending disposition 2/					
Balance from previous year	8,038				8,038
Deposited current year	56,734				56,734
Transferred to other accounts	(6,300)				(6,300)
Balance on deposit	58,472	0	0	0	58,472
Total	179,554	0	0	0	179,554
Grand total	936,150	3,269	23,015	5,324	967,758

1/ Land utilization projects.
2/ Budget clearing accounts.

Table 54--Satement of obligations--fiscal years 1994-98

	1998	1997	1996	1995	1994
			Million dollars actual		
National Forest System	2,268.8	2,721.3	3,195.6	2,871.8	3,436.1
Forest Research	171.1	190.3	189.7	209.9	218.6
State and Private Forestry	160.8	156.5	162.8	157.8	179.0
International Forestry	0.0	0.0	0.6	5.5	7.6
Human Resource programs	117.2	120.8	106.3	113.3	102.3
Working Capital Fund	130.1	169.6	133.7	167.6	140.4
Total	2,848.0	3,358.5	3,788.7	3,525.9	4,084.0

Table 55--Statement of obligations--fiscal year 1998 1/

	Total 2/	Work for other public agencies (reimbursables)
	1,000 dollars	
National Forest System		
Protection and management	842,183	49,967
Wildland fire management	569,142	73,606
Cooperative work for others	36,268	0
Cooperative law enforcement	62,431	0
Flood prevention and watershed protection	352	0
Restoration of forest lands and improvements	1,226	0
Reforestation and timber stand improvement	17,814	0
Timber sale betterment (K-V) 3/	94,041	0
Brush disposal	9,961	0
Timber salvage sales	97,255	0
Range betterment	2,720	0
Acquisition of lands, Forest Service	2,048	0
Acquisition of lands, Land and Water Conservation Fund	94,062	3,362
Construction of forest roads and trails	131,988	0
Timber purchaser roads constructed by the Forest Service	1,511	0
Restoration of roads, Federal Highway funds	23,839	0
Road construction, Mount St. Helens, highway trust	0	
Trail maintenance	12,627	0
Tongass Timber Supply Fund	0	0
General Administraiton	219,843	0
Operation and maintenance of quarters	4,193	0
Hazardous waste management	7,488	0
Resource management timber receipts	(18)	0
Strawberry Valley land transfer	0	0
Emergency Pest Suppression	271	0
L&WCF Recreation fees	494	0
Southeast Alaska Economic Disaster	0	0
Recreation fee demo	10,370	0
10 Percent Road and Trail Fund	26,710	0
Subtotal 2/	2,268,819	126,935
Research		
Tongass Timber Supply Fund	0	0
Forest research	170,645	12,303
Construction of research facilities	(5)	(6)
Cooperative research	0	0
Gifts, donations, and bequests for forest and rangeland resea	422	0
Subtotal 2/	171,062	12,297

See footnotes at end of table.

Table 55--Statement of obligations--fiscal year 1998 1/

	Total 2/	Work for other public agencies (reimbursables)
	1,000 dollars	
State and Private Forestry		
Cooperation and general forestry assistance	155,170	7,697
Resource conservation and development	265	0
Rural community fire protection grants	1,875	0
Flood prevention and watershed planning	2,574	0
Licensee programs - Smokey Bear and Woodsy Owl	99	0
Pesticide Impact Assessment	198	0
Forestry Incentives	578	0
Subtotal 2/	160,759	7,697
International Forestry Programs		
International Forestry		
Subtotal 2/	0	0
Human Resource Programs		
Job Corps	91,668	95
Senior Community Service Employment Program	25,498	25,498
Subtotal 2/	117,166	25,593
Total 2/	0	0
Internal equipment and supplies service		
Working Capital Fund (subtotal)	130,139	0
Grand total 2/	0	0

1/ Obligations were incurred on a "charged-as-worked" basis.
2/ May not add due to rounding.
3/ K-V = Knutson-Vandenberg Act.

Table 56--Summary statement of values and obligations--fiscal year 1998

Item	Units	1/	Quantity	Average value per unit	Total value
			Number		*Million dollars*
Value					
Minerals					
Industrial minerals	M Pounds		20,048,273	4.39	88.0
Base metals	M Pounds		361,720	823.01	297.7
Precious metals	M Troy Oz.		10,740	32,849.16	352.8
Oil	BBL		18,500,000	6.52	120.6
Gas	MCF		150,000,000	2.00	299.9
Coal	Tons		75,000,000	4.00	792.6
Others	-	2/			337.6
Timber harvested	MBF		3,297,800	135.18	445.8
Recreation	RVD	3/			
Wilderness and primitive areas	RVD	3/			
Wildlife and fish					
Recreation	AD	3/			
	Pounds	3/			
Range	HM	4/	8,150,301	0.86	7.0
Total value					2,742.0
Expenditures					
National Forest System					2,268.8
Forest Research					171.1
State and Private Forestry					160.8
International Forestry					0.0
Human Resource Programs					117.2
Working Capital Fund					130.1
Total expenditures					2,848.0
Net value, total					(106.0)
Net value, National Forest System only					473.2

1/ BBLl=barrels; MCF=thousand cubic feet; MBF=thousand board feet; RVD=recreation visitor day; AD=activity day; HM=head month.
2/ Units for leasable other minerals are not standard.
3/ Data not available for 1998.
4/ A head month is one month's occupancy by an adult animal. The fee for an adult sheep is 1/5 the fee for cattle.



PERFORMANCE INDICATOR DEFINITIONS

Accomplishments projected for future years, allocated for current years, and reported for prior years under the following definitions are the result of Forest Service discretionary and mandatory appropriations. With few exceptions, contributed accomplishments (e.g., challenge cost share activities) are not included.

Objective 1.1

Nonindustrial private forestlands (NIPF) under approved Stewardship Management Plans (acres):
The Forest Stewardship Program assists nonindustrial private forest landowners on a voluntary, nonregulatory basis to develop long-term Forest Stewardship Plans for the management of their forests and related resources. The indicator is reported as total acreage under Stewardship Plans. Five percent of the total NIPF acres under approved plans that are accomplished in FY 1999 satisfy Objective 1.1. The remaining acres are distributed between Objectives 1.2, 2.1, and 2.5.

Multiresource practices implemented on NIPF lands (acres):
Forest Stewardship Management Plans can be implemented by landowners through approved, cost-shared multiresource management practices. These practices allow for consideration of all resources such as soil and water, wildlife, recreation, agroforestry, and aesthetics, in balance with the landowners' commodity goals. Five percent of the total NIPF acres under approved plans that are accomplished in FY 1999 is attributed to Objective 1.1. The remaining acres are distributed between Objectives 1.2, 2.1, and 2.5.

Streams and lakes restored or enhanced for fish habitat (miles/acres):
This measures miles of rivers and streams and acres of lakes (fish bearing) that were restored or enhanced using structural or nonstructural improvements accomplished with appropriated funds. Examples of stream or river improvements include the placement of large woody debris and the placement of boulders to provide spawning habitat. Examples of lake improvements might include construction of an aerator or liming to counteract high pH levels. (MAR 68.3, 70.3, 68.4, and 70.4)

Soil and water resource improvements (acres):
This includes acres treated with improvement measures to increase the quality and quantity of water, and maintain or improve soil productivity. The reestablishment of vegetation on streambanks and the placement of gabions to halt streambank erosion are two examples of soil and water improvement activities. (MAR 13.0)

Abandoned mine land watershed initiative activities (non-CERCLA sites):
This measure involves the inventory and reclamation of mines causing damage to the environment or posing risks to public health and safety. The program includes sites that clearly do not involve the Comprehensive, Emergency Response, Compensation, and Liability Act (CERCLA).

Bonded nonenergy/energy operations administered to standard (sites):
Includes the number of total bonded operations administered to a level that ensures compliance with operating plans. Also includes the number of energy operations, including those conducted under reserved and outstanding rights, administered to a level that ensures compliance with operating plans. Count once each year until final reclamation has been accepted. (MAR 84.4, 87.2)

Road decommissioning (miles):
This measures the miles of both system and unclassified roads that are restored to natural resource management, and the removal of system roads from the road inventory. (MAR 91.3)

Land adjustments to improve national forest management and protect natural resource values (acres):
This measures the total acreage acquired through purchase, transfer, and exchange to consolidate national forest land ownership. Accomplishment is recorded when title has been transferred to the Forest Service. An estimated 30 percent of the total is attributed to Objective 1.1. The remaining acres are distributed between Objectives 1.2 and 1.3. (MAR 31.0, 32.1, and 32.2)

Objective 1.2

Forest Health surveys and evaluations, Federal and Cooperative lands (million acres):
Forest Health surveys and evaluations are a component of the State and Private Forestry Forest Health Management program. It provides professional forest health assistance, including forest insect and disease detection surveys and evaluations for all Federal forest lands, including National Forest System, National Park Service, Bureau of Land Management, Fish and Wildlife Service, Corps of Engineers, Smithsonian Institution, and Department of Defense lands. Through cooperation with State governments, assistance is provided to private landowners in the area of forest health, especially with insect and disease surveys and evaluations. Assistance is also provided to tribal governments.

NIPF Stewardship Management Plans (number):
Stewardship Management Plans are voluntary, long-term management plans for NIPF forests and related resources. The planning process considers all resources including soil and water, wildlife, recreation, agroforestry, and aesthetics in balance with the landowner's commodity goals. Plans are prepared by State forestry personnel, other State and federal agencies, or private forestry consultants.

Nonindustrial private forestlands (NIPF) under approved Stewardship Management Plans (acres):
The Forest Stewardship Program assists NIPF landowners on a voluntary, nonregulatory basis to develop long-term Forest Stewardship Plans for the management of their forests and related resources. The indicator is reported as total acreage under Plans. Sixty percent of the total NIPF acres under approved plans that are accomplished in FY 1999 is attributed to Objective 1.2. The remaining acres are distributed between Objectives 1.1, 2.1, and 2.5.

Multiresource practices implemented on NIPF lands (acres):
Forest Stewardship Management Plans can be implemented by landowners through approved, cost-shared multiresource management practices. These practices allow for consideration of all resources such as soil and water, wildlife, recreation, agroforestry, and aesthetics, in balance with the landowners' commodity goals. Fifty percent of the total NIPF acres under approved plans that are accomplished in FY 1999 is attributed to Objective 1.2. The remaining acres are distributed between Objectives 1.1, 2.1, and 2.6.

Forest Legacy Program: Statewide Assessment of Needs (acres, States and projects):
The Forest Legacy Program conserves environmentally important forests threatened by conversion to nonforest uses through the acquisition of land or interests in land from willing landowners. Statewide assessments, or plans, identify Forest Legacy Areas. Within those areas, interested landowners can apply for the program to the State lead agency, which maintains a list of potential projects and their acreages.

Terrestrial wildlife habitat restored or enhanced (acres):
Restoration and enhancement is accomplished using appropriated funds through application of a variety of management practices such as prescribed burns, seeding to improve foraging habitat for game birds, or manipulating vegetation to obtain the desired habitat condition. Seventy-five percent of the total terrestrial wildlife acres that are restored or enhanced in FY 1999 is attributed to Objective 1.2. The remaining acres are attributed to Objective 1.3. (MAR 66.2)

Forestlands maintained or enhanced by stand improvement (acres):
Stand improvement techniques include release, weeding, thinning, fertilization, and pruning using appropriated funds (NFFV), reforestation trust fund (RTRT), contributed funds, K-V funds (CWKV), or carryover funds. (MAR 20.0)

Lands restored by reforestation (acres):
Includes acres reforested by planting, seeding, and natural means, including site preparation for natural regeneration, and certification of natural regeneration without site preparation. (MAR 19.0)

Hazardous fuels reduction (acres):
Accomplishments can include acres directly affected by management-ignited prescribed fire, prescribed natural fire, and mechanical or chemical treatments that reduce fire hazard. (MAR 16.2)

Treatment of harvest-related woody fuels--brush disposal (acres):
This involves the treatment of fuels generated from timber sales and timber stand improvement. Techniques can include lopping and scattering and hand or mechanical piling and burning. (MAR 16.3)

Land adjustments to improve national forest management and protect natural resource values (acres):
This measures the total acreage acquired through purchase, transfer, and exchange to consolidate national forest land ownership. Accomplishment is recorded when title has been transferred to the Forest Service. An estimated 40 percent of the total is attributed to Objective 1.2. The remaining acres are distributed between Objectives 1.1 and 1.3. (MAR 31.0, 32.1, and 32.2)

Value of FEPP equipment loaned to States (dollars):
The State and Private Forestry Volunteer Fire Assistance program provides technical and financial assistance directly to local organizations for fire protection on over 1 billion acres of State and private lands.

Objective 1.3

Noxious weeds treated (acres):
Includes initial treatment and retreatment of noxious weed infestations. Accomplishment is reported when treatment has been completed. (MAR 9.0)

Nonstructural range improvements completed (acres):
This includes revegetation and forage improvement activities related to basic stewardship of rangeland conditions. Examples include seeding, fertilizing, and burning to improve forage production and overall range health. (MAR 29.0)

Rangelands monitored for progress toward desired condition in AMP's (acres):
During the fiscal year, an agency employee technically qualified in rangeland monitoring and evaluation physically inspects and evaluates as many acres as necessary, or verifies inspections and evaluations performed by others, to determine ecological status and trend for the acres reported. In accordance with monitoring plans for the area, the employee shall document whether the reported acres meet, do not meet, or are moving towards resource objectives for rangeland ecosystems contained in Allotment Management Plans. (MAR 76.1)

Terrestrial wildlife habitat restored or enhanced (acres):
The total number of acres restored or enhanced to achieve desired future condition of habitat using appropriated funds. Restoration and improvement techniques include prescribed burns, seeding to improve foraging habitat for game birds, and manipulating vegetation to obtain desired habitat condition. Twenty-five percent of the total terrestrial wildlife acres that are restored or enhanced in FY 1999 is attributed to Objective 1.3. The remaining acres are attributed to Objective 1.2. (MAR 66.2)

Land adjustments to improve national forest management and protect natural resource values (acres):
This measures the total acreage acquired through purchase, transfer, and exchange to consolidate national forest land ownership. Accomplishment is recorded when title has been transferred to the Forest Service. An estimated 30 percent of the total is attributed to Objective 1.3. The remaining acres are distributed between Objectives 1.1 and 1.2. (MAR 31.0, 32.1, and 32.2)

Objective 1.4

Hazardous substance sites--response actions completed and ongoing (number of actions):
Includes removal actions, remedial actions, and natural resource damage actions. Removal actions include response actions that either clean up or remove hazardous substances from the environment or are taken in the event of a release or threat of a release. Actions include monitoring, assessing, and evaluating the release or threat of release; disposing of removal material; or other actions to prevent, minimize, or mitigate damage to the public health, welfare, or the environment that might otherwise occur due to the release. Remedial actions include response actions consistent with a permanent remedy taken, instead of, or in addition to, removal actions to prevent and minimize the release of hazardous substances. Natural resource damage actions include actions to restore, replace, or acquire the equivalent natural resources, including the assessment costs.

Watershed or major abandoned mine land site cleanup actions initiated under CERCLA (number of actions):
Under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) the Forest Service is responsible for oversight of all nonemergency investigations and cleanups of hazardous sites on NFS lands. Hazardous sites under CERCLA include abandoned landfills and mines, oil and gas exploration sites, and drug lab or other illegal dumps. The Forest Service is working with DOI agencies to initiate actions including any efforts to plan, design, implement, and monitor the cleanup of CERCLA sites.

Objective 1.5

Terrestrial TES habitat restored (acres):
This measure reports acres of TES terrestrial habitat that were restored or enhanced using nonstructural improvements in the reporting year using TES appropriated funds for the explicit purpose of improving TES habitat. Accomplishment is reported when improvement has been completed. If work has been contracted, but not completed, only report improved acres actually completed. Work plans or maps of project areas including project descriptions should document the improvements completed. (MAR 72.6)

Aquatic TES habitat restored or enhanced (stream miles and lake acres):
This measure reports miles of perennial streams and surface acres of TES aquatic habitat that were restored or enhanced using structural and nonstructural improvements in the reporting year using TES appropriated funds for the explicit purpose of improving TES habitat. Accomplishment is reported when improvement has been completed. If work has been contracted, but not completed, only report improved miles actually completed. Work plans or maps of project areas including project descriptions should document improvements completed. (MAR 72.4,72.5)

Conservation agreements and strategies (number of sensitive aquatic and terrestrial species):
Report the number of recovery and conservation tasks that were completed in the fiscal year for sensitive aquatic and terrestrial species. Recovery plans and conservation strategies include assignment of specific tasks to agencies. For those federally listed species having such either FWS approved recovery plans or conservation strategies or sensitive species having a conservation strategy approved by Forest Supervisors or Regional Foresters, report those tasks required of the Forest Service in the given year that were accomplished.

Approved and implemented recovery plans (number of listed aquatic and terrestrial species):
Report the number of recovery and conservation tasks that were completed in the fiscal year for listed aquatic and terrestrial species. Recovery plans and conservation strategies include assignment of specific tasks to agencies. For those federally listed species having such either FWS approved recovery plans or conservation strategies or sensitive species having a conservation strategy approved by Forest Supervisors or Regional Foresters, report those tasks required of the Forest Service in the given year that were accomplished.

Objective 1.6

Scientific papers (number):
Includes books, papers in series, journal articles, dissertations and theses, and other similar peer-reviewed accomplishments that are primarily related to ecosystem sustainability.

Integrated Resource Inventories:
Integrated inventories are those designed to meet multiple needs for information and consist of "data collection for analysis of the status or conditions of resources or other vegetative or physical characteristics required for planning..."(FSH 1909.4).

NFIM-related integrated resource inventories are those that contribute to issues or decisions being addressed in the forest planning process, ultimately resulting in forest plan revisions or amendments that are technically and legally defensible. Such inventories are more than just incidentally supportive of forest plan revisions; and are not primarily carried out to support projects. They involve both "integrated inventory," done at the "front end" for reasons of practicality and cost effectiveness, and, "inventory integration," done at the "back end" of the forest planning process. NFIM-related integrated resource inventories meet multiple needs, including multilocation, multiresource, and/or temporal needs for information at various scales.

These may include certain single resource inventories that are designed to support forest plan revisions or amendments, but cannot be combined with other resource inventories due to the nature of the resource being measured. Single resource inventories should be relatable to others through geographical locators and mapping. Activity Code EM 111. The integrated inventories are associated with physical, biological, and human dimensions.

Physical Dimensions:
Aquatic ecological unit inventories (miles/acres):
An inventory that produces a map and/or descriptions of Aquatic Ecological Units, addressing issues associated with forest plan revisions or amendments. Units are defined in "Hierarchical Framework of Aquatic Ecological Units in North America (Nearctic Zone)," USDA Forest Service North Central Experiment Station, GTR NC-176. Report accomplishments, by scale, as number of riverine miles or lacustrine acres for which maps and/or descriptions have been completed during the fiscal year.

Riverine Valley Segment Scale Inventory (MAR 13.2)
Riverine Stream Reach or Channel Unit Scale Inventory (MAR 13.3)
Lacustrine Lake Type Scale Inventory (MAR 13.4)
Lacustrine Lake Zone or Site Scale Inventory (MAR 13.5)

Terrestrial ecological unit inventories (acres):
An inventory that produces a map and description of Terrestrial Ecological Units (TEUI) that address issues and decisions associated with Forest Plan revisions or amendments. Factors are combined that determine the biophysical capacity of the land (soil, geology, geomorphology, climate, and potential natural vegetation) as defined in FSH 2090.11, and the National Hierarchical Framework of Ecological Units. This includes the standards for Soil Inventory from FSM 2550.4. TEUI's are done at different scales (hierarchical levels) to respond to different levels of information needs as shown below. The scales are described in the National Hierarchical Framework of Ecological Units (Ecomap, Nov. 1993, in revision). Report accomplishments as number of acres for which maps with descriptions have been completed during the fiscal year.

TEUI at Eco-subregion (Section, Subsection) Scale (MAR 60.7)
TEUI at Landscape Scale (MAR 60.8)
TEUI at Land Unit Scale (MAR 60.9)

Biological dimensions:

Forest resource inventory (acres):

Work associated with strategic forest inventory and issues relevant to forest plan revisions or amendments (MAR 60.1). This includes preparation of an inventory plan; organizing and training for the inventory project; photo sampling, field sampling and maintenance of quality control; inventory compilation and preparation of data; and similar activities. It includes installing vegetation ground plots at a single intensity level (5000 meter intervals) across all forest land, including reserved lands. These plots are to be taken under the procedures provided in FSH 2404.13a. If NFS units contract with FIA units for plot taking or data processing, it would include pass-through funds for that purpose. Intensifying the permanent plot grid sampling is desirable to obtain additional information for forest planning purposes. Accomplishment is reported in fiscal year when information has been entered into an automated data base and is available for use in analyses above the project level, planning efforts, assessments, etc.

Rangeland resource inventory (acres):

Work associated with gathering information on the existing vegetation and physical conditions of rangelands, that addresses issues and decisions associated with forest plan revisions or amendments (MAR 60.2). Report the number of acres where current vegetation species and condition are inventoried to regional standards that include on-the-ground measurements and identification. Rangeland inventories may be conducted in deserts, grasslands, shrublands, woodlands, forests, and alpine zones. Riparian zone inventory is work associated with riparian condition including wetlands, and can be included. It is reported in acres of landscape, not miles of stream. Accomplishment is reported in fiscal year when information has been entered into an automated data base and is available for use in analyses above the project level, planning efforts, assessments, etc.

Wildlife habitat inventory (acres):

Supports ecosystem planning/management that has been designed to meet multilevel, multilocation, multiresource or temporal needs (MAR 60.3). NFIM-related inventory addresses issues and decisions associated with Land and Resource Management Plan revisions or amendments. Accomplishment is reported in fiscal year when information has been entered into an automated data base and is available for use in analyses above the project level, planning efforts, assessments, etc.

TES species habitat inventory (acres):

Support ecosystem planning/management that has been designed to meet multilevel, multilocation, multiresource or temporal needs (MAR 60.4). NFIM-related inventory addresses issues and decisions associated with Land and Resource Management Plan revisions or amendments. Accomplishment is reported in fiscal year when information has been entered into an automated data base and is available for use in analyses above the project level, planning efforts, assessments, etc.

Human dimensions:

Heritage inventory (acres):

Include acres inventoried for heritage resources (MAR 61.9). NFIM-related inventory addresses issues and decisions associated with forest plan revisions or amendments. Accomplishment is reported in fiscal year when information has been entered into an automated data base and is available for use in analyses above the project level, planning efforts, assessments, etc. Accomplishments are reported in acres for which heritage resources have been inventoried during the fiscal year.

Air quality related values inventoried/monitored (AQRVs):

The total number of Air Quality Related Values (AQRV) is a measure of air pollution impact inventoried and monitored in a Class I area, with emphasis on issues associated with forest plan revisions or amendments (MAR 81.2). Measures of air pollution impacts refers to ambient air monitoring of gases, aerosols, and particles; direct or indirect monitoring of visibility; monitoring of the health and vitality of ecosystems including such parameters as water and soil chemistry and presence or absence of biotic species. Air quality related values are those features or properties of a Class I area that have been identified in Forest Service AQRV screening documents and/or forest plans and that could be affected by air pollution. Typically, these include visual air quality and particularly valuable or unique ecosystems with resources affected by air pollution.

For counting purposes, if there are multiple sensors at a single site that are measuring parts of the same AQRV, count each one (e.g., a camera, nephelometer, aerosol sampler modules A and B, would count as 4). Where it takes multiple plots to characterize impacts as in foliar damage from ozone, count that as one AQRV inventoried. Where there are multiple toxic air pollutants tested for lichens, count each chemical element and lichen species, not each lichen plot sampled. You may count inventorying and monitoring in cooperation with States, EPA, other Federal land managers and partners as long as the FS contributes money or labor. Count supporting meteorological sites as one even though there are several parameters monitored. Accomplishments will be reported in the fiscal year when information has been entered into an automated data base and is available for use in analyses above the project level, planning efforts, assessments, etc., where the information lends itself to a geographically specific impact or interpretation. Until the Forest Service Air Quality Information Management System is operational, accomplishment should be counted when raw data and analysis are available to field units.

Multiscale assessments completed (number):
NFIM-related assessments are characterizations of ecosystems above the project level (e.g., ecoregional, subregional, river basin, landscape, watershed, etc.) that provide information relevant to forest plan revision issues or amendments. Such assessments efficiently consider information that might otherwise be collected independently for several separate national forests within the same ecoregion. Assessments, which may utilize integrated resource inventories and other information, are not decision documents. They report findings for future management consideration, providing a context for subsequent decisionmaking. Accomplishment is reported, by the following scales, in the fiscal year when the Assessment Team Leader certifies that the assessment report is completed.

Ecoregion (Domain/Division/Province) Scale Assessments (MAR 13.6)
Eco-subregion (Section)/River Basin & Subbasin Scale Assessments (MAR 13.7)
Landscape/Watershed Scale Assessments (MAR 13.8)

Objective 1.7

Wilderness in approved fire plans (acres):
This indicator is the total wilderness acres in approved fire plans. An approved fire plan is required for a natural ignition to result in a fire that achieves positive resource objectives with a minimum of human intervention. It is recognized that this indicator is not appropriate for Region 10 (Alaska) where wilderness is virtually unaffected by fire.

Objective 2.1

Nonindustrial private forestlands (NIPF) under approved Stewardship Management Plans (acres):
The Forest Stewardship Program assists NIPF landowners on a voluntary, nonregulatory basis to develop long-term Forest Stewardship Plans for the management of their forests and related resources. The indicator is reported as total acreage under Plans. Five percent of the total NIPF acres under approved plans that are accomplished in FY 1999 is attributed to Objective 2.1. The remaining acres are distributed between Objectives 1.1, 1.2, and 2.5.

Multiresource practices implemented on NIPF lands (acres):
Forest Stewardship Management Plans can be implemented by landowners through approved, cost-shared multiresource management practices. These practices allow for consideration of all resources such as soil and water, wildlife, recreation, agroforestry, and aesthetics, in balance with the landowners' commodity goals. Five percent of the total NIPF acres under approved plans that are accomplished in FY 1999 is attributed to Objective 2.1. The remaining acres are distributed between Objectives 1.1, 1.2, and 2.6.

Seasonal capacity available (million PAOT-days):
The cumulative total persons-at-one-time (PAOT) Days of developed facility capacity made available during the recreation season. This includes the capacity available to standard and the capacity available not to standard. (MAR 26.0)

Recreation special uses administered (permits):
The total number of Special Use Permits in existence at the end of the fiscal year. This includes permits administered to standard and those not administered to standard but on the books. (MAR 62.5)

Trails re/constructed to standard (miles):
Accomplishment reflects reconstruction/construction work on year-round system trails on NFS lands. Accomplishment is reported either when a contract is awarded or when a project is completed by Forest Service crews. Documentation of accomplishment consists of either copies of the contracts and award letters or copies of work plans including maps of projects completed by our own workforce. Separate documentation (i.e., outside the MAR system) of accomplishment related to completed contracts should be kept in unit files. (MAR 21.0)

Customers rate overall satisfaction with facilities and access, information about recreation opportunities, and service delivery (on a scale of 1-7):
Customer survey will measure user satisfaction with the recreation experience.

Customers rate satisfaction with the recreation special use permit process (on a scale of 1-7):
Customer survey will measure user satisfaction with the recreation special use permit process.

Customers rate satisfaction with Forest Service visitor services (on a scale of 1-7):
Customer survey will measure user satisfaction with Forest Service visitor centers.

Annual education contacts (number):
An education contact, for the purposes of this report, is an individual contact at least 5 minutes in length. During the contact, specific information about wilderness is transmitted with a high likelihood of understanding on the part of the recipient.

Wilderness meeting forest plan standards for physical and social conditions (acres):
This indicator represents a fundamental task of wilderness management; providing wilderness stewardship that "protects and/or restores" wilderness characteristics to units of the National Wilderness Preservation System. Attainment requirements include:

- Having adequate and appropriate forest plan standards and guidelines for wilderness.
- Monitoring wilderness condition to assess compliance, and
- Determination that standards are met or exceeded.

Customers rate satisfaction with recreation experience in congressionally designated wildernesses (on a scale of 1-7):
Customer survey will measure user satisfaction with recreation experience in natural wilderness areas.

Objective 2.2

Heritage Sites Evaluated (number):
Number of heritage sites evaluated in order to determine their eligibility for listing on the National Register of Historic Places or to assess the relative importance of a property within a management allocation framework such as a forest plan, EIS, or EA. Sites evaluated can include sites identified in earlier years but not evaluated and recommended eligible. Evaluation is work done to determine a property's eligibility to the National Register of Historic Places or to assess the relative importance of a property within a management allocation framework. Evaluation may include archival research or evaluative site testing. (MAR 65.2)

Heritage Sites Interpreted (number):
The number of heritage sites newly developed for on-site or off-site public interpretation. Includes interpretive displays, guided tours, trails, interpretive brochures, interpretive signs, etc. Count sites in which there has been an investment of resources to specifically interpret the heritage values of the sites. An individual site cannot be counted in more than one category. (MAR 65.3)

Heritage Sites Preserved and Protected (number):
Number of heritage sites protected this fiscal year. Protection refers to any deliberate, planned activity that shields a site or its information potential from, or monitors for, natural or human-caused damage or destruction This is the indirect protections of properties and includes the expenditure of resources to fence, remove impacting activities and facilities, prevent or control access, and monitor site conditions. Preservation is the expenditure of resources to restore, repair, or rehabilitate heritage properties in order to make them last longer or serve the public better. Sites afforded protection through project planning, redesign, and implementation (site avoidance) are not counted in this category. (MAR 65.4)

Objective 2.3

Participating Communities (number):
The number of communities that have recognized that trees, forests, and greenspace are assets to their communities and are initiating community-based natural resource programs and projects with the help of technical and/or financial assistance through the U&CF program.

Assists to communities (number):
The number of technical assists made to communities participating in U&CF programs through State and local agencies.

Training provided to communities (hours):
Training that is provided to 1) professionals about advancing U&CF program technologies, 2) policy makers on the important functions trees contribute to cities and communities, and 3) citizens on how to protect, manage, and care for trees in their communities.

Volunteer assistance generated (hours):
Hours worked by people who volunteer their time and assistance to maintain, improve, expand, and protect urban and community forests and related greenspace.

Objective 2.4

Communities working under broad-based local strategic plans (number):
Rural communities that have developed strategic plans to achieve sustainable development through the Economic Action Programs.

Communities using locally-based measurement systems (number):
A process and methodology developed by the Forest Service for rural communities to monitor and evaluate their progress toward building capacity and achieving their strategic goals with assistance from the Economic Action Programs.

Assistance to tribal and minority communities (number):
The number of tribal and minority communities that receive technical and financial assistance from State and local entities through the Economic Action Programs.

Communities and/or Volunteer Fire Departments assisted (number of grants):
The Volunteer Fire Assistance (formerly Rural Community Fire Protection) program provides technical and financial assistance directly to local organizations to effectively and adequately protect over 1 million acres of State and private lands. The volunteer program supports local fire suppression efforts by providing grants to over 3,000 small communities with populations under 10,000 each year.

State foresters rate satisfaction with Cooperative Fire Protection program (on a scale of 1-7):
Customer survey will measure user satisfaction with effectiveness of program delivery.

Objective 2.5

NIPF lands under approved Stewardship Management Plans (acres):
The Forest Stewardship Program assists NIPF landowners on a voluntary, nonregulatory basis to develop long-term Forest Stewardship Plans for the management of their forests and related resources. The indicator is reported as total acreage under Plans. Thirty percent of the total NIPF acres under approved plans that are accomplished in FY 1999 is attributed to Objective 2.5. The remaining acres are distributed between Objectives 1.1, 1.2, and 2.1.

Multiresource practices implemented on NIPF lands (acres):
Forest Stewardship Management Plans can be implemented by landowners through approved, cost-shared multiresource management practices. These practices allow for consideration of all resources such as soil and water, wildlife, recreation, agroforestry, and aesthetics, in balance with the landowners' commodity goals. Forty percent of the total NIPF acres under approved plans that are accomplished in FY 1999 is attributed to Objective 2.6. The remaining acres are distributed between Objectives 1.1, 1.2, and 2.1.

Increased use of underutilized species (million cubic feet):
Use of low-value, underutilized species in connection with ecosystem restoration and maintenance activities. Many eastern and western hardwoods, small diameter lodgepole and ponderosa pine in the inland West, and western juniper and pinyon pine in the Southwest are prime candidates for increased utilization.

Timber volume offered (million cubic feet):
The preparation and advertisement for sale (Gate 4 completed) of timber, including fuelwood (Fund Code NFTM), that has not been previously advertised for sale, and timber that is categorized as mortality, i.e., fire and/or insect damaged timber using timber salvage sale funds (Fund Code SSSS). This accomplishment is recorded in the Sales Tracking and Reporting System when the timber sale has been advertised or when a permit to remove timber has been sold. (MAR 77.3)

Timber volume sold (million cubic feet):
The total timber sale volume sold where a successful bidder/purchaser has been determined and the sale has been awarded (Gate 6 completed). This accomplishment is recorded in the Timber Sale Accounting System when the timber sale contract or permit has been executed prior to closure of the fiscal year. (MAR 77.9)

Objective 2.6

Range structural improvements (number):
For those structural improvements measured in miles, use a conversion factor of 0.5 miles = 1 structure. Accomplishment is reported when a structure has been completed. If work has been contracted, but not completed, only report structures actually completed. Work plans or maps of project areas including project descriptions should document the number of structures completed. Inspection reports would also document project completion. (MAR 30.0)

Grazing allotments analyzed and NEPA decisions analyzed (number):
Report all grazing allotments that during the fiscal year had analysis completed and project level decisions (AMP's) implemented in conformance with provisions of NEPA. Because one decision may be prepared for several grazing allotments, the reportable item is the number of allotments for which analyses were completed and decisions issued. (MAR 75.3)

Grazing allotments administered to standard (number):
During the fiscal year an agency employee qualified in grazing permit administration supervises livestock grazing by evaluating and documenting permittee compliance and annual achievement of applicable resource management standards, and by documenting and initiating any needed corrective action. An allotment may be reported as managed to standard when the responsible manager determines and documents that the permittee is in compliance AND applicable resource management standards are being met, OR where the permittee was not in compliance and/or applicable resource management standards are not being met, ALL necessary corrective actions have been documented and initiated.

The responsible resource manager will use as many of the following or similar activities as necessary to meet the standard: counting livestock; inspection rides with permittees; conducting livestock utilization studies; preparing, modifying or updating allotment management plans or annual operating plans; inspecting range improvements; issuing or modifying grazing permits or grazing agreements (MAR 75.1).

Objective 2.7

Bonded and nonbonded nonenergy operations processed (number):
Bonded nonenergy operations include the number of operations processed for which reclamation bonds were required. Accomplishment is reported when an operation plan is processed to a decision. There should be a decision document signed by a line officer in the files that verifies each operation reported as processed. Nonbonded nonenergy operations include the number of operations processed that did not require a reclamation bond, such as Plans of Operations under 36 CFR 228.A, for which bond requirements were waived; Notices of Intent; or free use mineral material permits for the public. Accomplishment is reported when an operation plan is processed to a decision. There should be a decision document signed by a line officer in the files that verifies each operation reported as processed. (MAR 84.1, 84.2)

Energy Operations Processed (number):
The number of new energy operations, including those conducted under reserved and outstanding rights, that required environmental analysis. Accomplishment is reported when an operation plan is processed to a decision. There should be a decision document signed by a line officer in the files that verifies each operation reported as processed. (MAR 87.1)

Objective 2.8

Technical reports (number):
Includes books, papers in series, journal articles, proceedings, general technical reports, special reports, patents, videos, computer programs, dissertations and theses, and other similar technology transfer accomplishments that are primarily related to provision or support of multiple benefits.

States surveyed to meet FIA cycle (number):
The Forest Inventory and Analysis (FIA) program provides the only continuous inventory that periodically quantifies the status of forest ecosystems, including timber and nontimber information, across all landownerships in the United States. FIA strives to maintain current State inventories on the shortest cycle possible (currently about 11 years). These inventories are established with a common sample frame, spatially referenced, across all forested lands.

Lands covered by Forest Health Monitoring plot system in lower 48 States (percent):
The Forest Health Monitoring plot system identifies and tests environmental indicators and provides data to evaluate the health of all of the Nation's forests. Performance is measured by the percentage of monitored forested area nationally.

Land and Resource Management Plan revisions and new plans completed (number):
Integrated interdisciplinary planning resulting in a NFMA-anticipated forest plan revision, recognizing that some revisions actually may be completed ahead of schedule. Accomplishment is reported in fiscal year when Record of Decision (ROD), based on the Final Environmental Impact Statement (FEIS), is signed by regional forester (MAR 61.1).

Land and Resource Management Plan revisions and new plans initiated (number):
Accomplishment is reported in the fiscal year that the Notice of Intent (NOI) is filed (MAR 11.3).

Land and Resource Management Plan monitoring and evaluation (reports):
Forests prepare an annual "Forest Plan Monitoring and Evaluation Report" in accordance with respective forest plan requirements; Regional direction; FSH, FSM, and planning regulation guidance on what to monitor; and, associated WO policy direction (MAR 11.2). The audience is the respective National Forest Leadership Team, with benefits to the Region, WO, and public. The report should be based on monitoring data and information gathered during the previous fiscal year; focus on evaluation of forest plan implementation; and, provide an overview of forest resource conditions and trends, with specific attention to the effects of management on landscapes and ecological functions, which will assist regions in preparing "State of the Region Reports" (see also MAR 61.8). It should contain these 10 items:

1. Forest supervisor(s) certification as per national strategy
2. Monitoring activities
3. Evaluation of monitoring results and conclusions (an interdisciplinary team process)
4. Action plan (include any proposed plan amendments/revisions or additional monitoring needs)
5. Status of previous year's recommendations
6. Update of research needs
7. List of preparers
8. Location of supporting documentation for monitoring activities
9. Public participation/disclosure plan
10. Appendix

Accomplishment is reported in fiscal year when the forest plan monitoring and evaluation report is completed.

State of the Region Evaluation Report:
Regions prepare a "State of the Region Evaluation Report" (MAR 61.8) based on the annual "Forest Plan Monitoring and Evaluation Reports" prepared by each national forest (see MAR 11.2) and any other pertinent information. The audience is the WO, the Regional Leadership Team, and the public. This report should focus on the evaluation results, as opposed to monitoring data. It should portray the condition and trends of the biological, physical, and human dimensions of NFS lands within the region and the effects that our management has had on the lands and communities. More specifics on the content of these reports are being developed, and will be issued later. Accomplishment is reported in fiscal year when report is completed, and is based on information from the previous fiscal year's forest-level reports, and other sources.

Objective 2.9

Performance indicators for this section are under discussion and development.

Objective 2.10

New boundary marked to standard (miles):
Posting and marking of boundaries (Fund Code NFLL and TTSA). Accomplishment is recorded when the miles have been located and marked. The amount reported should be supported by a record system maintained by the forest land surveyor. Work that has been contracted but not completed should not be counted as accomplished. Payment estimates can be used to record miles marked to standard under contracts. (MAR 33.0)

Rights-of-way (cases):
Rights-of-way cases include the number of road and trail right-of-way easements acquired, resolved through other lands activities, or by cooperative effort. These activities coincide with Categories I, II, and III on the existing annual Rights-of-Way Acquisition Report (FS-5400-25 4/92). (MAR 34.0)

Special use permits processed (number):
Special use applications processed to the decisionmaking stage and where a special use authorization is issued. This will also include applications processed, but where no authorization has been issued. This later situation is usually infrequent, but significant expenditures can be incurred so it is important to report. (MAR 89.2)

Special use permits administered to standard (number):
Authorizations administered to standard are in compliance with the terms and conditions of the authorization and Forest Service policy. At a minimum, use must be under current authorization and is in compliance with applicable health and safety laws, regulations, and Forest Service policy, and fees have been determined and collected. (MAR 89.3)

Hydropower license renewals completed (number):
Federal Energy Regulatory Commission (FERC) licenses are required for hydroelectric power generation projects and for relicensing existing projects on NFS lands. By law, the agency develops the terms and conditions for constructing, operating and maintaining non-federal hydroelectric power projects on NFS lands to ensure protection of national forest resources. Over the next few years many of these projects will be relicensed requiring environmental analyses and some environmental impact statements.

FS-USGS Quadrangle maps maintained to standard (number):
The Forest Service and U.S. Geological Survey produce single-edition 7.5 minute topographic quadrangle maps meeting National Mapping Accuracy standards through an interagency agreement, which eliminates duplication of efforts. The single edition maps portray elevation; vegetation; NFS boundaries; other administrative units; and manmade features including roads, urban areas, and communication lines.

Objective 2.11

System roads maintained to standard (percent of total):
Forest Service-owned system roads that are available for administrative, recreation, timber, and noncommercial uses require maintenance work to provide for user safety, protect natural resources, and support the Forest Service mission. Maintaining these miles to standard includes surface grading, and replacing damaged surfacing materials to remediate road use. It also includes activities not directly tied to use such as cleaning culverts, clearing roadside brush, maintaining traffic control devices, and painting bridges.

Bridges inspected as scheduled (percent):
Across NFS lands many bridges that provide access were constructed over 50 years ago. More than 1,000 are deficient or obsolete and 160 have been closed to vehicular traffic. Inspecting bridges on schedule ensures that engineers can prioritize which structures need to be fixed to ensure user safety, access, and resource protection and when that needs to occur.

Bridges improved or maintained to improve the Sufficiency Rating (points):
Improve the safety and economy of Forest Service bridges by performing maintenance and replacing, or rehabilitating bridges. The measurement of condition is the Sufficiency Rating, which is based on condition and required use of the bridge. The rating system was developed by the Federal Highway Administration, and is used by all States as required by the National Bridge Inventory (NBI) standards.

Dams inspected as scheduled (percent):

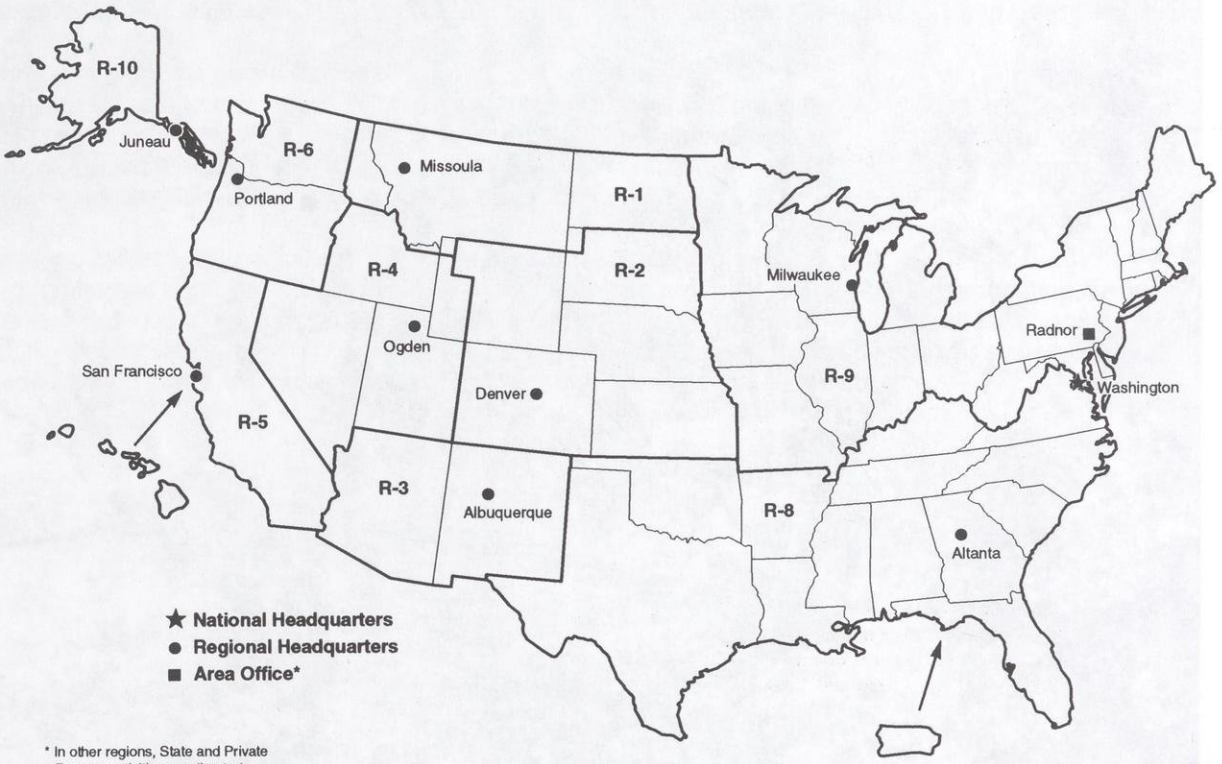
Across NFS lands many dams generate power and provide recreation opportunities. Inspecting dams on schedule ensures that engineers can prioritize needs that will ensure safety and protect natural resources.

Investments in existing roads (miles):
Miles of improvements to existing roads in accordance with approved plans and specifications. Accomplishment is reported when a contract is awarded, when timber sales with purchaser road work are sold, or when noncontract work is accepted. Copies of the contract and award letters, or acceptance reports, document the accomplishment reported. (MAR 93.2)

Facilities reconstructed to meet current legal standards (projects completed):
Improving health and safety of Forest Service facilities includes replacing, rehabilitating, renovating, and reconstructing facilities to improve access to buildings and restrooms for people with disabilities; update electrical, heating or cooling systems; replace roofs and eliminate hazards related to sewer systems, overcrowded conditions, and fire safety.



National Forest System Regional Offices
State and Private Forestry Area Office*



* In other regions, State and Private Forestry activities are directed from Regional Offices

● Regional Offices

Forest Service, USDA
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P.O. Box 7669
Missoula, MT 59807
406-329-3511

Forest Service, USDA
Rocky Mountain Region (R-2)
740 Simms Street
P.O. Box 25127
Lakewood, CO 80225
303-275-5350

Forest Service, USDA
Southwestern Region (R-3)
Federal Building
517 Gold Avenue, SW
Albuquerque, NM 87102
505-842-3292

Forest Service, USDA
Intermountain Region (R-4)
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324 25th Street
Ogden, UT 84401
801-625-5350

Forest Service, USDA
Pacific Southwest Region (R-5)
1323 Club Dr.
Vallejo, CA 94592
707-562-USFS

Forest Service, USDA
Pacific Northwest Region (R-6)
333 SW 1st Avenue)
P.O. Box 3623
Portland, OR 97208
503-326-2971

Forest Service, USDA
Southern Region (R-8)
1720 Peachtree Road, NW)
Atlanta, GA 30367
404-347-2384

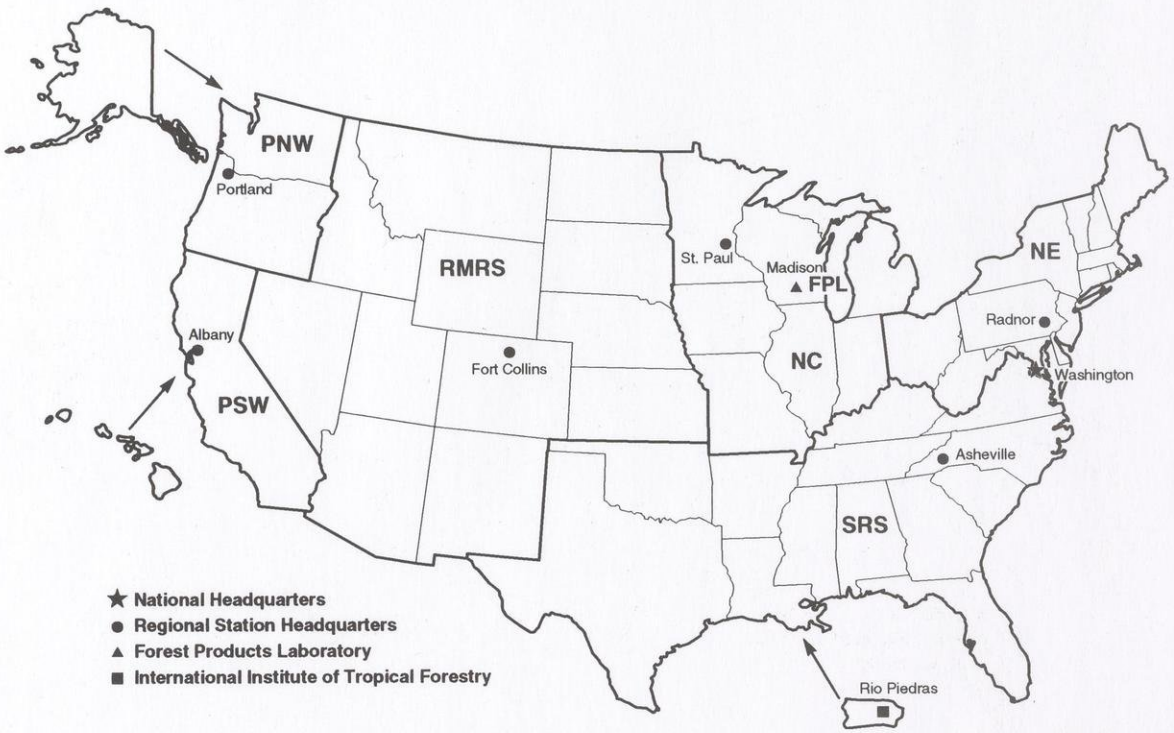
Forest Service, USDA
Eastern Region (R-9)
310 West Wisconsin Ave.,
Rm. 500
Milwaukee, WI 53203
414-297-3693

Forest Service, USDA
Alaska Region (R-10)
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Juneau, AK 99802
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Forest Service, USDA
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Southern Research Station (SRS)
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704-257-4300

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★ National Headquarters

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Forest Management Program
Annual Report for FY 1998

National Summary

United States Department of Agriculture | Forest Service | Washington Office Forest & Rangeland Staff | 14th & Independence SW P.O. Box 96090 Washington, DC 20090-6090

File Code: 2400
Date: March 2, 2001

Dear National Forest Stakeholder:

Enclosed for your use is a preliminary version of the *Forest Management Program Annual Report for FY 1998* – a document sometimes called the TSPIRS (Timber Sale Program Information Reporting System) Report. Although the data in this report are considered to be accurate and final, it has been labeled "preliminary" because this draft is presently undergoing editing and reformatting to bring it into full conformity with applicable government publication standards. The enclosed draft will be replaced with a final version when the required editing and reformatting has been completed. We are releasing the report now because it is already quite late, and we did not want to delay its release even further for essentially cosmetic reasons. Deputy Chief Jim Furnish's transmittal letter, which is a part of the document itself, explains why the report was not completed sooner.

Following release of the FY 1997 TSPIRS Report, Chief Dombeck established a multidisciplinary team to offer suggestions on how to modify the report so it would henceforth do a better job of describing the complex role that timber harvesting and sales now play in management of the national forests. The FY 1998 Report includes one of that team's recommendations; specifically, it includes a series of case studies – one from each region – that illustrate how these tools are being used to help achieve a wide array of important land management objectives. Highlighted projects show how timber harvesting and sales are being used to accomplish, often in a least net cost manner, such divergent objectives as reducing wildfire risks, improving public safety by eliminating hazard trees around campgrounds, and protecting historically significant earthworks by removing over-story trees prone to windthrow. Of special significance is the fact that these benefits are being realized at the same time that fiber is being produced and economic opportunities are being created for rural, resource-dependent communities.

I hope you find the report informative. If needed, additional copies may be downloaded from our website at http://www.fs.fed.us/land/fm/tspirs/ .

Ann M. Bartuska

ANN M. BARTUSKA
Director, Forest and Rangelands
National Forest System

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FACT SHEET Forest Service, USDA

Forest Management Program Annual Report
Fiscal Year 1998

- In fiscal year (FY) 1998, the volumes of national forest timber offered and sold declined slightly as compared to FY 1997. Harvest volume was essentially unchanged during the year. Specific accomplishments were: volume offered = 3.42 billion board feet (BBF), volume sold = 2.96 BBF, and volume harvested = 3.30 BBF. Of the volume harvested, 51 percent was removed for timber commodity purposes, 43 percent for forest stewardship purposes, and 6 percent for personal use purposes. These figures represent a continuing shift away from commodity and towards stewardship purpose sales, but the change was less pronounced than in prior years.

- In FY 1998, other direct accomplishments of the forest management program included: 12,000 pounds of seed produced, 292,902 acres regenerated, 300,202 acres of timber stand improvement (TSI) treatments, 15.7 million board feet (MMBF) of free-use firewood provided, 216,467 Christmas trees sold, 145,077 families served through personal use sales, $2.98 million worth of nonconvertible products sold, 2,557 miles of existing roads reconstructed, and 221 miles of new forest roads constructed.

- In FY 1998, important indirect accomplishments of the forest management program were: 25,434 acres of terrestrial habitat restored for threatened, endangered, and sensitive (TES) species; 957 habitat improvement structures built for TES species; 8,641 acres of range non-structural improvements; 169 range structural improvements built; 10,339 acres of rangeland monitored and evaluated; 36,502 acres of rangeland treated for noxious weeds; 18,153 acres of soil and water resource improvements; 17 miles of trail constructed or reconstructed; and 116,252 acres of fuels management treatments. These activities were conducted using Knutson-Vandenberg (K-V) or Brush Disposal (BD) funds collected from timber purchasers.

- In FY 1998, the harvest of national forest timber generated the following economic effects: 55,738 jobs, $2.1 billion in regional income, and $318 million in federal income tax receipts. The present net value (PNV) of the long-term economic benefits and costs expected to result from the harvesting of national forest timber, considering all quantifiable effects, was estimated to be $291 million. A total of $212.5 million in gross timber receipts was shared with the states and counties where national forest timber was harvested – to be used to benefit local schools and roads.

- In FY 1998, the national forest timber sale program as a whole operated at a loss of $125.9 million. Returns to the individual components of the overall program were: timber commodity purpose sales – a profit of $12.7 million, forest stewardship purpose sales – a loss of $110.6 million, and personal use purpose sales – a loss of $27.9 million. These figures are not directly comparable to those reported in previous years, because in FY98 the Forest Service changed its procedures for accounting for "road prism" costs – the second such change in as many years. This change was made in response to the findings of a General Accounting Office (GAO) study, which concluded that in FY97 agency had misinterpreted the new federal accounting standards applicable to such costs.

KEY MESSAGES Forest Service, USDA

Forest Management Program Annual Report
Fiscal Year 1998

Key Message No. 1: The national forest timber sale program has been changing, and these changes have had a profound effect on the program's profitability.

- *Change in program size.* – As recently as a decade ago, the national forest timber sale program entailed offering, selling, and harvesting nearly 12 BBF annually. In FY 1998, the program was under 4 BBF. As less volume is offered, sold, and harvested – other things being equal – revenue falls. Additionally, the unit costs of many program-related activities – e.g., sale preparation, harvest administration, and reforestation – tend to increase as the scale at which they are performed decreases.

- *Change in program objectives.* – In the past, most national forest timber sales were made primarily to provide commercially valuable fiber in response to the nation's demand for wood. Today, essentially half the program entails using timber sales as a cost effective tool for achieving various land management objectives, other than fiber production, that require manipulating the existing vegetation – e.g., improving forest health, reducing the risk of catastrophic fire, and creating desired habitat conditions for wildlife. Such "stewardship purpose" sales are just as costly to prepare and administer as commodity purpose sales, but oftentimes they generate less revenue because the material being sold is not dictated by commercial considerations.

- *Change in types of timber being sold.* – As compared to the past, today's timber sales program includes higher proportions of salvage and non-sawtimber sized material. Such volume tends to be less valuable than green or sawtimber sized material either because it has been degraded in some manner, it contains less clear wood, or it is unsuitable for manufacturing into as wide an array of products.

- *Change in methods of timber harvesting.* – Since the early 1990's, the agency has decreased its use of clearcutting in both absolute and relative terms. Additionally, it now makes more use of environmentally sensitive logging techniques such as cable yarding in place of tractors, and helicopter logging in place of cable yarding. These changes have tended to increase costs while simultaneously reducing volume recovery per acre.

Key Message No. 2: For a variety of reasons, profitability is a poor yardstick for evaluating the performance of the national forest timber sale program.

- *The national forests are not managed like a private timber growing business.* – As a matter of law and policy, the national forest timber program is not managed like a private timber growing business. Important differences revolve around such things as the longer growing periods (i.e., rotations) and higher stocking levels that are commonly employed, the greater emphasis placed on natural and uneven-aged management as opposed to plantation and even-aged management, the greater emphasis placed on the nontimber benefits obtainable from forest lands, the greater emphasis placed on thoroughly analyzing all the potential environmental effects of proposed timber sale projects, and the more open administrative

processes and procedures that are employed – e.g., the agency's administrative appeals process. If we do not want national forest managers to behave like private forest managers, does it make sense to judge their performance by the private sector's main performance standard – i.e., profits.

- *Timber sales are oftentimes the "least net cost" method of achieving desired management objectives.* – As noted earlier, timber sales are increasingly being used mainly as a tool for achieving various land management objectives, other than fiber production, that require manipulating the existing vegetation – e.g., improving forest health and reducing the risk of catastrophic fire. While sales of this type are frequently below-cost, the net cost to the government of achieving such land stewardship goals is oftentimes minimized when a timber sale is used to attain the desired ends. This result is explained by the fact that timber sales, unlike the other ways of manipulating vegetation – e.g., prescribed burning, use of chemical herbicides, and mechanical treatments such as cut-&-leave – typically generate revenue to help offset their implementation costs.

- *Timber sales provide many benefits beyond the revenues earned.* – Returns to the US Treasury are only one of the benefits derived from national forest timber sales. From an economic standpoint there are the job opportunities that are created, the additional income that accrues to individuals and businesses, the increment in tax receipts that governments receive by virtue of taxing this added income, the improved forest access that occurs as a result of timber-related road construction and reconstruction activities, and the legally required receipt-share payments that go to benefit local schools and roads. From an ecologic standpoint, there are the various land stewardship objectives that are addressed through timber harvesting – e.g., the improvements in forest health, the reductions in the risk of catastrophic fire, and the enhanced habitat conditions for wildlife. As the economic account of TSPIRS has consistently shown, to the extent that we can quantify them, the present value of the long-term benefits associated with national forest timber sales exceed the present value of the long-term costs.

- *There is no legal direction to earn a profit from the sale of national forest timber.* – The statutes under which the national forests are managed do not mandate that the agency make a profit from the sale of timber; indeed, some key laws – e.g., the Multiple Use-Sustained Yield Act of 1960, and the National Forest Management Act of 1976 – contain language which explicitly suggests or states that some management decisions should not to be based on profit maximization considerations. Of course, this does not mean that the Forest Service has no obligation to use taxpayer dollars as efficiently as possible. Agency managers recognize this responsibility is part of being a good steward of the public's limited resources, and they seek to behave accordingly.

Key Message No. 3: Even though the national forest timber sale program operates at a loss, this loss does not represent a subsidy of federal timber purchasers.

- A subsidy occurs whenever a good or service is exchanged at other than its fair market value. This does not describe what happens when national forest timber is sold. Before making a timber sale, Forest Service personnel conduct an appraisal to estimate the fair market value of the material being sold. By law, the timber cannot be sold for less than this amount. Additionally, at the time a sale is made, the timber is sold competitively with the contract normally being awarded to the bidder offering the highest price. Arguments of a subsidy arise because, as noted earlier, many timber sales fail to generate enough revenue to offset the total costs of sale preparation and administration. Program critics content that since a private timber producer wouldn't be able to remain in business under these circumstances, a subsidy is obviously occurring. In weighing the merits of this argument, it's important to consider: 1) the reasons why many timber sales lose money, and 2) the question of who benefits as a result of continuing the timber program even though some sales are money losers.

- Regarding the reasons why today's timber sales sometimes lose money, although a broad array of factors contribute to this result, some of which have already been mentioned – e.g., the shifts is program objectives, types of products being removed, and cutting methods being employed – two points warrant special emphasis. The first is that the Forest Service operates under a broad array of policies and procedures, some mandated by law and others administratively imposed, that effectively make the agency a relatively high cost timber producer – e.g., its NEPA analysis requirements, ESA consultation procedures, and administrative appeals process. The second factor is that the price the Forest Service can charge for its timber is determined in an open market where most purchasers have a choice of buying either public or private stumpage. In combination, these two factors make it impossible for the agency to always price its timber high enough to cover all costs. If it attempted to do so, in many instances it would only succeed in pricing itself out of the market and losing its ability to use timber sales as a management tool. This leads into the second important point.

- Regarding the issue of who benefits from perpetuating a money-losing timber sale program, a strong argument can be made that the government itself is the primary beneficiary. If the government were to be precluded from making below-cost timber sales, as noted above its ability to use sales as a management tool would be severely compromised. This is important because, as noted earlier, timber sales, even those that lose money, are oftentimes the least net cost way of attaining different management objectives that require manipulating the existing vegetation. Because this is the case, a policy eliminating below-cost sales, assuming all the nontimber objectives currently set-forth in forest plans were to be preserved, would almost certainly result in higher, not lower, costs to the US Treasury. A 1994 analysis conducted on 19 national forests from around the country strongly suggested that this would be the case. While private firms undoubtedly acquire national forest timber to realize a profit by converting the material into products, it is important to remember they paid fair market value for the material.

Key Message No. 4: Because of a change in the procedures for accounting for road prism costs, the financial returns reported for FY 1998 are not directly comparable to those reported in prior years.

- The change in road prism accounting procedures that the Forest Service made in FY 1998 resulted from the findings of a GAO inquiry conducted following release of the FY 1997 TSPIRS Report. GAO concluded the agency, in FY 1997, had misinterpreted the new federal accounting standards as they apply to income producing properties. This was the second procedural change in the treatment of such costs in as many years. The bottomline result is that in recent years TSPIRS has accounted for road prism costs in the following ways:

    - *FY 1996 and Prior Years* – These costs were capitalized into the value of the underlying land. This treatment was in conformity with a recommendation made by the independent accounting firm of Brown & Company in the early 1990's, and was based on the premise that road prisms, if properly maintained, would have an infinite useful life.

    - *FY 1997* – These costs were fully expensed. The agency believed that recently promulgated federal accounting standards required it to handle prism costs in this manner.

- *FY 1998* – These costs were depreciated over 50 years, which was the average useful life of a road prism that was agreed upon by the Forest Service and GAO. As mentioned earlier, this new method of handling prism costs was adopted because of the results of a GAO study.

Because a new procedure was used to account for road prism costs, the financial results reported in FY 1998 are not directly comparable to those reported in prior years. To provide a valid basis for comparison, the FY 1998 report provides some restated financial results for years back to FY 1994.

Key Message No. 5: The FY 1998 TSPIRS Report includes one of the reforms requested by Chief Dombeck following release of the FY 1997 Report.

- Following release of the FY 1997 TSPIRS Report, Chief Dombeck, believing that TSPIRS as traditionally structured was becoming increasingly less relevant to today's national forest timber sale program, directed establishment of a multi-disciplinary team to develop and offer recommendations on how to modify the report so that it would henceforth do a better job of documenting the critical role that timber harvesting and timber sales now play in management of the national forests. The FY 1998 Report includes one of that team's recommendations; specifically, it includes a series of case studies – one from each region – that were chosen to illustrate how timber sales are being used to achieve, often in a least net cost manner, a broad array of important land management objectives other than fiber production. The projects highlighted in the report used timber sales to accomplish such divergent objectives as reducing wildfire risks, improving public safety by eliminating hazard trees around campgrounds, and protecting historically significant earthworks by removing overstory trees prone to windthrow.

Key Message No. 6: The delay in releasing the FY 1998 TSPIRS Report is largely explained by the need to implement, in a systematic and rational way, the change in road prism accounting procedures recommended by GAO.

- The change in road prism accounting procedures alluded to above created a need to work with GAO to agree upon a reasonable depreciation period for road prisms; as noted earlier, 50 years was ultimately agreed upon. More importantly, this procedural change, as explained above, created a need to restate the financial results presented in prior TSPIRS Reports. This process took time, as critical financial management personnel were fully committed to bringing a new accounting system – the Foundation Financial Information System (FFIS) – on line for agency-wide use by October 1999. Implementation and debugging of the new accounting system took precedence over TSPIRS – thereby delaying the report's completion.

United States
Department of
Agriculture

Forest Service

February 2001

National Summary

Forest Management Program Annual Report

Fiscal Year 1998

(Preliminary Version)*

* All data in this document are considered to be accurate and final, however, before the report itself is deemed complete it will be edited and reformatted to conform to government publication standards. This current version will be replaced with an updated and final version when this required editing and reformatting has been completed.

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Message from the Deputy Chief

Dear National Forest Owner:

Enclosed is the *Forest Management Program Annual Report* for fiscal year (FY) 1998. This marks the 10th year the Forest Service has published this document, which is largely a summary of data compiled by the Timber Sale Program Information Reporting System (TSPIRS). As with previous editions in this series, this year's report documents program accomplishments, estimates various program-related economic effects, and applies accrual accounting principles to identify the revenues earned and expenses incurred in association with the Forest Service's timber program.

Past TSPIRS reports have documented a continuing decline in the profitability of the National Forest timber sales program and have examined some key reasons for this trend. Important changes highlighted in these earlier reports include the following:

- The marked decline in program size. – Over the last decade the volume of National Forest timber being offered, sold, and harvested each year has dropped from approximately 12 BBF (billion board feet) to less than 4 BBF. As the program has declined in size, revenues have tended to drop and unit costs to increase.

- The marked shift in program objectives. – Since the Forest Service started tracking sales by purpose in FY 1993, the proportion of National Forest timber being offered, sold, and harvested each year for timber commodity purposes has dropped from 71 to 51 percent whereas the proportion being managed for forest stewardship purposes has grown from 24 to 43 percent. Because stewardship purpose sales are undertaken for reasons other than producing commercially valuable fiber, their revenues are frequently less and unit costs more than for commodity purpose sales. Still, such sales oftentimes are the "least net cost" way to achieve management objectives requiring manipulation of the existing vegetation. This is because in contrast to the other tools that might be applied – e.g., prescribed burning, use of chemical herbicides, or mechanical treatments such as cut-&-leave – stewardship sales generate some revenue to help offset any treatment costs that are incurred.

- The marked change in the types of products being harvested. – Over the last decade more thinning and less regeneration harvesting has been occurring on the National Forests. As a consequence, less sawtimber and more small-sized trees are now being offered, sold, and harvested than was the case in the past. To illustrate, in FY 1998 sawtimber accounted for only 60 percent of harvest volume whereas in FY 1989 it accounted for 79 percent. Additionally, most of the decline

in the size of the program has occurred in the "green" rather than the "salvage" component. As a result, salvage sales now represent a greater proportion of the program than was the case in the past. Specifically, in FY 1998 salvage sales accounted for 37 percent of offer volume as compared to just 17 percent in FY 1989.

Following release of our FY 1997 report, acting on a belief that the preceding changes were rendering TSPIRS, as traditionally structured, increasingly less relevant to today's National Forest timber program, the Chief asked that a team be established to develop and offer recommendations on how the reporting system could be modified to do a better job of documenting the critical role that timber harvesting and timber sales now play in National Forest management. This year's report implements one of that team's recommendations; specifically, it includes a chapter highlighting several "case study" projects. These case studies, one from each Region, were chosen to illustrate how National Forest managers are currently using timber harvesting and timber sales as tools to achieve a diversity of land management goals.

Although the process that we initiated following release of the FY 1997 report was a step in the right direction in terms of reforming how we report on our forest management activities, in light of additional changes occurring within both the program and the agency, it seems likely that further refinements will be needed in the future. Much of the information now being reported in TSPIRS is only marginally relevant to today's timber program. TSPIRS was developed at a time when the program's focus was on producing commercially valuable timber to help meet the nation's demand for wood. In this setting, it arguably made some sense to stress timber output levels and profitability – but this is no longer the case. As previously noted, today's timber program emphasizes using timber harvesting and timber sales as cost-effective tools for improving resource conditions on the land, and consequently our principal interest is on outcomes as opposed outputs. While many of the activities we now pursue may not be profitable in a strict financial sense, we firmly belief they will eventually provide benefits to society that far outweigh any short-term financial losses. These benefits will be received in the form of such things as cleaner water, more abundant fish and wildlife habitats, increasingly diverse recreational opportunities, enhanced aesthetic values, improved soil productivity, and greater contributions to local communities. Much of the information currently reported in TSPIRS is, or soon will be, available through other agency reports. This situation even applies to the financial information reported in TSPIRS. The Forest Service, like all federal agencies, is under direction to implement managerial cost accounting for all its programs. The mechanism the agency intends to employ to satisfy this requirement is "activity based costing." Once fully implemented, which could be as early as FY 2002, this procedure will enable the Forest Service to provide equivalent financial information for all its programs. At this point in time there will be no need for a stand-alone financial reporting system such as TSPIRS.

Since the FY 1998 report is substantially overdue, I want to conclude my remarks by highlighting a couple of factors that contributed to its delayed release. One key factor was that in FY 1998 the Forest Service once again changed the way it accounts for road prism costs. This was the second such change in as many years, and was prompted by the results of a General Accounting Office (GAO) study. It took time for the Agency to determine how best to respond to GAO's conclusions. More importantly, it took time for us to restate our prior year financial results so they would be consistent with the information we reported in earlier years. Another key factor causing delay was the push to fully implement our new Foundation Financial Information System (FFIS) – which, effective in FY 2000, totally replaced our old Central Accounting System (CAS). The timely implementation of FFIS was a cornerstone of our continuing financial reform initiatives. Accordingly, when staffing resources were limited, activities relating to FFIS took precedence over those relating to TSPIRS.

We hope that you find this report useful and that it will add to your understanding of the many roles that timber sales now play in management of the national forests.

James R. Furnish

JAMES R. FURNISH
Deputy Chief, NFS

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Preface

This report is produced each year to provide Congress and the public with accomplishment, economic, and financial information about the Forest Service's forest management program. The format of this year's report is somewhat different, but the information provided is essentially the same as in previous years. After presenting an Executive Summary highlighting significant observations and findings, the body of the report is organized into five main chapters:

- **Review of TSPIRS and FY 1998 Changes.** – This chapter describes the origin and structure of TSPIRS, briefly explains what each part of the reporting system is intended to do, and discusses any procedural changes implemented during the reporting year.

- **Review of Stewardship Harvesting Case Studies.** – This chapter is new to the FY 1998 TSPIRS report; it describes a representative sampling of stewardship purpose sales from around the country. The goal in reviewing these sales is to provide some concrete illustrations of how timber harvesting and timber sales are currently being used as tools to help achieve a diversity of National Forest resource management objectives. Besides describing the purposes of each project, the reviews also attempt to document some of the advantages of using timber harvesting and timber sales as opposed to other possible management treatments.

- **Accomplishments of the FY 1998 Forest Management Program.** – This chapter documents various accomplishments of the forest management program. Among the direct accomplishments discussed are the volume of national forest timber offered, sold, and harvested; the amount of free-use firewood provided; the number of Christmas trees provided; the value of nonconvertible products provided; the acreage of national forest land regenerated; the number of acres of timber stand improvement treatments completed; and the mileage of timber access roads constructed and/or reconstructed. Resource management activities accomplished using funds collected from timber purchasers are also documented.

- **Economic Effects of the FY 1998 Forest Management Program.** – This chapter displays the economic effects directly or indirectly attributable to the forest management program during the reporting year. Consistent with past practice, three types of economic effects are documented: employment effects, regional income and Federal income tax effects, and the "present net value" (PNV) of the estimated resource effects.

- **Financial Results of the FY 1998 Forest Management Program.** – This chapter displays the revenues received and expenses incurred due to forest management during the reporting year. Revenues and expenses are reported by program component as well as for the program as a whole. This year's report, like prior reports, also includes an analysis of past revenue, cost, and net revenue (i.e., profit) trends.

Most of the data presented in this report has been aggregated to the national level; however, several appendixes provide more detailed information by region; forest; and, in some instances, state. The report includes a glossary of technical terms, a map showing the boundaries of all administrative regions and national forests, and instructions about how to obtain additional information.

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Executive Summary

The Forest Service administers approximately 192 million acres of public land -- 187 million acres designated as national forests and 4 million acres designated as national grasslands. This report provides information about the agency's forest management program activities in FY 1998. Key points discussed in the report include the following:

Accounting Changes in FY 1998

- In FY 1998, for the second year in a row, a major change was made in the way the TSPIRS financial account handles "road prism" costs. These include the costs associated with constructing the roadbeds that are an integral part of all timber access roads. Prior to FY 1997, consistent with generally accepted accounting principles (GAAP) applicable to the private sector, these costs were capitalized into the value of the underlying land. In FY 1997, consistent with the Forest Service's understanding of a new accounting standard specifically applicable to Federal agencies, these costs were annually expensed. In FY 1998, based on the results of a General Accounting Office (GAO) study completed after issuance of the FY 1997 TSPIRS report, these costs have been depreciated over an anticipated useful life of 50 years. This change means that to draw meaningful comparisons between past and future TSPIRS financial results, prior results must be restated to ensure consistent handling of road prism costs.

Stewardship Harvesting Case Studies

- Recognizing the changes that have been occurring in the national forest timber sales program, following release of the FY 1997 TSPIRS Report Chief Dombeck asked that a taskforce be created to recommend ways to modify the report so that it would henceforth do a better job of displaying "the full range of services and values provided by timber sales and other forest vegetation management activities." The FY 1998 report incorporates one of the recommendations suggested by that taskgroup; specifically, it highlights a number of timber sale projects from around the country that have been consciously chosen to illustrate how sales are being used to help achieve, often in a least net cost manner, a diversity of land management objectives, other than fiber production, that require manipulating the existing vegetation.

Selected Accomplishments in FY 1998

- In FY 1998, both the volume of timber offered and the volume sold declined slightly as compared to FY 1997. Harvest volume was essentially unchanged during the year. Specific accomplishments were:

  - Volume offered = 3.42 billion board feet (BBF)
  - Volume sold = 2.96 BBF
  - Volume harvested = 3.30 BBF

- In FY 1998, the volume of national forest timber harvested for timber commodity purposes continued to fall, while the volume harvested for forest stewardship purposes continued to grow – but the shifts were less pronounced than in previous years. The volume harvested for personal use purposes was down slightly as compared to FY 1997. The specific proportions were:

  - Timber commodity = 51 percent,
  - Forest stewardship = 43 percent, and
  - Personal use = 6 percent.

  Although the shifts in FY 1998 were not dramatic, there has been a significant change since FY 1993 when TSPIRS first recognized different sale purpose categories. In that year the proportions were:

  - Timber commodity = 71 percent
  - Forest stewardship = 24 percent
  - Personal use = 5 percent

- Of the total volume of timber harvested for stewardship purposes in FY 1998, the vast majority was harvested for the following reasons:

  - Forest ecosystem health = 76.9 percent
  - Wildlife habitat management = 9.8 percent
  - T&E species habitat management = 5.8 percent

  The acreages treated in connection with the preceding resource objectives are estimated to be:

  - Forest ecosystem health = 190,848 acres
  - Wildlife habitat management = 22,008 acres
  - T&E species habitat management = 15,715 acres

- Other direct accomplishments of the FY 1998 forest management program were:

  - Seedlings produced = 66 million

- Seed produced = 12,000 pounds
- Acres harvested (including thinning) = 524,785
- Acres regenerated = 292,902
- Acres treated for timber stand improvement = 300,202
- Free-use firewood provided = 15.7 MMBF
- Christmas trees sold = 216,467
- Value of nonconvertible products sold = $2.98 million
- Families served through personal use sales = 145,077
- Miles of existing forest roads reconstructed = 2,557
- Miles of new forest roads constructed = 221

To help put the amount of road construction and reconstruction in perspective, it is interesting to look at the amount of road being decommissioned. In FY 1998 the figure was:

- Miles of forest roads decommissioned = 2,098

- In FY 1998, other accomplishments indirectly attributable to the forest management program in the sense that they were funded using either Knutson-Vandenberg (K-V) or Brush Disposal (BD) funds collected from timber purchasers included the following:

Wildlife and Fish:

- Acres of TES terrestrial habitat restored/enhanced = 25,434
- Number of TES habitat improvement structures built = 957

Range:

- Acres of range non-structural improvements = 8,641
- Number of range structural improvements built = 169
- Acres of rangeland monitored and evaluated = 10,339
- Acres of noxious weed treatment = 36,502

Soil and Water:

- Acres of resource improvements = 18,153

Recreation:

- Miles of trail construction/reconstruction = 17

Fuels Management:

- Acres treated = 116,252

Economic Effects in FY 1998

- In FY 1998, the harvest of national forest timber directly or indirectly created the following economic effects:

  - Local community jobs = 55,738
  - Regional income = $2.1 billion
  - Federal income tax receipts = $318 million

- In FY 1998, the net present value of the long-term economic benefits and costs expected to result from the harvesting of national forest timber was estimated to be $291 million.

- In FY 1998, as mandated by law, $212.5 million in gross timber sale receipts were returned to the states and counties where national forest timber had been harvested – for use in benefiting local schools and roads. Timber-related "owl payments" to those states and counties where national forest timber harvests have been reduced to protect habitat for the northern spotted owl were $88.8 million, or over two-fifths (42 percent) of this total.

Financial Results in FY 1998

- In FY 1998, all components of the national forest timber sale program, considered in combination, lost $125.9 million. By comparison, the overall loss in FY 1997 was $88.6 million – but this was based upon annual expensing of "road prism" costs. Had the net revenue in FY 1997 been calculated using the same procedures as were employed in FY 1998, the reported loss would have been about $27.0 million higher.

- In FY 1998, the various components of the forest management program produced the following net revenues:

  - Timber commodity = +$12.7 million
  - Forest stewardship = -$110.6 million
  - Personal use = -$27.9 million

REVIEW OF TSPIRS AND FY 1998 CHANGES

Most of the information presented in this report was compiled by the Timber Sale Program Information Reporting System (TSPIRS). Accordingly, it is appropriate to briefly describe its origin, structure, and objectives.

Review of TSPIRS

TSPIRS was developed in response to Congressional direction contained in the Conference Committee Report on the 1985 Interior Appropriations Bill. The impetus for this direction was concern over "below-cost" sales, and the desire to have better information on the benefits and costs of selling national forest timber. The system was "pilot-tested" during FY's 1987 and 1988, and was officially implemented in FY 1989. It consists of three parts, each of which is described below.

The Financial Account

The TSPIRS financial account displays the revenues, expenses, and resultant net revenues (i.e., revenues minus expenses) associated with the harvesting of national forest timber in a given year -- doing so in an annual financial statement format. It was jointly developed by the Forest Service and General Accounting Office (GAO).

Separate financial accounts are developed by forest, region, and for the Forest Service as a whole. Additionally, at each administrative level, revenues, expenses, and net revenues are separately reported for three distinct components of the overall sales program. These components are:

- **Timber Commodity Purpose Sales** -- This component includes sales being made primarily to supply timber in response to society's demand for wood.

- **Forest Stewardship Purpose Sales** -- This component includes sales being made primarily to help achieve desired ecological conditions and/or to attain some non-timber resource objective that requires manipulating the existing vegetation -- e.g., improving forest health or reducing forest fuels.

- **Personal Use Purpose Sales** -- This component includes sales being made primarily to supply firewood, Christmas trees, and other miscellaneous forest products to individuals for their own consumption.

The revenues that are recognized in the financial account include actual stumpage receipts, purchaser road credits used to pay for harvested timber,[1] purchaser deposits for such things as road maintenance and brush disposal -- called associated charges, and any interest or penalty payments that are assessed.

The expenses that are recognized in the financial account fall into four broad categories:

- **Direct Timber Sale Expenses** -- Included are the costs of such activities as sale preparation and harvest administration.

- **Direct Timber Program Expenses** -- Included are the costs of such activities as transportation planning, conducting silvicultural examinations, and reforesting cutover areas.

- **Indirect Timber Sale Expenses** -- The primary thing included here is the cost of dealing with appeals and litigation.

- **Indirect Timber Program Expenses** -- Included are any costs of a "general administration" nature -- i.e., the portion of line management and program support costs that is properly chargeable to the timber program.

To better match annual sale-related revenues to annual sale-related expenses, expenses that are long-term investments -- i.e., expenses that will benefit future sale-related activities as well as those being conducted in the reporting year -- are placed into one of three pools and are redistributed back to a particular year based on pre-established formulas. This method of accounting is called "accrual" accounting, and it differs from "obligations-based" or "cash-flow" accounting.

TSPIRS recognizes three cost pools. These are:

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[1] Purchaser road credits are earned as timber purchasers complete construction and/or reconstruction of Forest Service mandated roads. The work must be performed to standards established by the Forest Service, and the amount of credit earned is governed by cost estimates developed by agency engineers. These estimates reflect the costs that an operator of average efficiency would incur to perform the desired work. As part of the President's FY 1998 Budget Request, the Administration proposed phasing-out the use of purchaser road credits. Congress concurred with this request, and starting in FY 1999 purchaser credits will no longer be used. Purchasers with unused credits, however, will be allowed to redeem them. In appraising future sales the Forest Service must estimate the associated road construction costs and include this amount in calculating the 25 percent receipt-shares due states and counties.

- **Sale Activity Pool** -- This pool includes those costs directly associated with the preparation of timber sales. The costs placed in it are expensed using the ratio of volume harvested to volume harvested plus volume under contract.

- **Growth Activity Pool** -- This pool includes those costs associated with growing timber over an entire rotation. The costs placed in it are expensed using the ratio of volume harvested to the total growing stock volume on suitable lands.

- **Depreciation Pool** -- This pool includes those costs associated with roads and facilities. The costs placed in it are depreciated over predetermined periods of time set to approximate each asset's anticipated useful live.

The method that TSPIRS uses to "pool" certain costs and subsequently "write-them-off" in later years is consistent with Federal government accounting standards as prescribed by such authoritative bodies as the Federal Accounting Standards Advisory Board (FASAB).

Over the years, considerable debate has surrounded the question of whether or not the 25 percent of timber sale receipts that must, by law, be returned to the states and counties for use in supporting local schools and roads -- i.e., "payments to states" -- should be counted as a timber program cost.[2] Some argue that since the original intent of these payments was to substitute for the property taxes that private landowners would pay, they should be treated as a cost. The Forest Service, however, has consistently maintained that these payments are not a program cost, but a redistribution of income that occurs outside the agency's normal financial activity. Accordingly, while payments to states for FY 1998 are documented in this report, they are not treated as a timber program cost.

The Economic Account

The TSPIRS economic account displays the long-term benefits and costs expected to result from a given year's timber harvesting activities. The account's information complements the data in the financial account in three ways:

- by considering future effects, not just immediate effects;

- by recognizing effects on all resource values, not just timber-related effects; and

- by examining "economic" effects, not just "financial" effects.

All of the preceding differences merit brief clarification. Concerning the first distinction, the basic idea is that the financial account uses a single year as its frame of reference -- i.e., the year during which the timber harvesting operations being evaluated were actually

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[2] Payments were originally authorized through legislation enacted on May 23, 1908. (Ch. 192, 35 Stat. 251, as amended; 16 U.S.C. 500, 16 U.S.C. 553, 31 U.S.C. 534)

conducted -- while the economic account considers a timeframe that is infinite in length. Concerning the second distinction, the basic idea is that the financial account documents only timber program effects, while the economic account considers how timber harvesting affects all resource programs -- i.e., recreation, wildlife, fisheries, grazing, soils, and water. Finally, concerning the third distinction, the basic idea is that the financial account examines only actual receipts and expenditures, while the economic account, where appropriate, uses state-of-the-art non-market analysis techniques to quantify relevant resource effects that cannot be evaluated by other means.

The economic account is constructed by performing what is called a "with-and-without" analysis. Initially, relevant resource effects are estimated under the assumption that a particular year's timber harvesting operations are indeed conducted. Next, these same resource effects are estimated using the assumption that no timber harvesting occurred. Lastly, the marginal or incremental output changes attributable to timber harvesting are evaluated. These output changes may be immediate or delayed (i.e., experienced now or experienced later). Additionally, the changes may be either positive (e.g., increased recreation and decreased sedimentation) or negative (e.g., decreased recreation and increased sedimentation). Once the relevant output effects have been expressed in physical terms -- e.g., animal unit months (AUM's) in the case of grazing, or visitor-days (RVD's) in the case of recreation -- they are re-expressed as monetary equivalents. The unit values employed to make these conversions are taken from the best available information sources which may be site-specific research studies, values used in RPA planning, or values set-forth in forest plans.

To facilitate making direct comparisons between monetary values occurring at different points in time, the economic account discounts the values of all anticipated output changes, positive as well as negative, back to the desired base year using a 4 percent real rate of interest. The present value of the negative output changes is then deducted from the present value of the positive output changes to determine the present value of the benefits. As a last step, the present value of any costs, including road costs, that will have to be incurred to realize the projected benefits is subtracted from the present value of the benefits themselves to derive two "present net value" (PNV) figures -- one that considers timber resource effects only, and one that considers effects on all resources, including timber.

Conceptually, when the PNV, considering all resource effects, is positive, it indicates that, at the assumed rate of interest, the timber harvesting investments that were made during the year in question were economically justified, because the present value of the expected long-term benefits exceeded the present value of the expected long-term costs. This fact illustrates one of the complexities of the below-cost sale controversy -- namely, that of selecting the criteria by which to determine if a below-cost situation exists. It is not uncommon for forests to have a negative net revenue in the financial account of TSPIRS and yet have a positive PNV in the economic account.

The Employment, Income, and Program Level Account

The TSPIRS employment, income, and program level account displays the employment, income, and Federal income tax benefits attributable to a given year's timber harvesting activities -- and also documents certain key timber program accomplishments. Like the financial account, its frame of reference is a single year -- this being the year in which the harvesting operations being reported upon were actually conducted. Despite this similarity, however, the information contained in the account compliments the data presented in the other accounts of TSPIRS in two ways:

- by recognizing certain important social and economic impacts not captured in the other accounts; and

- by providing a more complete description of timber program accomplishments.

Because of these differences, inclusion of the account strengthens TSPIRS and enables the reporting system, in the aggregate, to more fully portray the "net public benefit" that results from each year's forest management program.

The employment and income figures shown in the account are developed using IMPLAN or some other suitable input-output model, and the implied Federal income tax changes are computed as a percentage of the estimated income effects. While the last measure may require no explanation, some clarification of the other measures seems appropriate.

The account's employment figures depict the average number of full- and part-time employees using National Income and Product Account conventions. Additionally, they indicate not only the "direct" employment attributable to the national forest timber program, but also any relevant "indirect" and "induced" employment effects. Direct effects capture the initial economic consequences that result from some Forest Service action -- e.g., additional sawmill production stimulated by national forest timber sales. Indirect effects capture the additional economic consequences that occur as supplying industries respond to the changed input requirements of the directly impacted industries -- e.g., increased purchases of fuel, trucks, and equipment by sawmills so they can process national forest timber. Finally, induced effects capture the added economic consequences that result from adjustments in household spending that are attributable to changes in either the original industries or their suppliers -- e.g., increased purchases by any new workers hired by sawmills or their suppliers because of the processing of national forest timber.

The account's income figures indicate what is called "total regional factor income," and they consist of essentially three things. These are:

- **Employee Compensation** -- This part includes wages and salaries, and supplements to wages and salaries (e.g., employer contributions to employee health benefit and retirement plans).

- **Proprietor's Income** -- This part includes the income of sole proprietorships, partnerships, and tax-exempt cooperatives.

- **Other Factor Income** -- This part includes such things as rental income, interest and dividend earnings, and corporate profits.

As with employment, the income figures reported in TSPIRS as being attributable to the forest management program include the direct, indirect, and induced effects. The Federal income tax consequences are determined by taking 15 percent of the estimated income figures.

The program accomplishments that are reported fall into two broad categories – direct and indirect. Direct program accomplishments are outputs or outcomes that are clearly attributable to the forest management program. Besides the three measures typically stressed – i.e., volume offered, volume sold and awarded, and volume harvested – this category includes data on the area of land impacted by harvesting activities; the volume of free use firewood produced; the number of Christmas trees cut; the value of other "non-convertible products" produced (e.g., cones, boughs, and ferns); the area of land regenerated through planting, seeding, or by natural means; the area of land on which timber stand improvement activities were conducted (e.g., release, weeding, pruning, and precommercial thinning); and the mileage of timber access roads constructed and/or reconstructed using either appropriated funds or purchaser road credits. Indirect program accomplishments are outputs or outcomes normally associated with other resource programs but which can be attributed to the forest management program in that the activities are conducted using funds collected from timber purchasers – e.g., acres of soil and water improvements, acres of terrestrial wildlife habitat improved, and miles of stream habitat improved.

FY 1998 Changes

In FY 1998, for the second year in a row, a significant change was made in the way TSPIRS handles "road prism" costs. These are the costs, including excavation costs, that the Forest Service incurs to construct the roadbeds that are an integral part of all timber access roads.

In the absence of explicit Federal accounting standards, to the extent possible the agency originally built TSPIRS around generally accepted accounting principles applicable to the private sector. Consistent with these principles, since road prisms were deemed to be an integral part of the underlying land and to have an infinite useful life, the agency used to capitalize these costs into the land values reported in its financial statements. Other road-related costs, again consistent with industry standards, were initially depreciated over the growth cycle of the timber being harvested. The agency soon discovered, however, that this second convention did not work well for its road costs. The Forest Service is a land

conservation agency, not a private timber growing business; the factors it considers in deciding when to harvest timber differ from those of a private business. The lengthy periods of time over which it commonly grows trees may, under normal industry standards, cause its non-prism road costs to be depreciated over unrealistically long intervals of time – in some cases more than 200 years. To remedy this situation the agency contracted with an independent certified public accounting (CPA) firm to offer recommendations about how it should handle its road-related costs.[3] The end-result was the procedures the agency used prior to FY 1997. These procedures entailed recognizing four categories of road costs – prism, surface, culverts, and bridges. Prism costs, consistent with prior agency practice, were to be capitalized into the agency's financial statements. Other road component costs were to be depreciated over specified schedules – i.e., surface = 10 years, culverts = 30 years, and bridges = 50 years.

In more recent years, new accounting standards specifically applicable to federal agencies like the Forest Service have been under development. The body charged with formulating and recommending these standards is the Federal Accounting Standards Advisory Board (FASAB). FASAB's recommendations, once approved by the Office of Management and Budget (OMB) and the General Accounting Office (GAO), become the Federal Government's official accounting standards and are issued as Statements of Federal Financial Accounting Standards (SFFAS).

SFFAS Number 6 – *Accounting for Plant, Property, and Equipment* – contains the standards federal agencies are to use for road accounting. In reviewing these new standards pursuant to preparing its FY 1997 TSPIRS Report, the Forest Service concluded that they mandated annual expensing as opposed to capitalization of road prism costs. Implementation of this accounting change necessitated recognizing an additional $51.4 million in timber-related road costs in FY 1997. Largely because of these increased costs, TSPIRS reported a loss of -$89 million in FY 1997 – a much larger loss than the -$15 million loss reported in FY 1996.

Following release of the FY 1997 TSPIRS Report, Senator Frank H. Murkowski, Chairman of the Senate Committee on Energy and Natural Resources, asked the General Accounting Office (GAO) to assess whether or not the Forest Service had correctly applied the new federal accounting standards applicable to road prism costs. The GAO, after consulting with FASAB, concluded that the agency had erred – and that in the case of federal lands being used for business-type activities such as timber production, road prism costs should have been depreciated over the period of time the roadbeds were expected to be useful in accessing timber.[4] After a period of negotiation between the agency and GAO, it was mutually agreed that, on balance, a depreciable life be 50 years would be appropriate for most national forest road prisms. Accordingly, this is the practice that was followed in preparing the FY 1998 TSPIRS Report.

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[3] Brown & Company; 1989; Evaluation of Timber Sale Program Information Reporting System (TSPIRS). Report of Contract No. 53-3187-9-01 (SBA 3-88-2-2928); 43p. plus appendixes.

[4] See: General Accounting Office; 1999; *FOREST SERVICE: Accounting Treatment of Roadbed Costs*; GAO/AIMD-99-44R; 13p. plus appendices.

The change in the agency's handling of road prism costs has important implications for the comparability of the financial results presented in different TSPIRS reports. Specifically, absent restatements of prior year results, the total expenditure and net revenue figures contained in this year's report cannot be directly compared to those presented in prior year's reports. In this regard, while SFFAS No. 6 does not mandate restatement of prior year's figures, this report does contain some restated expenditure and net revenue data. This has been done as a convenience to readers, and to provide a valid basis for explicitly showing the financial effects of this latest road prism accounting change.

Review of Stewardship Harvesting Case Studies

As documented in recent TSPIRS Reports, the national forest timber sales program has undergone significant change during the last decade. One of the most fundamental changes has been the ongoing shift in the underlying reasons for selling national forest timber. In the past, the vast majority of sales were made primarily to provide commercially valuable timber to help meet the nation's demand for wood. As recently as FY 1993 such sales, called "timber commodity" purpose sales, accounted for almost three-fourths of all the national forest timber being harvested. More recently, however, more and more timber sales are being undertaken primarily to achieve, in a least net cost manner, a broad array of land management objectives that require manipulating the existing vegetation – e.g., improving forest health, reducing the risk of catastrophic fire, and creating desired habitat conditions for wildlife. Such sales are called "forest stewardship" purpose sales.

As this shift towards stewardship purpose sales has become more dramatic, the Agency has come to believe that the accomplishment measures traditionally stressed in TSPIRS – e.g., volume offered, sold and awarded, and profitability – are much less relevant to evaluating program performance than they once were. This situation prompted Chief Dombeck, following release of the FY 1997 report, to create a taskforce to formulate recommendations on how TSPIRS might be modified so as to henceforth do a better job of depicting the vital role that national forest timber sales are presently playing in helping to restore the health of forest ecosystems and watersheds.[1] After completing its work, one of this taskforce's recommendations was to include a series of case studies in future TSPIRS reports that would illustrate how the Agency is presently using timber sales as a tool to help achieve different forest stewardship objectives in a least net cost manner.[2] This chapter has been prepared in response to that recommendation.

Objectives of Review

The basic objective of the case study reviews is to provide specific examples of how national forest managers are currently using timber sales as a tool to achieve, often in a least net cost manner, a diversity of important land management objectives other than fiber production. In recent years there has been a growing perception that national forest timber is sold for only one reason – to provide essential raw material to the forest

[1] See Chief's letter of June 11, 1998, on the subject of "tracking forest management accomplishments."
[2] See decision memorandum sent to the Chief on September 25, 1998, on the subject of "tracking forest management accomplishments."

products industries. These examples will hopefully show, in a forceful and persuasive way, that this is not the case.[3]

In reviewing each case study, emphasis has been placed on documenting two things: 1) the resource management objectives that the project was intended to achieve, and 2) the reasons why a timber sale was chosen as the primary tool for implementing the project. Other topics discussed, as appropriate, include the following: the number of acres subject to different types of treatments; the outputs produced; the steps taken to prevent and/or mitigate the potential undesirable side-effects of the treatments being applied; and the public reaction to the project before, during and after completion. Photographs have been included, as available, to illustrate the pre- and/or post-treatment conditions of the project areas. Finally, where a particular project had progressed to termination, each review concludes with an assessment of its overall success.

Regional Case Studies

The case studies highlighted in this report were selected after requesting nominations from the field. In the letter requesting nominations, field units were instructed to nominate "representative" projects, not projects that they considered to be their "best" or "most favorable" efforts. Ultimately one project was selected from each Region. These selections were made so as to ensure that the chosen projects, when considered in combination, would illustrate the use of timber sales within a wide range of different management contexts.

Region (1): Northside Timber Sale, Lolo National Forest

The Northside Timber Sale was carried-out on the Missoula Ranger District of the Lolo National Forest in Montana. Over time the treatment unit, which is located within an urban interface area, had become "out-of-balance" ecologically. As a result, the area faced substantial risk from catastrophic wildfire. The primary objective of the project was to reduce this risk. Secondary objectives were to improve winter range and elk forage, and encourage ponderosa pine growth. For TSPIRS reporting purposes, the project was coded as FS10 – 100 percent; which means that the undertaking was deemed to be a forest stewardship purpose sale that would mainly benefit ecosystem health.

[3] In reality, such has never been the case – even in the past when the Agency's focus was on making so-called "timber commodity" purpose sales. When the Forest Service sells timber, even for commodity purposes, it does not do so to help ensure that the forest products industries can operate at a profit, it does so to fulfill its legislative mandate "to furnish a continuous supply of timber for the use and necessities of the citizens of the United States." (Organic Administration Act of June 4, 1897) In a capitalistic economy such as ours, where the means of production have, for the most part, been vested in the private sector, working through the forest products industries is the only way that the Agency can effectively respond to its charge from Congress.

A contract to implement the project was awarded on October 2, 1996. Under the terms of this contract, timber harvest operations, primarily commercial thinning and understory removal, were to be conducted on some 1,500 acres. Following harvesting, the treated acres were to be burned. It was estimated that 5.3 MMBF of sawtimber would be produced. Timber harvesting was selected as the preferred method of treatment because the ID (Interdisciplinary) team responsible for planning the project concluded that this tool would most completely fulfill the objectives set-forth in statement of purpose and need of the governing Environmental Assessment (EA). Additionally, the net cost per acre treated was estimated to range from $65 to $159/acre for the timber sale alternatives as compared to $220/acre for the no harvest option.

A variety of measures were employed to prevent and/or mitigate the potential undesirable side effects of project's timber harvesting activities. Helicopter yarding was employed. Streamside buffer zones were established, and a temporary bridge was used to cross La Valle Creek. Log haul schedules were structured to minimize watershed, wildlife, fishery, ecosystem and social impacts. Steps were taken to prevent and/or control the spread of noxious weeds. Lastly, unneeded roads were decommissioned at the end of the project.

The project had been controversial during the planning stage, but eventually received widespread public support. Only one appeal was received from local environmental groups. During FY 1998 a number of field trips were held for adjacent residents, the media, and members of the local Chamber of Commerce.

Region (2): Big Creek Lakes Campground Vegetation Management Project, Medicine Bow/Routt National Forest

The Big Creek Lakes Campground Vegetation Management Project was carried-out on the Parks Ranger District of the Medicine Bow/Routt National Forest in Colorado. The western portion of the Big Creek Lakes Campground was surrounded by a stand that included an overstory of mature lodgepole pine and an understory of subalpine fir and lodgepole pine. Over time, the overstory lodgepole pine had become severely infested with dwarf mistletoe – which was spreading to the pine understory. These conditions were resulting in a high rate of tree mortality and top die-back which, in turn, was creating hazardous campground conditions. Since 1994 the Forest Service had been removing between 110 and 145 hazard trees each year. Even this rate of cutting was insufficient to guarantee the health of the stands and ensure the long-term viability of the campground. Complicating the situation, the stands surrounding the eastern portion of the campground were pole-sized lodgepole pine that was seriously overstocked. These overcrowded conditions were favoring the spread of the dwarf mistletoe infestation, and also accentuating the risks of catastrophic wildfire.

The Big Creek Lakes Campground Vegetation Management Project was undertaken primarily to ensure the long-term viability of the campground and to guarantee the safety of recreation users. A secondary objective was to improve forest health by reducing the

risks of disease and catastrophic wildfire. For TSPIRS reporting purposes, the project was coded as FS10 – 100 percent; which means that the undertaking was deemed to be a forest stewardship purpose sale that would benefit mainly ecosystem health.

A contract to implement the project was awarded on August 31, 1998. Under the terms of this contract, some 30 acres of the stands surrounding the western portion of the campground were to be harvested using individual tree selection. The prescription mandated removal of all lodgepole pine that was heavily infested with dwarf mistletoe, and all overstory trees that were near campsites or deemed to be subject to windthrow. The overstocked stands surrounding the eastern portion of the campground were to be thinned to improve forest health. The total volume of timber harvested was approximately 510 CCF (hundreds of cubic feet). Roughly 95 percent of this material was live sawtimber, the balance was dead.

A timber sale was deemed to be the only viable option for accomplishing the objectives of this project. Continuing to remove 100 to 150 hazard trees per year was not significantly improving public safety, or doing anything to address the existing forest health concerns. Using a timber sale enabled the Forest Service to collect KV and BD funds which were used to manage the understory and treat the logging slash. A financial analysis of the "Proposed Action" and "No Action" alternatives showed the former to have a much better present net value (PNV) assuming a 4 percent discount rate.

Measures used to prevent and/or mitigate the potential undesirable side effects of the project's timber harvesting activities included the following: directional felling, mandating the use of rubber-tired skidders, requiring that the front-end of logs be suspended during skidding, using campground roads as skid trails, precluding whole tree skidding, and requiring revegetation of the skid trails and landings at the close of the operation.

Very little controversy surrounded implementation of the project. No appeals or lawsuits occurred. The public was concerned about the way the campground appeared immediately following treatment, but these concerns evaporated once the slash treatment and cleanup work was completed.

Region (3): Pratt Canyon Timber Sale, Kaibab National Forest

The Pratt Canyon Timber Sale was carried-out on the North Kaibab Ranger District of the Kaibab National Forest in Arizona. This District has the densest population of Northern Goshawks in the United States. The report of the Northern Goshawk Scientific Committee – *Management Recommendations for the Northern Goshawk in the Southwestern United States (MRNG)* – identified 6 age classes of vegetation that were needed to provide nesting and foraging habitats for the goshawk and its prey base. Unfortunately, over time the structure of the stands within the project area had become unbalanced – there was a preponderance of trees in the larger size classes. This was adversely affecting populations of some of the goshawk's principal prey species.

The primary objective of the Pratt Canyon Timber Sale was to improve habitat for both goshawks and their prey species. Towards this end, timber harvest activities sought to create a condition where approximately 40 percent of the treatment area would be dominated by groups of large trees (18"+). Secondary objectives were to reduce the risk of catastrophic wildfire, reduce the acreage infected with dwarf mistletoe, reduce the threat from other insect and disease pests, increase the acreage of aspen, and provide additional watering opportunities for animals. Treatments implemented during the course of the project included the following: 1,188 acres harvested using group selection, 597 acres of prescribed burning, 200 acres of precommercial thinning, 94 acres of fuelbreak maintenance, 30 acres of meadow maintenance (removal of encroaching conifers), 20 acres of artificial regeneration, and 15 acres of aspen regeneration. Timber outputs included 4.53 MMBF of ponderosa pine, Douglas-fir and white fir sawtimber, and 777 MBF of pulpwood.

Because of the preponderance of larger-sized trees, a timber sale was deemed to be the least net cost method of achieving the desired results. A financial analysis indicated that the Benefit/Cost Ratio for the project would be approximately 2.2. To have used cut-&-leave to attain the desired results would have cost an estimated $106,000. Furthermore, the merchantable material left in the woods would have created an unacceptable fuels situation. Finally, had it used cut-&-leave the government would have forgone the $250,000 in revenue that was earned from sale of the timber, and would have had to pay for $121,000 in site improvements that were funded with the use of KV funds collected from timber purchasers.

A variety of measures were employed to prevent and/or mitigate the potential undesirable side effects of the project's harvesting operations. Most significantly, the timing of harvest activities was controlled to minimize disturbance of the goshawks. Other measures that were adopted included the following: placing restrictions on the location of roads and skid trails, specifying the conditions under which certain roads could be used for haul purposes, and retaining groups of mature aspen trees with existing cavities or the potential for them.

This project was quite controversial at the time it was proposed. An appeal was filed, but the decision of the field managers was upheld by the Regional Forester. There continues to be controversy surrounding the application of the recommendations of the Northern Goshawk Scientific Committee, but the results of this project appear to have been accepted.

Region (4): Prince John Timber Sale, Boise National Forest

The Prince John Timber Sale was carried-out on the Cascade Ranger District of the Boise National Forest in Idaho. Analyses begun in 1994 had shown that within the treatment area, low elevation Douglas fir, grand fir, and ponderosa pine stands were outside their historic range of variability in terms of both basal area per acre and seral species

composition. Due to a lack of frequent low intensity fires and unchecked regeneration of climax species, the basal area on some sites was a high as 174 square feet per acre – this is in contrast to the historic range which varied from 77 to 115 square feet per acre. The condition of these stands favored the occurrence of large stand-replacing fires, which had the potential to severely damage soil productivity, wildlife and fisheries habitat, and other resource values. Additionally, a number of roads within the project area, most of which had been built prior to 1950 and had been located immediately adjacent to streams, were contributing substantial amounts of sediment to perennial streams, thereby degrading riparian conditions and aquatic habitat.

The primary objectives of the project as articulated in the "purpose and needs" section of the final environmental impact statement were: 1) to salvage dead and imminently dead trees from the area; 2) to achieve the desired future condition of a healthy diverse forest in which important visual resource values are sustained; 3) to improve big game forage habitat; 4) to reduce natural fuel loads; 5) to reduce sediment delivery from existing roads while still providing access to heavily used recreation sites; and 6) to provide sawlogs and other wood products to help sustain local economies and meet the nation's demand for wood. For TSPIRS reporting purposes the sale was coded as FS10 – 100 percent; which means that the undertaking was deemed to be a forest stewardship purpose sale that would mainly benefit ecosystem health.

A contract to implement the project was awarded on September 22, 1997. Expectations are that the project will not be completed until September of 2004. By the time the project is completed it is estimated that 14.7 MMBF of timber will have been harvested from approximately 2,018 acres. This volume is to be removed using a variety of silvicultural prescriptions including clearcut with reserve trees, irregular shelterwood, group selection, and individual tree selection. Some 10.6 miles of existing road will be reconstructed – and 5.5 miles, most of which lies immediately adjacent to perennial streams, will be obliterated. Finally, prescribed fire will be used to improve big game forage, thin overcrowded plantations, and reduce natural fuel loads on some 1,307 acres.

Because much of the vegetation needing treatment was of merchantable size, a timber sale was deemed to be the prudent means of attaining the stated project objectives. An economic analysis prepared as part of the FEIS suggested that the project would return $1.05 for every dollar spent preparing and administering the sale. Because of a drastic upswing in market values, the high bid was such that the project will actually return about $2.00 for every dollar spent on sale preparation and administration. Sale area improvements costing over $166,000 were carried-out using KV funds collected from the timber purchaser. These improvements were not undertaken to mitigate timber sale effects, but to achieve other desired resource objectives –e.g., precommercial thinning, dwarf mistletoe control, prescribed fire for wildlife, and streamside and gully stabilization.

In addition to the normal forest plan standards, the interdisciplinary (ID) team that designed the project imposed a wide array of other constraints to mitigate the potential adverse impacts of the project on such things as visual values, the residual vegetation,

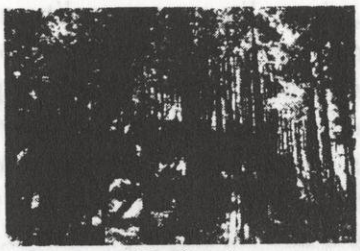
wildlife and fisheries resources, air quality, water quality, and soil productivity. Representative of the specific measures used were the following: using a Landscape Architect to layout unit boundaries and decide on marking prescriptions; retaining a certain number of "snags" per acre for use by wildlife; leaving "buffer zones" of specified widths around streams, ponds, lakes, reservoirs, and wetland areas; leaving a certain amount of woody material per acre to maintain soil productivity; and requiring hydromulching and seeding of cut and fill slopes, landings, and skid trails.

The project was not without controversy at the time that it was proposed. The Regional Office received three administrative appeals. Two were dismissed because they failed to meet the content requirements of an appeal; the third proceeded through the appeals process and the decision of the field manager's was upheld by the Regional Forester. Since implementation, the project has been cited as a good example of how timber harvesting can be used to improve forest health and reduce chronic sedimentation sources while simultaneously providing wood products to help meet market needs.

Region (5): "Chopsticks" Small Diameter Demonstration Project, Shasta-Trinity National Forest

The "Chopsticks" Small Diameter Demonstration Project was carried-out on the Hayfork Ranger District of the Shasta-Trinity National Forest in California. This was not a typical timber sale, or even a typical stewardship purpose sale – but the project was intended to provide information that could be extremely useful in terms of addressing an important stewardship need. The Chopsticks project entailed removing suppressed and damaged understory trees from 39 acres of mixed conifer/Douglas fir forest in the Klamath Mountains area. The project's primary resource management objective was to reduce overstocking and thereby improve the health and vigor of the residual stand (Figure 1); an important secondary objective was to evaluate the economics of a mobile yarder that had been developed to provide a means of efficiently thinning dense stands of small sized trees – i.e., trees from 3.5 to 10 inches in diameter. At present a significant acreage of National Forest land is overstocked, principally by small diameter trees of little or no commercial value. This overstocking elevates the risk of resource value losses due to wildfire, insects, and disease, and may adversely impact wildlife habitat as well.

The Chopsticks project was implemented under an administrative use agreement approved by the Regional Forester. All harvesting activities were carried-out during the period from May through November of 1997. Approximately 170 MBF of sawtimber-sized material was removed, and 20 MBF of poles. Timber harvesting was used because it represented the only practical means of achieving the project objectives. The stocking of the stands being treated was so dense that the use of prescribed fire was not a viable option. By issuing an administrative free use permit for the timber as opposed to utilizing a service contract, the government saved anywhere from $200 to $400 per acre.



(Before)



(After)



(Before)



(After)

Figure (1): Matched Photos Showing "Before" and "After" Treatment Conditions Associated With the *Chopsticks Small Diameter Utilization Project* Implemented on the Shasta-Trinity National Forest in California.

The mobile yarder that was tested represents a relatively "low-impact" method of thinning small-diameter trees from dense, over-crowded stands. Nonetheless, a number of measures were employed to mitigate the potential undesirable effects of the harvesting operations. For one thing, cable corridors were flagged in advance of felling and yarding. For another thing, extra care was exercised during yarding to protect the residual stand.

The project was strongly supported by a broad array of local community groups. The Watershed Research and Training Center in Hayfork was a key partner. Other cooperators included Trinity County, Trinity Occupational Training, Jefferson State Forest Products, and the Forest Products Laboratory.

Region (6): Tower Timber Sale, Gifford Pinchot National Forest

The Tower Timber Sale was carried-out on the Cowlitz Valley Ranger District of the Gifford Pinchot National Forest in Washington. All the harvest units were 35 to 40 year old plantations dominated by Douglas fir. The stands, which typically had from 200 to 300 trees per acre, were at their maximum stocking density. Canopy closure was complete and diameter growth had slowed to a minimum. Because of the canopy closure, understory vegetation was minimal. Treatment was deemed necessary to accelerate growth and development towards the late successional conditions described in the Northwest Forest Plan. The principal management objectives of the project were: 1) to accelerate development of late-seral conditions (large dominant tress, multiple canopy layering, diversity of understory species, and large snags/course woody debris on the forest floor) in young stands less than 80 years old; and 2) to restore structural complexity and biological diversity in forests and streams where past wildfires and management activities had reduced diversity. (Figure 2) For TSPIRS reporting purposes, the project was coded as FS30 – 100 percent; which means that the undertaking was deemed to be a forest stewardship purpose sale that would mainly benefit wildlife.

Harvesting began in the summer of 1998. In total, some 207 acres were to be commercially thinned thereby yielding 1.3 MMBF of sawtimber and 30 MBF of non-sawtimber. A timber sale was deemed to be the only practical and feasible way of attaining the established management objectives. Leaving the stands untreated would have doubled or tripled the time required for the units to develop into the desired conditions. Additionally, using a timber sale made it possible to collect KV funds from the timber purchaser. These funds were used to precommercially thin six young plantations (10 to 20 years old) adjacent to the harvest units.

A wide array of measures was employed to mitigate the potential undesirable side effects of the timber harvesting operations. These included the following: leaving no-cut buffers alone creeks and roads; predesignating skid trail locations to minimize compaction; restricting skidding activities during certain times of the year to minimize compaction;



(Before)



(After)

Figure (2): Unmatched Photos Showing "Before" and "After" Treatment Conditions Associated With the *Tower Timber Sale* Implemented on the Gifford Pinchot National Forest in Oregon.

restricting the timing of logging operations to minimize disruption of wildlife; and retaining big leaf maple clumps to increase species diversity.

This project, by virtue of the fact that it was occurring within the Late Successional Reserve, was not particularly controversial. One administrative appeal was received. The District responded to the issues and the Regional Office affirmed the decision.

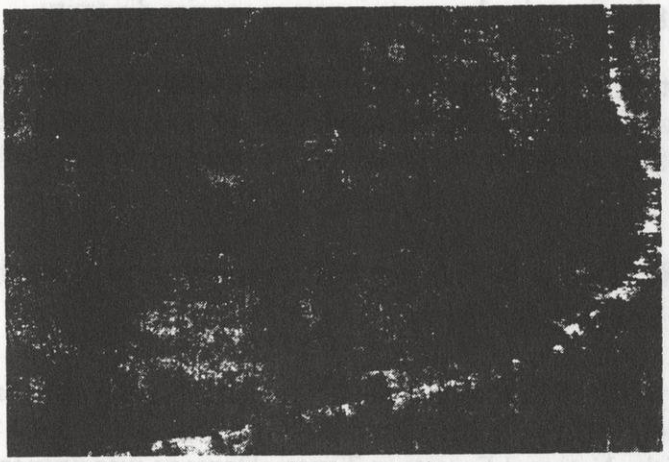
Region (8): Texas Windstorm Response and Rehabilitation Project, National Forests in Texas

On February 10, 1998, a severe windstorm struck East Texas damaging trees on approximately 103,000 acres within the Angelina, Sabine, and Sam Houston Ranger Districts of the National Forests in Texas. Damage was primarily to large pine sawtimber trees with severity ranging from extensive (loss of greater than 60 percent of existing trees) to light (loss of 10 to 30 percent of existing trees). The downed material greatly increased the potential for catastrophic wildfire and an upswing in southern pine beetle activity. Habitat for the Red Cockaded Woodpecker (RCW), a federally listed species, was also adversely impacted.

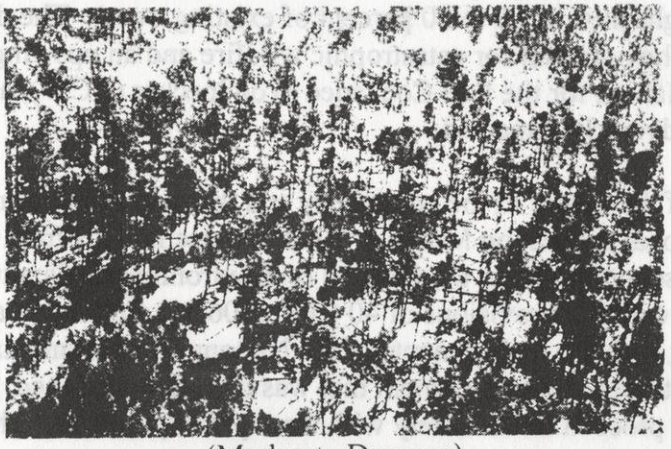
Because of the nature of the emergency and the threat to intermixed private lands as well as the national forests, on March 4, 1998, representatives from the Forest Service met with representatives from the Council on Environmental Quality (CEQ) to request, consistent with the provisions of 40 CFR 1506.11, alternative arrangements for complying with the requirements of the National Environmental Policy Act (NEPA). Under the terms of the agreement that was ultimately reached, the Forest Service was allowed to proceed immediately with three priority actions. These were:

- Remove fallen and hazard trees from existing forest development roadways.
- Remove dead, down and leaning trees in and within 300 to 500 feet of active RCW clusters, recruitment and replacement stands.
- Remove fallen trees and tops to reduce fuel loadings and minimize the potential for catastrophic fire.

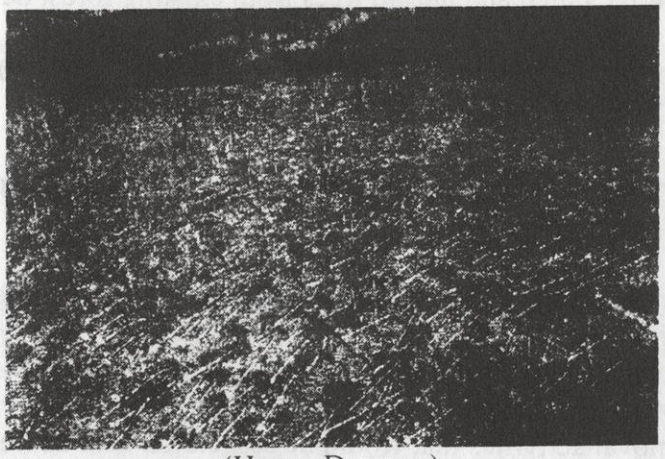
A fourth priority was to take whatever actions were deemed necessary to suppress southern pine beetle attacks on the remaining live trees. Under the agreement reached with CEQ, the agency was allowed to utilize an Environmental Assessment (EA) as opposed to an Environmental Impact Statement (EIS) to analyze the probable effects of the tree removal activities that would be associated with addressing this need – however, the EA had to include a discussion of the likely cumulative effects. Finally, a last condition of the agreement was that the agency would prepare an EIS prior to reforestation of the affected areas.



(Light Damage)



(Moderate Damage)



(Heavy Damage)

Figure (3): - Varying Degrees of Damage Caused by the Windstorm That Struck the National Forests in Texas on February 10, 1998.

For TSPIRS reporting purposes, all the sales undertaken in connection with this project were coded as FS10 – 100 percent; which means that they were deemed to be forest stewardship purpose sales that would mainly benefit ecosystem health. In total, some 92 MMBF of timber were eventually removed, including 82 MMBF of pine sawtimber. Because of the magnitude of the project and the high value of pine sawtimber, a timber sale was clearly the most economically efficient way to accomplish the resource management objectives. Indeed, estimates indicate that to have accomplished the same work using a service contract would have cost the government approximately $39.5 million whereas timber sales yielded a return of $7.2 million.

All timber harvest activities were conducted in accordance with the standards and guidelines set forth in the Revised Land and Resource Management Plan for the National Forests in Texas. Additionally, a variety of other measures were used to mitigate the potential undesirable side effects of the logging operations. These measures included the following: avoiding removal of undamaged live trees except as necessary to ensure worker and equipment safety; avoiding removal of trees in riparian areas except as recommended by fisheries biologists, soil scientists, and hydrologists; and using interdisciplinary (ID) teams to recommend removal techniques and to identify areas where operations should be restricted or prohibited.

Following the windstorm event, the predominant concern among most East Texas residents was that the Forest Service would not respond rapidly enough to remove the storm-damaged trees. Landowners in surrounding areas were fearful that wildfires would start on the national forest land and spread to adjacent private lands. On August 14, 1997, Judge Richard A. Schell, United States District Court for the Eastern District of Texas had issued a judgment in a civil lawsuit that enjoined the National Forests in Texas from engaging in all timber harvesting except that intended for insect and disease control, fire protection, or to maintain the health of the forest land. The Forest Service believed that the harvesting operations required to respond to this emergency situation were justified under the court's exception for forest health. However, the plaintiffs in the original lawsuit took an opposing position. After numerous filings by all parties concerned, Judge Schell ruled on April 1, 1998 that the Forest Service could proceed to remove the storm-damaged trees. During the appeal period following release of the EA covering the four priority recovery activities, 3 organizations filed administrative appeals. One appeal was dismissed for failure to meet the applicable regulatory criteria; in the case of the other two appeals, the Regional Forester affirmed the Forest Supervisor's decision. In general, the public seems to have been satisfied with the way this emergency was handled.

Region (9): Wolfmore Timber Sale, Allegheny National Forest

The Wolfmore Timber Sale was carried out on the Marienville Ranger District of the Allegheny National Forest in Pennsylvania. The sites that were treated were archaeologically significant areas; they contain a series of linear ditch and berm-like earthen circles that are the remains of prehistoric camps that were once surrounded by

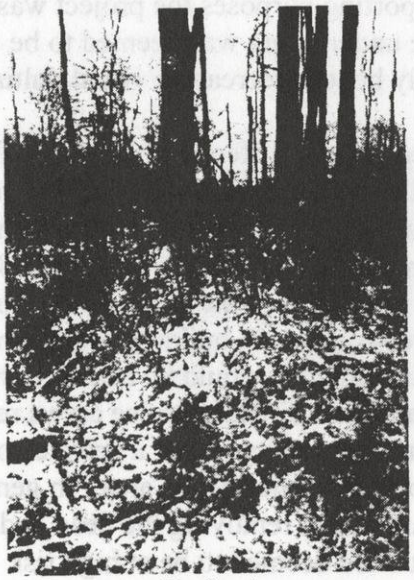
protective fence-like palisades. During the period that the sites were occupied, probably 450 to 650 years ago, there were no trees within and surrounding the sites because they had all been used by the site occupants to build the site or as firewood. When the sites were abandoned, however, trees and other vegetation became re-established. Prior to creation of the Allegheny National Forest in 1923, the majority of the hemlock, beech, white pine and maple forest on these areas had been completely logged. Today the trees on these prehistoric earthworks are mainly mature or over-mature black cherry and maple. Because the sites are situated on exposed ridge tops, these mature and declining trees are often blown down by the strong winds that pass over the Northern Allegheny Plateau. When this occurs, the roots pull up the soil and disturb the prehistoric site features. The fallen trees eventually decay, but nonetheless change the surface texture of the site and obscure archaeological features, such as the earthen circle. In recent years, this has been occurring with increasing frequency.

The objective of the sale was to remove the trees that had the potential to harm the archaeological features, and to establish of low-profile cover of grasses and ferns. A timber sale was used because it provided an economical and environmentally acceptable way of achieving the preceding objectives. It is estimated that to have accomplished the desired work using a service contract would have cost approximately $105,000. In contrast, the 77 MBF of sawtimber and 95 cords of pulpwood that were sold as a result of using a timber sale yielded a revenue of $61,000 – providing a net gain to the government of about $166,000. The primary danger of using a timber sale was the potential to disturb the soil during removal of the trees. However, a number of options were available for minimizing this risk – e.g., use of horse logging, use of helicopter logging, and limiting logging operations to times when the ground was frozen. After discussing these options with the Pennsylvania Bureau for Historic Preservation, the final decision was to remove the trees with a skidder during snow covered conditions. (Figure 4) All logging operations were carefully monitored by archaeologists and sale administrators.

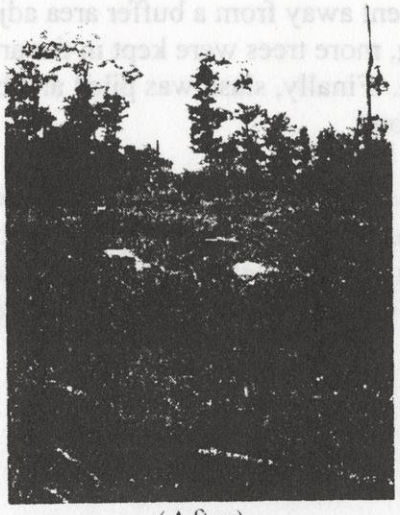
The Pennsylvania archaeological community responded favorably to the Allegheny National Forest's decision to protect the sites by removing the overstory trees. No administrative appeals or lawsuits were filed. Public reaction to the project has generally been favorable.

Region (10): Ptarmigan Salvage Resale Timber Sale, Chugach National Forest

The Ptarmigan Salvage Resale Timber Sale was carried-out on the Seward Ranger District of the Chugach National Forest in Alaska. The treatment area abutted private land, encompassed a national forest campground, and was adjacent to Ptarmigan Creek – in which sockeye salmon spawn each year. The Lutz spruce stands which predominate the area had been hard hit by spruce bark beetles, with at least one-third of the trees having been killed. The objectives of the project were: 1) to remove hazard trees near developed sites thereby ensuring a safe recreational experience; 2) to reduce forest fuels and the risk of catastrophic fire; 3) to maintain screening between the campground and



(Before)



(After)

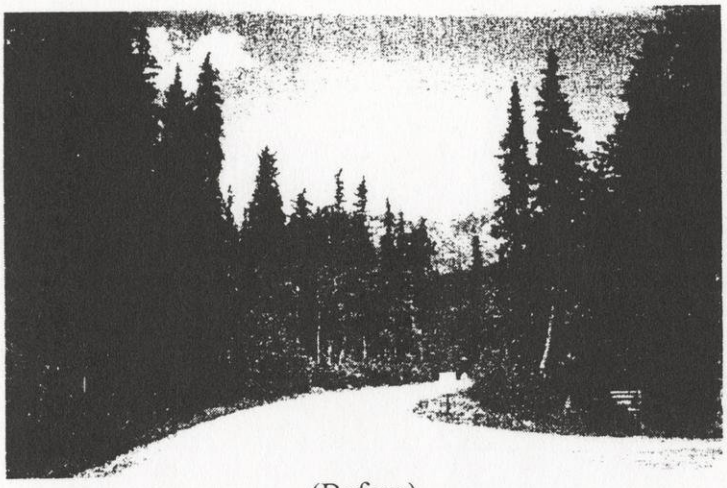
Figure (4): - Photos Showing Archeologically Significant Earthen Berm and "Before" and "After" Treatment Conditions Associated With the Wolfmore Timber Sale Conducted on the Allegheny National Forest in Pennsylvania.

adjacent private land; and 4) to provide a healthy and natural-appearing forest environment. For TSPIRS reporting purposes the project was coded as FS20 – 100 percent; which means that the undertaking was deemed to be a forest stewardship purpose sale that would mainly benefit recreation/visual/cultural resource enhancement.

The NEPA document explored several different alternatives for attaining the project's objectives – e.g., use of lethal trap trees, removing dead and hazardous trees only, using pesticides, and using active forest management to create and maintain a desired mix of age classes and species within and around the campground. The decision was to use forest management to restore the health of the area. There was a demand for wood products from small companies engaged in building log cabin packages. By selling the material with commercial value, income would be earned to help offset the cost of implementing the desired treatments. Forest Service crews removed the infested and dead trees from within the campground itself, but a private contractor was employed to implement the prescription for the balance of the area. In general, the prescription was for a salvage/sanitation cut targeted at removing the dead and insect infested spruce trees; however, a few live trees that were deemed to be at high risk of bark beetle infestation were also marked for removal. Ultimately 98 MBF of sawlogs and 29 MBF of pulpwood were sold for roughly $3,000. (Figure 5)

The sale was conducted during the winter months so as to limit the impact on visitors wishing to use the campground. The salmon spawning habitat in Ptarmigan Creek was protected by keeping equipment away from a buffer area adjacent to the stream. To achieve the desired screening, more trees were kept in the areas directly adjacent to the campground and private land. Finally, slash was piled and burned prior to beginning summer campground operations.

Although there has been some opposition to salvaging beetle killed spruce over large areas, local residents supported removal of the dead and infested trees within the campground and surrounding area. No administrative appeals were filed against this project. On balance, this undertaking seems to have been a success.

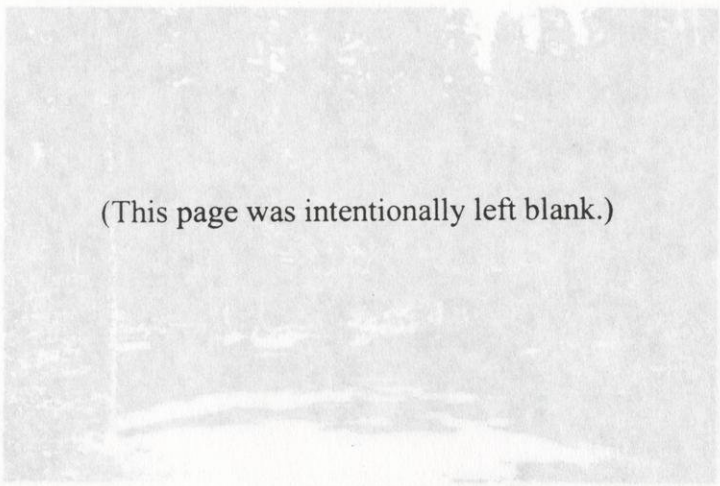


(Before)



(After)

Figure (5): - Photos Depicting "Before" and "After" Conditions Associated With the Ptarmigan Salvage Resale Timber Sale Conducted on the Chugach National Forest in Alaska.



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ACCOMPLISHMENTS OF THE FY 1998 FOREST MANAGEMENT PROGRAM

This section of the report documents FY 1998 accomplishments of the forest management program. The information is presented in four parts:

1) Volume Accomplishments – This section displays the volume of timber that was offered, sold, and harvested, both in total and by program component.

2) Stewardship Harvesting Accomplishments – This section describes the various resource management benefits that were achieved through stewardship harvesting, both in volume and acreage terms.

3) Other Direct Program Accomplishments – This section provides information about a broad array of forest management program outputs other than the volume of timber produced – e.g., acres regenerated, and acres of timber stand improvement treatments.

4) Indirect Program Accomplishments – This section documents various non-timber resource management accomplishments that were achieved using funds collected from timber purchasers.

The chapter's focus is on examining national level data, but some regional-level figures are presented. More detailed information about the accomplishments of specific regions and forests is contained in Appendix A.

Volume Accomplishments

During FY 1998, 3.42 BBF (billion board feet) of national forest timber was offered for sale, 2.96 BBF was sold, and 3.30 BBF was harvested. (Table 1) By comparison to FY 1997, the volume harvested was essentially constant while both the volume offered and the volume sold declined. The decline in offer volume was roughly .60 BBF, which represents the first notable change in this indicator in 3 years. Prior to this drop it appeared that the size of the national forest timber sales program was stabilizing at an annual output level of around 4.0 BBF. (Figure 6)

Table (1) – Volume of National Forest Timber Offered, Sold, and Harvested in FY 1998.

Accomplishment Measure	Level (MMBF)
Timber Offered for Sale	3.415
Timber Sold and Awarded	2.955
Timber Harvested	
Sawtimber	1.944
Roundwood	804
Firewood (commercial and personal use)	225
Other	311
Total	3.284

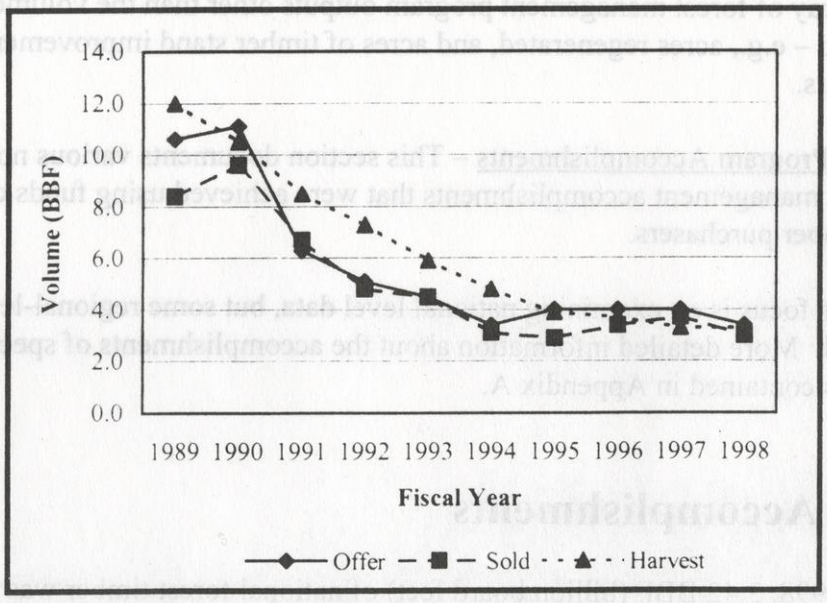


Figure (6) - Trend in the Volume of National Forest Timber Being Offered, Sold, and Harvested.

Of the total volume harvested during FY 1998, 51 percent (1.68 BBF) was for timber commodity purposes, 43 percent (1.41 BBF) for forest stewardship purposes, and 6 percent (.20 BBF) for personal use purposes. (Figure 7) This perpetuates the ongoing

shift from timber commodity to forest stewardship purpose sales, but suggests that the rate of change may be slowing. The size of the personal use sales program dropped slightly in FY 1998, but in general has remained relatively stable over time. (Figure 8)

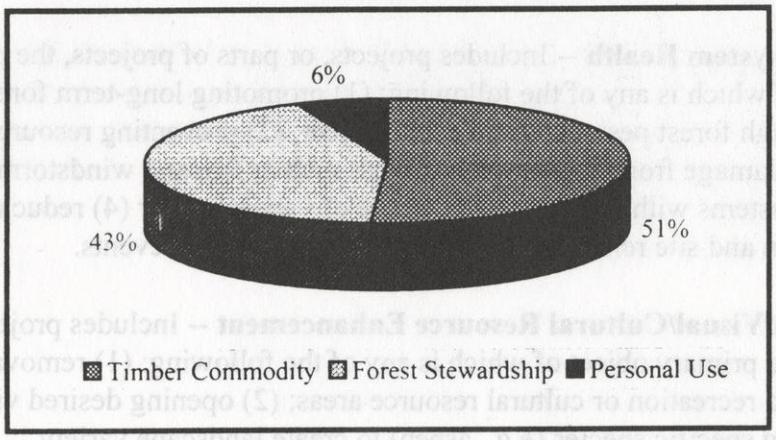


Figure (7) - Proportion of FY 1998 Harvest Volume Associated with Different Harvest Objectives.

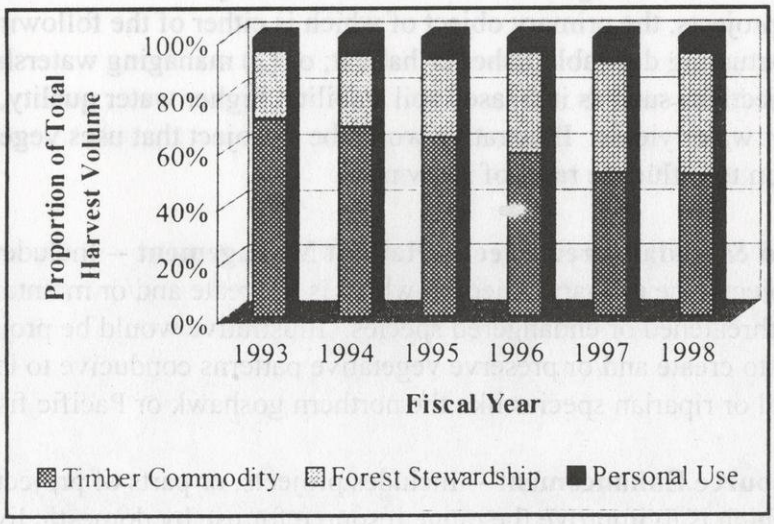


Figure (8) – Trend in Size of Various Timber Sale Program Components.

Stewardship Harvesting Accomplishments

As noted in last year's report, stewardship purpose sales are made for a variety of reasons. For reporting purposes, these are defined as follows:

- **Forest Ecosystem Health** -- Includes projects, or parts of projects, the primary objective of which is any of the following: (1) promoting long-term forest ecosystem health through forest pest and fuels management; (2) preventing resource losses and ecosystem damage from catastrophic events, such as fire and windstorms; (3) keeping forest ecosystems within their historic range of variability; or (4) reducing reforestation and site rehabilitation costs after catastrophic events.

- **Recreation/Visual/Cultural Resource Enhancement** -- Includes projects, or parts of projects, the primary object of which is any of the following: (1) removal of hazard trees around recreation or cultural resource areas; (2) opening desired vistas; or (3) regenerating specific species (e.g., aspen) to create landscape variety.

- **Wildlife Habitat Management** -- Includes projects, or parts of projects, the primary object of which is to create and/or perpetuate habitat conditions favorable to certain species of wildlife. Illustrative would be a project that seeks to stimulate mast production by controlling competition in oak stands.

- **Fisheries Habitat Management and Watershed Improvement** -- Includes projects, or parts of projects, the primary object of which is either of the following: (1) creating and/or perpetuating desirable fisheries habitat; or (2) managing watersheds to attain specific objectives such as increased soil stability, higher water quality, or improved control over water yields. Illustrative would be a project that uses vegetative manipulation to influence rates of snow melt.

- **Threatened & Endangered Species Habitat Management** -- Includes projects, or parts of projects, the primary object of which is to create and/or maintain suitable habitat for threatened or endangered species. Illustrative would be projects undertaken to create and/or preserve vegetative patterns conducive to late successional or riparian species like the northern goshawk or Pacific fisher.

- **Range Resource Enhancement** -- Includes projects, or parts of projects, the primary object of which is to improve the range resource for use by domestic livestock. Illustrative would be a project that creates openings improving the production of forage for cattle.

- **Non-Timber Products** -- Includes projects, or parts of projects, the primary object of which is implement a stewardship objective through the commercial sale of non-timber products like posts, poles, firewood, and Christmas trees.

- **Other** -- Includes projects, or parts of projects, the primary object of which is to implement a stewardship objective that cannot be classified into any of the other stewardship purpose categories. Illustrative would be a project intended to clear right-of-way for a general purpose forest administration road.

In FY 1998, the volume of timber harvested for each of the preceding purposes was as shown in table (2). As indicated, the most important reasons for undertaking stewardship sales were:

Forest Ecosystem Health - Accounted for about 77 percent of total volume harvested.

Wildlife Habitat Management – Accounted for approximately 10 percent of total volume harvested.

T&E Species Habitat Management - Accounted for nearly 6 percent of total volume harvested.

Table (2) -- Volume Harvested in Connection with Various Stewardship Purpose Goals, FY 1998.

Stewardship Purpose Goal	Harvest Volume (MMBF)	Proportion of Total (percent)
Forest Ecosystem Health	1,085.7	76.9
Recreation Visual/Cult. Resource Enhancement	40.4	2.9
Wildlife Habitat Management	137.7	9.8
Fisheries Habitat Mgmt./Watershed Improvement	4.9	.3
T&E Species Habitat Management	81.5	5.8
Range Resource Enhancement	1.0	.1
Non-Timber Products	18.2	1.3
Other	41.6	2.9
Totals	1,411	100.0

In attempting to evaluate how stewardship sales are contributing to the attainment of various resource management goals, it would be useful to know not only the volume that was harvested in connection with each goal – but also the number of acres that were treated. While information of this latter type is not tracked directly by TSPIRS or our Timber Sale Accounting (TSA) system, it can be estimated using data as to: (1) the number of acres that were cut in a given year; and (2) the total volume that was harvested from these acres. Dividing the total harvest volume by the number of acres cut yields an average volume removed per acre. If total volume harvested for a particular purpose is

than divided by the average volume removed per acre, the quotient provides an estimate of the number of acres treated. This has been done in Table (3).

Table (3) – Acres Treated in Connection with Various Stewardship Purpose Goals, FY 1998.

Stewardship Purpose Goal	Acres Treated
	(M acres)
Forest Ecosystem Health	190.8
Recreation/Visual/Cult. Resource Enhancement	6.6
Wildlife Habitat Management	22.0
Fisheries Habitat Mgmt./Watershed Improvement	.8
T&E Species Habitat Management	15.7
Range Resource Enhancement	.1
Non-Timber Products	3.1
Other	6.8
Totals	245.9

This table tells essentially the same story as the one displaying harvest volumes, but it reports accomplishments in a way that may be more relevant for stewardship purpose sales – i.e., acres treated. As the table shows, the most important reasons for engaging in stewardship sales were:

Forest Ecosystem Health – An estimated 190,800 acres were treated for this purpose.

Wildlife Habitat Management – An estimated 22,000 acres were treated for this purpose.

T&E Species Habitat Management – An estimated 15,700 acres were treated for this purpose.

Other Direct Program Accomplishments

Other direct accomplishments of the forest management program during FY 1998 were as shown in Table (4). Each of these accomplishments is briefly discussed below.

Acres Harvested: - In FY 1998, harvesting operations were conducted on 524,785 acres of national forest land. (See table 4) This includes areas harvested using various partial cutting systems that remove relatively few trees per acre. The acreage impacted

represents about 1 percent of the 49.4 million acres of national forest land currently designated as being "suitable" for timber production. During the year, clearcutting was employed on 49,560 acres, and selection harvesting on 52,450 acres.

The total number of acres being harvested rose somewhat during each of the last two years (i.e., FY 1997 and FY 1998), but over the last several years the trend in total harvesting has been distinctly downward. (See Figure 9) The most dramatic reduction has occurred in the use of clearcutting. Application of this silvicultural system has dropped from 31 percent of total harvest acres in FY 1989 to only 10 percent in FY 1998. (See Figure 9)

Table (4) – Selected Direct Accomplishments of the Forest Management Program in FY 1998.

Accomplishment Measure	Level
Timber Information	
Total Area Harvested, Including Thinnings (acres)	524,785
Free Use Firewood Provided (MMBF)	15.67
Non-Convertible Forest Products Removed	
Christmas Trees (number of trees)	216,467
Value of All Products (thousands of dollars)	2,978
Families Assisted (number)	145,077
Regeneration Treatments (acres)	292,902
Timber Stand Improvement Treatments (acres)	300,202
Seedlings Produced (number of seedlings)	66,000,000
Seed Produced (pounds)	12,000
Forest Road Information	
Road Construction (miles)	
Appropriated Construction	33.3
Purchaser Credit Construction	188.0
Total Construction	221.3
Road Reconstruction (miles)	
Appropriated Reconstruction	302.8
Purchaser Credit Reconstruction	2,254.6
Total Reconstruction	2,557.4
Road Decommissioning (miles)	2,098

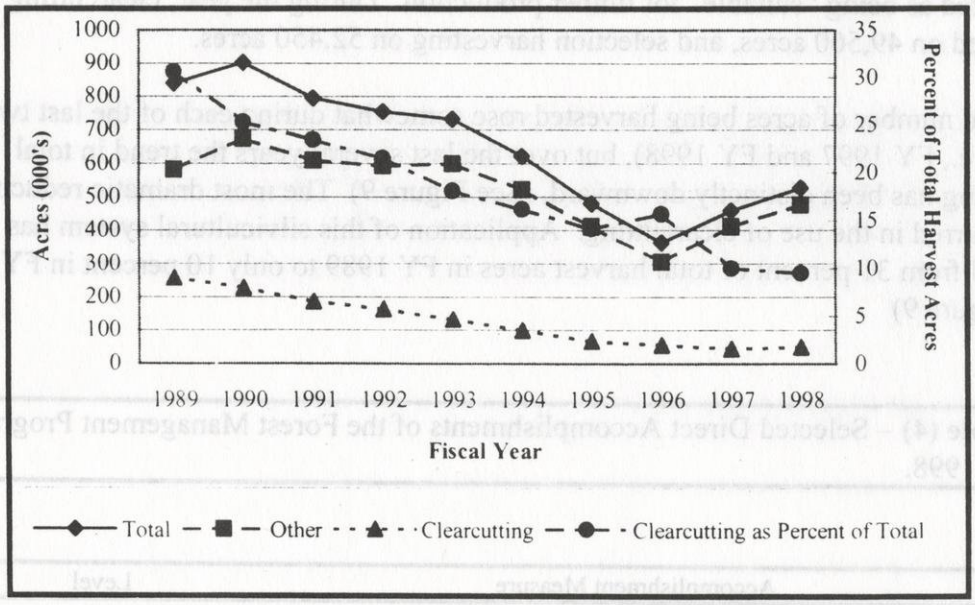


Figure (9) – Trend in Number of Acres Harvested Using Clearcutting as Opposed to Other Harvest Methods.

Acres Regenerated and Improved: - A total of 292,902 acres were regenerated in FY 1998, and 300,202 acres received some type of timber stand improvement (TSI) treatment. (See Table 4) Regeneration activities, such as spreading seeds and planting seedlings, are intended to reestablish stands of trees following harvest. Timber stand improvement activities, such as thinning and pruning, are intended to increase growth and improve the quality of residual trees.

The number of acres regenerated declined slightly between FY 1997 and FY 1998, thereby continuing a downward trend extending back several years. (See Figure 10) The acreage receiving some type of TSI treatment increased in FY 1998 after having been relatively stable for several years. (See Figure 10)

Free Use Firewood: - In FY 1998, approximately 16 MMBF of "free use" firewood was provided from the national forests. (See Table 4) Free use firewood, as its name implies, is firewood that is given away without charge to individuals for their personal use. Firewood is provided at no charge only when it has been determined that this action is in the Federal Government's best interest. To illustrate, there may be a pocket of insect- or disease-infested timber on a remote section of some national forest that is too small to justify making a salvage sale – and yet managers want to remove the material before the infection spreads. In this case, making the wood available without charge provides an incentive for people to carry it away at little direct cost to the government.

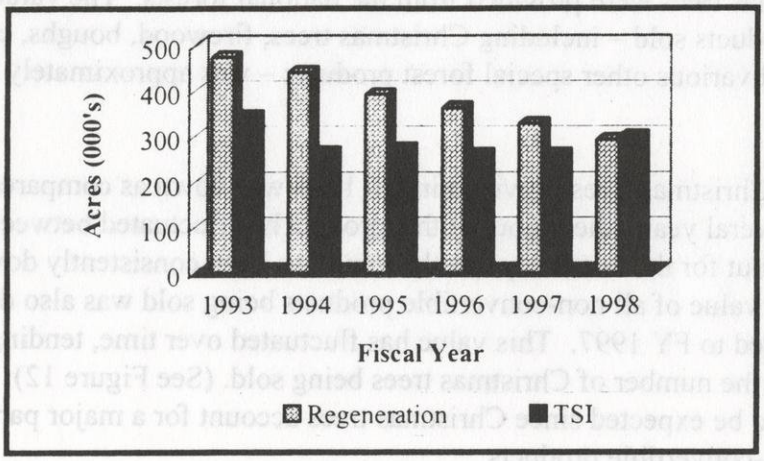


Figure (10) – Trend in Number of Acres Being Impacted by Regeneration and TSI Activities.

The volume of free use firewood being provided off the national forests dropped between FY 1997 and 1998 – from roughly 27 to 16 MMBF. This decline is consistent with what has been the general trend in the output of this product for the last several years. (See Figure 11)

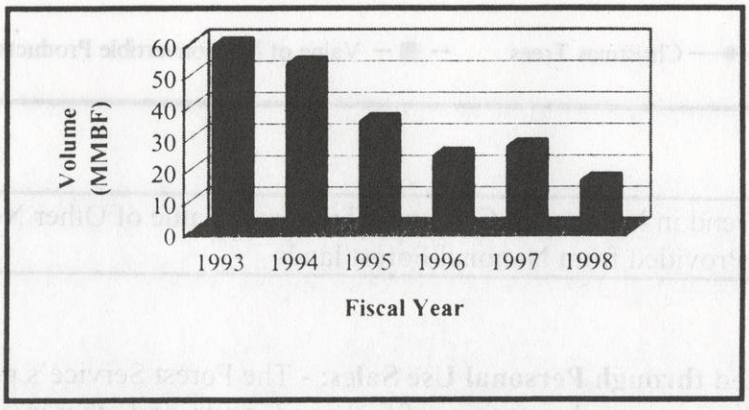


Figure (11) -- Trend in the Amount of Free Use Firewood Being Provided from National Forest Lands.

Christmas Trees and Other Non-Convertible Products: - In FY 1998, a total of 216,467 Christmas trees were provided from the national forests. The value of all "non-convertible" products sold – including Christmas trees, firewood, boughs, cones, nuts, mushrooms, and various other special forest products – was approximately $3.0 million. (See Table 4) [1]

The number of Christmas trees provided in FY 1998 was down as compared to FY 1997. Over the last several years, the output of this product has fluctuated between 200 and 300 thousand trees, but for the last few years the trend has been consistently downward. (See Figure 12) The value of all non-convertible products being sold was also down in FY 1998 as compared to FY 1997. This value has fluctuated over time, tending to follow the same pattern as the number of Christmas trees being sold. (See Figure 12) This relationship is to be expected since Christmas trees account for a major part of the total value of all non-convertible products.

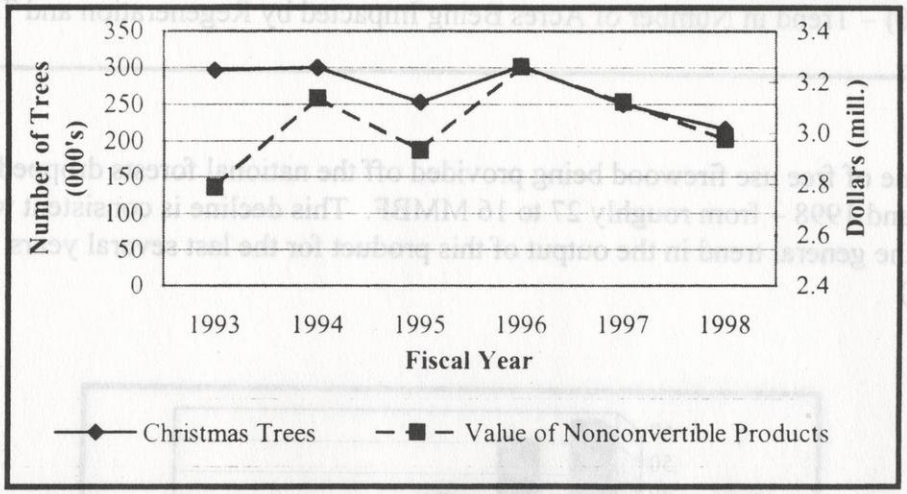


Figure (12) – Trend in Number of Christmas Trees and Value of Other Nonconvertible Products Being Provided from National Forest lands

Families Assisted through Personal Use Sales: - The Forest Service's personal use sales program provides small quantities of fuelwood, posts, and other miscellaneous forest products to individuals for their own consumption. The program's roots trace back to the origins of the national forests. It is perpetuated today not to produce a profit, but

[1] As one might expect, non-convertible products are those products whose outputs cannot be readily expressed in terms of volume – i.e., in terms of board feet or cubic feet. Starting in FY 1998 the agency has made a concerted effort to improve its reporting of such outputs. Specifically, its Annual Cut & Sold Report has been expanded to recognize outputs of the following special forest products: bee trees, transplants, limbs/boughs, foliage, cones-green, cones-dry, seed, nuts/seed, fruits/berries, tree sap, roots, mushrooms, fungi, mosses, herbs, ferns, wildflowers, grass, aquatic plants, and other plants.

because it is needed to help clean-up dead and dying trees and is considered part of being a "good neighbor."

In FY 1998, an estimated 145,077 families were helped through personal use sales.[2] (See Table 4) The number of families helped has been relatively stable over the last four years, but is down substantially from the early 1990's. (See figure 13)

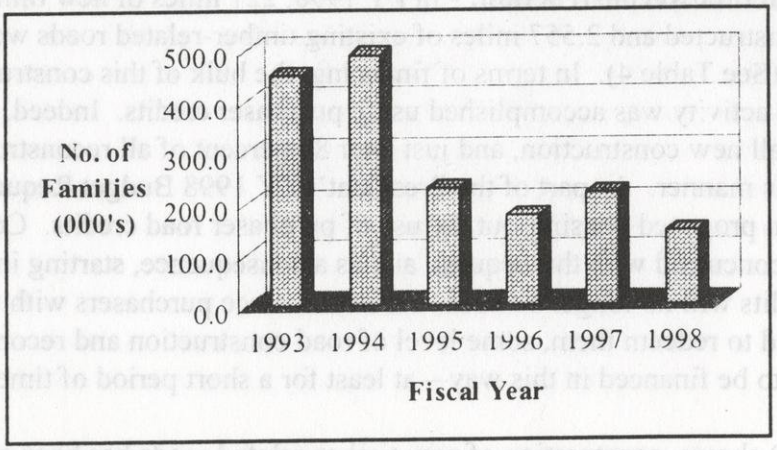


Figure (13) – Trend in the Number of Families Assisted Through Personal Use Sales.

Seedling Production: - In FY 1998, Forest Service nurseries, considering both bareroot and container stock, produced approximately 66 million seedlings – up about 19 percent from FY 1997.[3] This represents a modest departure from the sharp declines that have been experienced in recent years as a result of such factors as reduced timber harvests, shifting emphasis towards intermediate treatments, and increased reliance on natural regeneration as a means of achieving reforestation objectives. The changes that have been occurring in the Forest Service's forest management program over the last several years prompted the agency, in FY 1995, to conduct a review of its nursery operations. The results of this review led the Chief to call for closure of three nurseries by the end of FY 2000. All present all three of the targeted nurseries have been closed, as has another unit in Region 8 (Southern). These closures have left the agency with six functioning nursery facilities.

[2] The number of families assisted is estimated from knowledge of: 1) the number of sales made for under $300, and 2) the volume of free use firewood provided.

[3] USDA Forest Service; 1999; *Reforestation and Timber Stand Improvement Report: National Summary for FY 1998*; Reports 2400-D and 2400-M; 45p.

Seed Production: - In FY 1998, Forest Service seed extractories produced a total of around 12,000 pounds of seed – up slightly from FY 1997 when 11,100 pounds of seed were generated.[4] Seed production levels can vary widely from year-to-year, depending upon the unique characteristics of individual plant species and the periodicity of good seed crops in each species.

Road Construction/Reconstruction: - In FY 1998, 221 miles of new timber-related roads were constructed and 2,557 miles of existing timber-related roads were reconstructed (See Table 4). In terms of financing, the bulk of this construction and reconstruction activity was accomplished using purchaser credits. Indeed, approximately 85 percent of all new construction, and just over 88 percent of all reconstruction, was financed in this manner. As part of the President's FY 1998 Budget Request, the Administration proposed phasing-out the use of purchaser road credits. Congress subsequently concurred with this request, and as a consequence, starting in FY 1999, purchaser credits will no longer be used. However, since purchasers with unused credits will be allowed to redeem them, some level of road construction and reconstruction work will continue to be financed in this way – at least for a short period of time.

As Figure (14) shows, construction of new timber-related roads has been steadily declining for several years; but reconstruction of existing roads has varied over time. Periodic reconstruction is important in terms of providing safe access for timber harvesting and other activities and also as a means of helping to prevent some of the environmental problems that can materialize if roads are allowed to deteriorate – e.g., accelerated erosion and an increased risk of mudslides.

To help put the amount of road construction and reconstruction into perspective, it is interesting to note that 2,098 miles of national forest system roads were decommissioned in FY 1998. Decommissioning entails removing a classified road from the system, or taking action to eliminate the use of an unclassified road. In some instances, decommissioning only necessitates treating the entrance to a road so as to exclude traffic. Over time vegetation will reclaim the area and the road will become unusable. In other cases, decommissioning may involve ripping the roadbed, removing drainage structures, reestablishing natural drainage patterns, and seeding. When activities of the latter type are performed, the road is said to be obiliterated.

Indirect Program Accomplishments

In FY 1998, a variety of other resource management accomplishments were indirectly attributable to the agency's forest management program in that they were funded using

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[4] USDA Forest Service; 1999; *Reforestation and Timber Stand Improvement Report: National Summary for FY 1998*; Reports 2400-D and 2400-M; 45p.

either Knutson-Vandenberg (K-V) or Brush Disposal (BD) funds collected from timber purchasers.

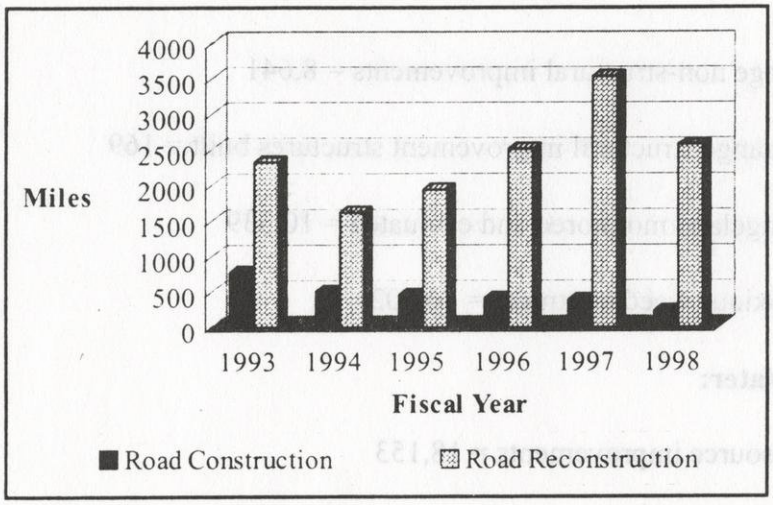


Figure (14) - Trend in the Mileage of Timber-Related Roads Being Constructed or Reconstructed Annually

The collection of K-V funds is authorized by the Knutson-Vandenberg Act of 1930 (PL 71-319). Originally these funds were intended to be used to reforest cutover lands, but in 1976 the National Forest Management Act (PL 94-588) provided that they could also be used for "protecting and improving the future productivity of the renewable resources" on sale areas, including "sale area improvement operations, maintenance and construction, reforestation, and wildlife habitat management."

The collection of BD funds is authorized by the Brush Disposal Act of 1916 (PL 64-190). BD funds can be used to cover the costs of doing actual brush disposal work, to rent or purchase equipment needed for brush disposal purposes, to do supplemental fire protection in lieu of actual disposal, and to fight fires that result from brush disposal activities.

In FY 1998, important resource management accomplishments funded through the preceding mechanisms included the following:[5]

- **Wildlife and Fish:**

  Acres of TES terrestrial habitat restored or enhanced = 25,434

[5] The figures presented here were taken from the *Report of the Forest Service for FY 1998* (Appendix table 7), or were provided by the Budget Coordinators for the relevant program staffs.

Number of TES habitat improvement structures built = 957

- **Range:**

  Acres of range non-structural improvements = 8,641

  Number of range structural improvement structures built = 169

  Acres of rangeland monitored and evaluated = 10,339

  Acres of noxious weed treatment = 36,502

- **Soil and Water:**

  Acres of resource improvements = 18,153

- **Recreation:**

  Miles of trail construction or reconstruction = 17

- **Fuels Management:**

  Acres treated = 116,252

In recent years, the various timber trust funds have become highly controversial. There have been concerns that these funds, by providing a mechanism for financing certain Forest Service activities outside the normal appropriations process, provide an incentive for the agency to harvest more national forest trees. Partly in response to these concerns, the Administration, in the President's Budget Request for FY 2001, proposed eliminating four of the existing trust fund accounts – i.e., the Knutson-Vandenberg, Salvage Sale, Reforestation, and Timber Sale Pipeline Restoration funds. Under the proposal, the timber sale revenues that currently go into these various special accounts would be returned to the General Fund of the U.S. Treasury. To help ensure that needed ecosystem restoration and maintenance activities are still addressed, and to provide enhanced employment opportunities for rural workers, a permanent annual appropriation of $300 million would be provided to the Forest Service. These funds would be targeted to high priority projects around the nation, or to areas where rural jobs are needed.

ECONOMIC EFFECTS OF THE FY 1998 FOREST MANAGEMENT PROGRAM

This chapter describes the economic effects that were directly or indirectly attributable to the Forest Service's forest management program in FY 1998. Three types of economic impacts are estimated: (1) effects on local employment; (2) effects on regional income and Federal income tax receipts; and (3) the NPV (net present value) of all anticipated future resource effects. The chapter's focus is on examining national level information, but some regional and forest level data are presented. More detailed information about the economic impacts attributable to the forest management programs of specific regions and forests may be found in Appendixes A and B.

Employment Effects

Nationwide, 55,738 jobs were directly or indirectly supported by the harvesting and processing of national forest timber in FY 1998 – essentially unchanged from FY 1997. The number of supported jobs was highest in Region 1 (Northern) – 13,209 jobs -- and lowest in Region 10 (Alaska) -- 994 jobs (See Table 5).

Table (5) -- Number of Jobs Supported by the Forest Management Program in FY 1998, by Region.

Region	Jobs
	-- (no.) --
R01 - Northern	13,209
R02 - Rocky Mountain	2,660
R03 - Southwestern	1,494
R04 - Intermountain	3,359
R05 - Pacific Southwest	4,849
R06 - Pacific Northwest	9,239
R08 - Southern	12,561
R09 - Eastern	7,373
R10 - Alaska	994
Total	55,738

As the size of the Forest Service's forest management program has declined, the total number of jobs being supported by the program has also dropped (See Figure 15). Specifically, supported employment has fallen from over 103 thousand jobs in FY 1991 to between 55 and 56 thousand jobs in FY's 1997 and 1998 – a decline of around 45 percent. It is important to recognize that employment associated with timber harvesting is affected by many factors, including increased mechanization and current market conditions. Additionally, as discussed later in this chapter, declines in the level of employment supported by the harvesting and processing of national forest timber may, to some degree, be mitigated by increased harvesting off private forest lands. Lastly, it is appropriate to note that while the number of jobs being supported by the national forest timber program has dropped in response to the reductions in the level of commercial timber harvesting; in the years ahead, the activities that will be required to address the restoration needs that currently exist on these lands have the potential to provide significantly increased job opportunities and income to local communities.

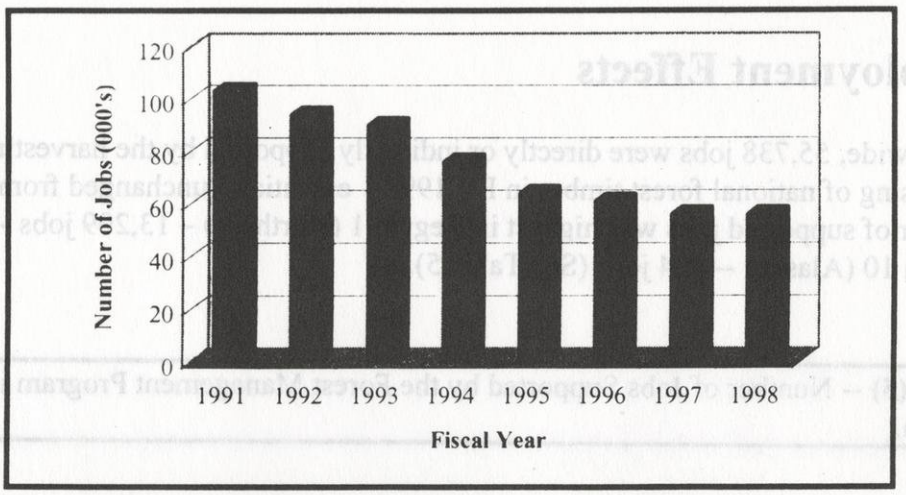


Figure (15) -- Trend in the Level of Employment Associated with National Forest Timber Harvest Activities

Income and Federal Income Tax Effects

Nationwide, the total regional income that was generated as a consequence of the forest management program in FY 1998 was estimated to be $2.1 billion – and the increment in Federal tax revenues, $317.6 million. The figures for specific regions are shown in Table (6).

As the size of the Forest Service's timber sales program has declined, so have the program's income and Federal income tax consequences (See Figure 16). Over the period from FY 1991 to FY 1998, the total income attributable to the program, in terms of constant FY 1998

dollars, has fallen from $5.5 to $2.1 billion – a decrease of 62 percent. Because of the direct linkage that exists between income and Federal income tax receipts, the latter's decline has been just as dramatic in percentage terms. In terms of constant FY 1998 dollars, Federal tax receipts have fallen from about $831 million in FY 1991 to around $318 million in FY 1998 (See Figure 16).

Table (6) -- Income and Federal Tax Revenues resulting from National Forest Timber Sales in FY 1998, by Region

Region	Income	Federal Tax
	---- (000's of Dollars) ----	
R01 - Northern	430,261	64,538
R02 - Rocky Mountain	63,037	9,458
R03 - Southwestern	41,713	6,255
R04 - Intermountain	169,416	25,413
R05 - Pacific Southwest	247,079	37,060
R06 - Pacific Northwest	280,025	42,004
R08 - Southern	413,525	62,127
R09 - Eastern	415,058	62,260
R10 - Alaska	44,562	8,467
Totals	2,104,676	317,582

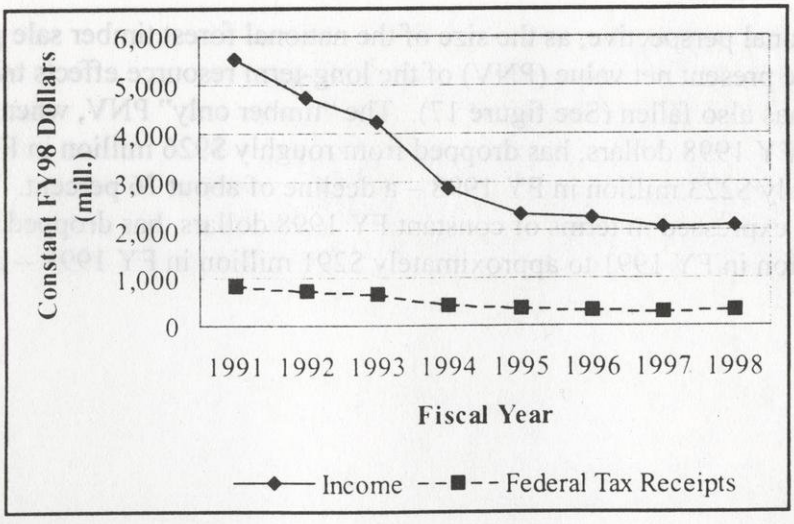


Figure (16) -- Trends in the Income and Federal Tax Receipts Associated with National Forest Timber Harvest Activities

It should be noted that while the levels of employment, income, and Federal income tax receipts associated with the harvesting and processing of national forest timber have, as noted above, been decreasing as the size of the national forest timber sales program has fallen, the possibility exists that the overall net effect on these variables has been lessened somewhat by increased harvesting from private forest lands. The 1993 Timber Assessment identified several potential market responses to lower Federal timber harvests. These included: (1) increased harvesting off private forest lands, especially in the South; and (2) increased imports, especially from Canada.[1] To the extent that market adjustments have been made through increased harvesting off private forest lands in the U.S., domestic jobs, income, and tax receipts will have been preserved despite declines in Federal timber harvesting. However, to the extent that market adjustments have been made through increased imports, there will have been a net loss of jobs to the U.S. economy, and regional incomes and Federal income tax receipts will also have been adversely affected. No attempt is made here to estimate the actual net effect of these market adjustments.

Present Net Value of Estimated Resource Effects

The economic account of TSPIRS indicates that for FY 1998, from a nationwide perspective and considering all resource effects, the harvesting of national forest timber generated positive net benefits having an aggregate present value of $290.7 million (See Table 7). Some $222.9 million, or 77 percent of this amount, was due to the effects of timber harvesting on the timber resource itself; the remaining $67.8 million, or 23 percent, was due to the estimated effects of timber harvesting on all other resource values.

From a national perspective, as the size of the national forest timber sale program has declined, the present net value (PNV) of the long-term resource effects triggered by timber harvesting has also fallen (See figure 17). The "timber only" PNV, when measured in terms of constant FY 1998 dollars, has dropped from roughly $926 million in FY 1991 to approximately $223 million in FY 1998 – a decline of about 76 percent. The "all resources" PNV, again expressed in terms of constant FY 1998 dollars, has dropped from roughly $1,039 million in FY 1991 to approximately $291 million in FY 1998 -- a drop of about 72 percent.

[1] Haynes, Richard W. et al. 1995; *The 1993 RPA Timber Assessment Update*. USDA Forest Service. Rocky Mountain Forest and Range Experiment Station. RM-GTR-259. Fort Collins, CO. 66 p.

Table (7) - National Summary of TSPIRS Economic Account for FY 1998.

Description of Impact Indicator	Subtotals	Totals
	-- (000's FY98 Dollars) --	
Present Value of Benefits		
Positive Effects		
Timber	758,521	
Other Resources	82,360	
Total Positive Effects		840,881
Negative Effects		
Timber	0	
Other Resources	2,629	
Total Negative Effects		2,629
Net Present Value of Benefits /1		
Timber	758,521	
Other Resources	79,731	
Total Net Present Value of Benefits		838,252
Present Value of Costs		
Timber	446,177	
Other Resources	12,002	
Roads	89,418	
Total Present Value of Costs		547,597
Present Net Values (PNV's)		
Timber Only /2		222,926
All Resources (including timber)		290,655

/1 Positive effects less negative effects.
/2 Includes the deduction of road costs.

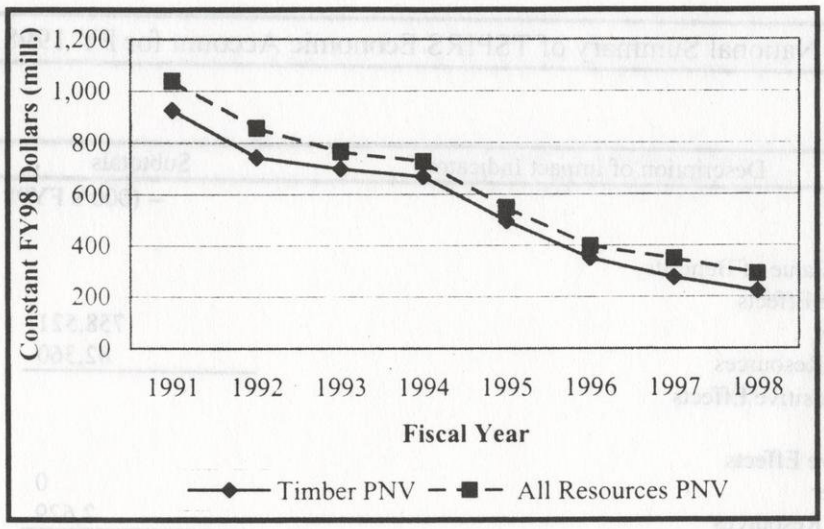


Figure (17) -- Trends in the PNV's Associated with National Forest Timber Harvest Activities

FINANCIAL RESULTS OF THE FY 1998 FOREST MANAGEMENT PROGRAM

This section of the report highlights important findings from the "financial account" of TSPIRS. Costs and revenues are examined first for the forest management program as a whole, and then by program component. The focus is on describing national level results, but some regional and forest level data are presented and discussed. More detailed information about the financial accounts of specific regions and forests is contained in Appendixes C and D.

Overall Revenues and Expenses

The revenues and expenses that were associated with all aspects of the Forest Service's forest management program in FY 1998 are shown in Table (8). As indicated, the harvest of 3.30 BBF of timber produced a gross revenue of just under $546.1 million. The combined direct and indirect costs of operating the program were approximately $672.0 million, resulting in a loss of about $125.9 million.

Because of the new procedures that were used to account for road prism costs, the total expenditure and net revenue figures for FY 1998 are not directly comparable to those for prior years. Before valid comparisons can be made, adjustments are needed to ensure that road prism costs are treated in a consistent manner. Although the applicable Federal accounting standards do not require restatement of prior year results for an accounting change of the type the Forest Service made in FY 1998, as a service to readers, and to provide a basis for assessing the implications of the new accounting procedures, national level results were restated for selected years. Specifically, timber-related expenditures were estimated, for FY's 1994 to 1997, in two different ways:

- Assuming road prism costs are annually expensed – i.e., the approach used in FY 1997.

- Assuming road prism costs are depreciated over 50 years – i.e., the approach used in FY 1998.

No attempt is made here to explicitly compare depreciation over 50 years to the procedure used in FY 1996 and earlier years – i.e., capitalization of road prism costs into land values. The FY 1997 TSPIRS Report compared expensing to capitalization, so by combining data from that report with the information contained in this report, readers who desire to explicitly compare depreciation to capitalization can do so. Basically they will find that both

procedural changes – i.e., the switch from capitalization to annual expensing, and the switch from annual expensing to depreciation over 50 years – caused total timber program expenditures to increase. However, for the years for which restatements have been prepared depreciation over 50 years results in the highest road prism costs.

Table (8) -- Statement of Revenues and Expenses Associated with All Components of the Forest Management Program in FY 1998 [1] [2]

Account Description	Amount (000's of dollars)
Volume Harvested (BBF)	**3.30**
Revenues	
Timber Sale Receipts	451,754
Purchaser Road Credits	43,127
Associated Charges	43,560
Interest and Penalties	7,640
Total Revenues	**546,081**
Expenses	
Direct Expenses	
Timber Sale	526,755
Timber Program	70,485
Total Direct Expenses	**597,240**
Indirect Expenses	
Timber Sale	2,581
Timber Program	72,163
Total Indirect Expenses	**74,744**
Total Expenses	**671,984**
Net Rev. (before extraord. losses)	**-125,904**
Extraordinary Losses	**0**
Net Rev. (after extraord. losses)	**-125,904**

Table (9) shows, for the period FY 1994 to FY 1998, total timber revenues and two distinct sets of "total expenditure" and "net revenue" figures. The table is intended to document the

[1] Data reflect the application of accrual accounting concepts.

[2] Consistent with the results of a General Accounting Office (GAO) study completed in January of 1999, road prism costs have been depreciated over an anticipated useful life of 50 years. The GAO study – entitled *"Forest Service: Accounting Treatment of Roadbed Costs"* (GAO/AIMD-99-48R) – concluded that the agency had erred when, in preparing its FY 1997 TSPIRS Report, it elected to annually expense its prism costs. Specifically, the study found that the agency had misinterpreted the requirements of Statement of Federal Financial Accounting Standards (SFFAS) Number 6 as these apply to business type activities. The study did not actually conclude that a depreciation period of 50 years was appropriate for road prism costs, this figure was arrived at during subsequent discussions between the Forest Service and GAO, and represents that same depreciation period as the agency has traditionally applied to its bridge-related costs.

effects of the agency's latest change in road prism accounting procedures. The total expenditure and net revenue figures labeled "/e" show the financial results assuming annual expensing of road prism costs – i.e., the procedure used in FY 1997. The total expenditure and net revenue figures labeled "/d" display the financial results assuming depreciation of road prism costs over 50 years – i.e., the procedure used in FY 1998.

Table (9) – Summary of Restated Forest Management Program Revenues, Expenses, and Net Revenues for Period FY 1994–FY 1998 [3]

Fiscal Year	Total Revenue ($ mill.)	Total Expense/e ($ mill.)	Total Expense/d ($ mill.)	Net Revenue/e ($ mill.)	Net Revenue/d ($ mill.)
1994	885	733	764	153	122
1995	696	678	711	17	-16
1996	619	678	715	-60	-96
1997	577	666	693	-89	-116
1998	546	NE*	672	NE*	-126

* NE = not estimated.

Table (9) shows that total timber-related expenses vary significantly depending on how road prism costs are handled from an accounting standpoint. Without exception, for the years for which restatements were prepared – i.e., FY 1994 to FY 1997 – total expenses increased as expensing was dropped in favor of depreciation over 50 years. Since total revenues were unaffected by the method of accounting for road prism costs, these higher expenses were directly reflected in reduced net revenues or profits. One result is that whereas the agency had previously not reported a loss for the timber program as a whole until FY 1996, it now appears that if it had consistently been depreciating road prism costs over 50 years, it would have posted its first loss a year earlier – i.e., in FY 1995. Specifically, the data in table (9) show that because of the decision to replace annual expensing with depreciation over 50 years:

- For FY 1994, total expense increased and net revenue fell by roughly $31 million ($764 million - $733 million).
- For FY 1995, total expense increased and net revenue fell by roughly $33 million ($711 million - $678 million).

[3] The display of restated TSPIRS amounts to reflect the change in accounting for road prism costs in prior years is not in accordance with Statement of Federal Financial Accounting Standards Number 6, Accounting for Property, Plant, and Equipment. This information is provided as supplemental information to improve the comparability of prior year information with the current year results. Because of errors introduced by rounding, some of the indicated net revenue figures may not equate to the apparent differences between total revenue and total expense.

- For FY 1996, total expense increased and net revenue fell by roughly $37 million ($715 million - $678 million).

- For FY 1997, total expense increased and net revenue fell by roughly $27 million ($693 million - $666 million).

- No attempt was made to restate the FY98 financial results using annual expensing of road prism costs since this procedure had been determined to be inappropriate.

The relationships described above become more apparent when the data displayed in Table (9) are plotted graphically as in Figure (18). As this figure indicates, regardless of the method used to account for road prism costs, timber-related revenues and expenses have both been falling since FY 1994, but revenues have fallen much more rapidly than expenses thereby causing net revenue to decline.[4] In any given year, the method used to account for road prism costs influences the total expense reported, and thus the implied net revenue – but the basic trends that were previously descriptive of what has been happening to the program's profitability over time remain unchanged. Specifically, the procedural change made in FY 1998 effectively caused the total expense trend-line to shift up and the net revenue trend-line to shift down. The reason why total expenses increased as the agency switched from expensing to depreciation relate to the changing size of its timber roads program. The program is much smaller today than it was in the past. Because of the decline that has occurred over time, current annual expenditures for road prisms – which is the amount that would be charged in any given year assuming annual expensing – are less than $1/50^{th}$ the accumulated road prism costs incurred during prior years for which records are available – which is the amount that would be charged each year assuming depreciation over 50 years.

As a result of the timber revenues earned in FY 1998, $212.5 million was returned to the states and counties under the provisions of the 25 percent receipt-sharing program mentioned earlier. As noted at that time, these payments, by law, must be used to benefit local schools and roads. In FY 1998, the required payments-to-states were actually 39 percent of gross timber receipts – not 25 percent. This is because in those parts of Pacific Northwest where national forest timber harvesting was reduced to protect habitat for the northern spotted owl, these payments are based on past, not current, harvest levels.[5] In FY 1998, the timber-related portion of these so-called "spotted owl" payments, totaled $88.8 million – or over 40 percent of all the timber-related payments-to-states. As was noted during the review of TSPIRS, Forest Service policy is to treat these amounts as "transfer payments" not as timber program costs.

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[4] Normally these financial trends would be shown in constant dollar terms, but this has not been done here so that the actual restated financial results for each year could be displayed.

[5] See the Omnibus Budget Reconciliation Act of 1993 (PL 103-66).

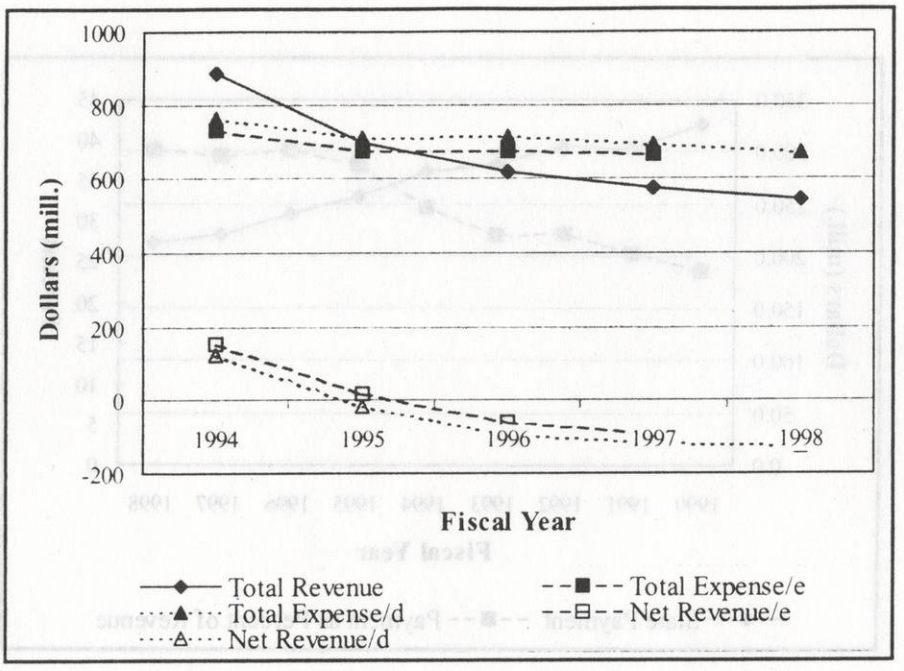


Figure (18) – Trend in Timber Sale Revenues, Expenses, and Net Revenues Given Different Methods of Accounting for Road Prism Costs

Figure (19) shows how timber-related payments to states, and payments as a percent of total timber revenues, have changed over time. As indicted, the actual payments have been declining in amount as the timber sales program has fallen in size, but the payments as a percent of timber revenues, because of the impact of the special spotted owl provisions, have tended to increase. The percentage figures may be interpreted to represent the proportion of each dollar of timber revenue that is returned to the states and counties.

In recognition of the fact that some counties have been adversely affected by the decline in commercial harvesting and the resultant fall-off in receipt-share payments, and to ensure that all counties can depend upon predictable and stable Federal payments, the Forest Service has, for some years, been advocating that the linkage between payment amounts and national forest receipts be severed. As this report was being prepared, this goal was finally achieved. Congress recently passed, and the President signed, H.R. 2389 – the "Secure Rural Schools and Community Self-Determination Act of 2000." The objectives of this act go beyond reforming the existing procedures for making payments to states, but this is one of the things the legislation does. Specifically, the new law allows qualifying counties to elect the greater of: 1) the 25 percent payment they would have been entitled to under prior law, and 2) the average of the three highest 25 percent payments they received during the period FY 1986 through FY 1999. Under the terms of the legislation, future payments will be partially indexed for inflation.

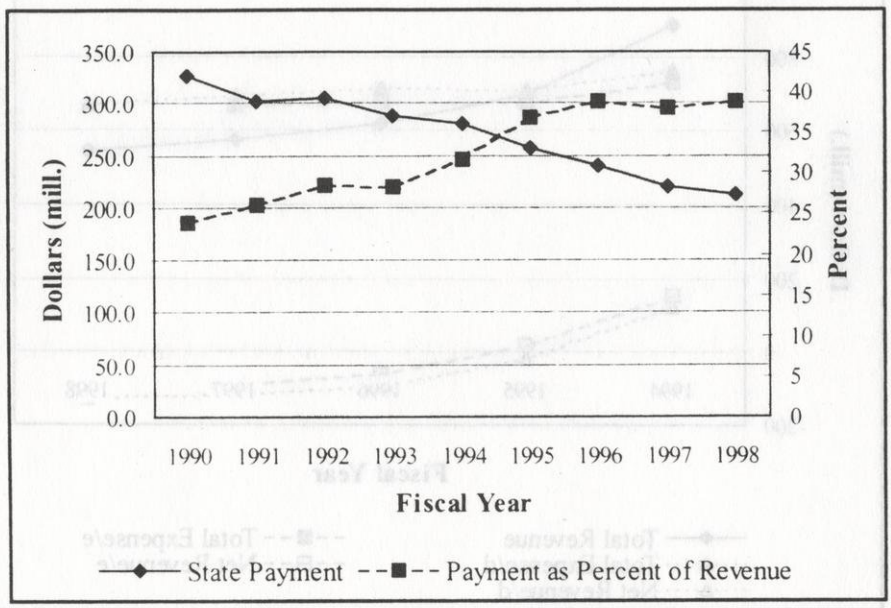


Figure (19) – Trends in Total Payments to States and Payments as a Percent of Total Timber Revenues.

Revenues and Expenses by Program Component

The revenues and expenses that were associated with the different components of the Forest Service's overall forest management program in FY 1998 are summarized in Table (10). This table shows the following:

- **Timber Commodity Program Component:** – The harvest of 1,683 MMBF produced a gross revenue of just under $351.6 million. The combined direct and indirect cost of making timber commodity purpose sales was $338.9 million, resulting in a profit of just under $12.7 million.

- **Forest Stewardship Program Component:** – The harvest of 1,411 MMBF produced a gross revenue of just over $189.6 million. The combined direct and indirect cost of making forest stewardship purpose sales was $300.3 million, resulting in a net loss of just over -$110.6 million.

- **Personal Use Program Component:** – The harvest of 204 MMBF produced a gross revenue of just under $4.9 million. The combined direct and indirect cost of making personal use purpose sales was about $32.8 million, resulting in a net revenue of just over -$27.9 million.

As was true for the program as a whole, because of the change in our procedures for recognizing road prism costs, the preceding total expenditure and net revenue figures cannot be validly compared to the figures reported in prior years. In this instance, however, because of the substantial amount of work that would have been required to develop the restated amounts, and because development of such restatements is not required by the relevant federal accounting standards, restated financial accounts were not prepared by program component.

Table (10) -- Statement of Revenues and Expenses associated with Different Components of the Forest Management Program in FY 1998

Account Description	Timber Commodity	Forest Stewardship	Personal Use
	--- (000's of dollars) ---		
Volume Harvested (MMBF)	**1,683**	**1,411**	**204**
Revenues			
Timber Sale Receipts	294,031	153,447	4,277
Purchaser Road Credits	26,958	16,169	0
Associated Charges	23,161	19,796	603
Interest and Penalties	7,427	212	1
Total Revenues	**351,577**	**189,624**	**4,881**
Expenses			
Direct Expenses			
Timber Sale	266,143	234,372	26,242
Timber Program	38,210	32,276	0
Total Direct Expenses	**304,353**	**266,648**	**26,242**
Indirect Expenses			
Timber Sale	1,396	991	195
Timber Program	33,153	32,626	6,384
Total Indirect Expenses	**34,549**	**33,617**	**6,579**
Total Expenses	**338,902**	**300,265**	**32,821**
Net Rev. (before extraord. losses)	**12,675**	**-110,641**	**-27,940**
Extraordinary Losses	**0**	**0**	**0**
Net Rev. (after extraord. losses)	**12,675**	**-110,641**	**-27,940**

Traditionally, timber commodity purpose sales have been the focus of the so-called "below-cost" controversy. The data in Appendix D shows that in FY 1998 four Regions had negative financial account balances for this program component: R01 – Northern; R03 – Southwestern; R04 – Intermountain; and R10 – Alaska. Below the regional level, 66 forests had negative financial account balances for timber commodity purpose sales.[6] These forests

[6] Twenty of these forests had timber commodity purpose harvests of less than 1.0 MMBF during the year. Experience has shown that unit costs tend be relatively high for such small-scale programs.

accounted for roughly 36 percent of the total volume harvested for timber commodity purposes (See Appendix D).

When considering the financial performance of the different forest management program components, it is important to remember the basic reasons why each type of sale is undertaken. These reasons influence how the various classes of sales are designed, including the types of timber marked for cutting. Since timber commodity purpose sales are intended to help meet the nation's demand for wood, they typically include a significant amount of commercially valuable timber. This is not necessarily the case, however, for forest stewardship and personal use purpose sales. Stewardship sales are undertaken to help achieve a multitude of land management objectives that require manipulating the existing vegetation. While these sales are designed to yield a profit whenever circumstances allow, in the last analysis, most of the timber they contain is dictated by the management objectives to be achieved. Similarly, personal use purpose sales are undertaken to provide Christmas trees, firewood, and small quantities of other forest products to individuals for their own consumption; in other words, they are offered mainly as a public service, and as part of being a "good neighbor" – not to secure a profit.

Interpreting the Financial Results

Key factors impacting the revenues and costs associated with national forest timber sales, and thereby the program's profitability, have been discussed at length in prior TSPIRS reports as well as in two comprehensive timber cost efficiency reports published by the Forest Service.[7] While no attempt will be made here to thoroughly review this information, some key findings merit brief review since they will help readers to better understand why the profitability of the agency's timber sales program has been declining over time.

Factors Affecting Timber Program Revenues

Prior reports and studies indicate that, in recent years, timber program revenues have been adversely affected (i.e., forced downward) by the following factors:

Decline in Program Size: – Over the last decade, the volume of national forest timber being harvested has dropped from nearly 12.0 BBF to about 3.3 BBF annually. Other things being equal, as output declines so does sales revenue.

Shift to Stewardship Purpose Sales: – The amount of timber being harvested for stewardship as opposed to timber commodity purposes has been increasing over time. This shift has affected program profitability. As decisions about sale design are made less-and-

[7] See the FY 1996 and FY 1997 TSPIRS reports. The study reports being referred to are: (1) USDA Forest Service, 1993, *Timber Cost Efficiency Study-Final Report*, Washington, DC, 140 p.; and (2) Liggett C. et al., 1995; *Timber Program Issues: A Technical Examination of Policy Options*; USDA Forest Service, Washington, DC, 301p.

less on the basis of financial considerations (e.g., what timber to remove in light of current market needs), and more-and-more on the basis of ecological considerations (e.g., what timber to remove to create desired habitat conditions), program profitability has tended to decline.

Changing Nature of Products Being Sold: -- As compared to the past, dead and dying trees, and small trees (i.e., trees of less than sawtimber size) now account for a greater proportion of annual offer volume. Salvage timber tends to be less valuable than green timber because it has often been damaged or suffered deterioration. Non-sawtimber sized material tends to be less valuable than sawtimber; because it cannot be manufactured into as wide an array of products, and oftentimes it contains smaller amounts of clear, high-grade wood.

Factors Affecting Timber Program Costs

Prior reports and studies indicate that, in recent years, timber program costs have been adversely affected (i.e., forced upward) by the following factors:

Increasing Importance of Fixed Costs: – Certain costs associated with conducting the national forest timber sale program – e.g., the expenses associated with the depreciation on existing facilities and roads, and with general program administration – are relatively fixed. As program size has declined, these costs have not dropped commensurably and have become a more important part of the total cost mix.

Diseconomies of Small Scale Operations: -- Experience indicates that the costs of some timber-related activities – e.g., sale preparation, harvest administration, reforestation, and timber stand improvement – tend to decrease as the scale at which they are conducted is increased. In recent years, of course, just the opposite has been true – i.e., the size of the timber program has been shrinking. Because of this situation, the unit costs of performing such activities have tended to increase over time.

Open Process and High Environmental Standards: – The General Accounting Office (GAO), in comparing the timber sale programs of the Forest Service and Bureau of Land Management (BLM) in the Pacific Northwest to state timber sale programs in Oregon and Washington, observed:

> "The federal agencies have a much longer and more complex planning process that involves the public at every stage of the process for timber sales. ... In addition, the state agencies do not provide for administrative appeals, whereas the federal agencies do." [8]

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[8] General Accounting Office; 1996; *PUBLIC TIMBER--Federal and State Programs Differ Significantly in the Pacific Northwest*; GAO/RCED-96-108; 16 p (See p.2).

Similarly, Keegan et al., after conducting a study that compared timber management costs on eight national forests in Montana and Idaho to the costs experienced by a broad range of other forest owners and managers (private industry, the Idaho Department of Lands, the Montana Department of Natural Resources and Conservation, and the Confederated Salish and Kootenai Tribes) concluded that:

> "... where organizational goals are complex, emphasizing non-commercial values as well as commercial harvests, then the costs of timber management increase. ... Even more important are the mandates and methods affecting various timber management operations. Agencies that operate within explicit legal and/or administrative directives and undertake formal environmental review and monitoring ... find these activities add substantial costs to their programs for managing timber resources." [9]

Disappearance of the Pipeline: – Pipeline volume represents advanced sale preparation for future years. For a period of time, as the national forest timber sales program became increasingly controversial, the Forest Service was able to maintain output levels and keep unit costs relatively low by drawing upon such volume. However, this cushion eventually disappeared. When this happened, the impact of various factors on timber program costs – e.g., administrative appeals and lawsuits – could no longer be avoided.

Shrinking Volume Under Contract: -- A key factor in determining the rate at which the "sale activity pool" of TSPIRS is written-off is the "volume under contract." Volume under contract represents the amount of national forest timber purchasers have acquired but not yet harvested. In recent years, volume under contract has been declining. This trend has caused an increasing proportion of the sale activity pool's balance to be expensed each year.

Some Closing Points

Because the national forest timber sales program now loses money, some stakeholder groups have argued that it should be halted. While few government programs operate at a profit (this is why we use tax revenues to support them), it is nonetheless appropriate to ask – does this recommendation make sense?

Data in this and prior TSPIRS reports indicate that national forest timber sales made primarily for commodity purposes are generally profitable. Of the total loss reported in FY 1998 – i.e., $125.9 million – almost 90 percent was due to stewardship purpose sales – i.e., sales undertaken mainly to achieve objectives such as improving forest health, reducing forest fuels, and creating desired habitat conditions for wildlife. Eliminating these unprofitable sales would not eliminate the need to address various stewardship objectives, it would only limit the ability of national forest managers to use timber sales as a tool for accomplishing them. Our experience suggests that oftentimes the end result would be higher,

[9] Keegan, Charles E. III et al. 1996. "Timber Management Costs: A Comparison Among Major Landowners in Idaho and Montana." *Montana Business Quarterly* Vol. 34, no. 2: 9-14 (See p. 14).

not lower, net operating costs for national forest management.[10] This outcome is explained by the fact that the alternatives to timber sales – e.g., prescribed burning, use of chemical herbicides and pesticides, and various mechanical treatments such as cut-&-leave – typically do not generate any revenue to help offset their costs of application.

The FY 1997 TSPIRS Report mentioned several other points that should be kept in mind when attempting to assess the wisdom of proposals to eliminate "below cost" timber sales. Very briefly, these were as follows:

- **The National Forests Have a Different Mandate than a Private Timber Growing Business: --** The forest management program on the national forests is not run like a private timber growing business. Significant differences exist in terms of such things as the longer growing periods (i.e., rotations) and higher timber stocking levels commonly employed; the greater emphasis placed on natural and uneven-aged management as opposed to plantation and even-aged management; the greater emphasis placed on the non-timber benefits obtainable from forest lands; the greater emphasis placed on thoroughly analyzing all the potential environmental effects of proposed timber sale projects; and the more open administrative processes and procedures that are employed. Abandoning these differences would likely improve the profitability of national forest timber sales, but in all likelihood would also belie the multiple-use mission of the Forest Service.

- **Timber Sales Provide Many Benefits Beyond the Revenues Earned --** Returns to the U.S. Treasury are only one of the benefits derived from national forest timber sales. Other important benefits documented by TSPIRS include the employment opportunities that are generated, the additional income that accrues to individuals and businesses, the incremental tax receipts that various levels of government receive, and the receipt-share payments that go to benefit local schools and roads. In a somewhat different vein, as the case studies highlighted in this report demonstrate, timber sales can also improve forest health, create desired habitat conditions for certain species of wildlife, address safety concerns in and around National Forest campgrounds, and even help protect the integrity of historically significant earthworks. The economic account of TSPIRS, to the extent that it has been able to express these various resource effects in monetary terms, suggests their present net value is positive.

- **National Forest Timber is Sold at Fair Market Value --** Existing regulations mandate adherence to several practices designed to ensure the public is justly compensated whenever national forest timber is sold. First, timber must be appraised before being offered for sale – and the objective of this appraisal is to estimate fair market value.[11] Secondly, timber cannot be sold for less than appraised value.[12]

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[10] See: Reyna, Nick and Prausa, Rick. 1994. *Evaluating the Use of Timber Harvest on 19 National Forests: An Exploratory Study of Below-Cost Timber Sale Issues and Changing Management Conditions*. USDA Forest Service. Washington, DC. 16p.

[11] 36 CFR 223.60

[12] 36 CFR 223.61

Lastly, timber sale contracts are normally to be awarded competitively to the prospective purchaser offering the highest bid.[13] Despite these requirements, sometimes national forest timber is sold for less than the government's full costs of sale preparation and administration. When this occurs, the benefit is to the government itself, not the forest products industries. National forest timber sales tend to be relatively expensive to prepare because of the costs associated with such things as providing for public involvement and conducting comprehensive environmental analyses. At the same time, the Forest Service has no choice but to sell its timber in open markets where most purchasers have a choice of buying either public or private stumpage. If the agency sought to price its timber high enough to consistently cover its full costs, in many instances it will only succeed in pricing itself out of the market and compromising its ability to use timber sales as a management tool.

The issues surrounding management of our national forests are complex. While the Forest Service is committed to implementing the will of the people as concerns management of these lands, it also wants to ensure that public opinions are formed on the basis of balanced knowledge and understanding.

[13] 36 CFR 223.100

USDA FOREST SERVICE CONTACT

Please contact the Forest Service at the following address if you have questions about this report or desire additional information:

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Washington, DC 20090-1105

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GLOSSARY

Analysis and Documentation -- A category established to track the costs of completing environmental analysis and documentation of timber projects in compliance with the National Environmental Policy Act (NEPA).

Appeals and Litigation -- A category established to track the costs of processing administrative appeals, of working on litigation related to timber projects, and of reworking projects to bring them into compliance with changed standards resulting from appeals and legal decisions. Not included are any investments (sunk costs) incurred in connection with proposed timber sales that are started but subsequently abandoned because of an appeal or judicial decision; or any foregone revenues or opportunity costs that are associated with such projects.

BBF -- One billion board feet of timber volume. A board foot is a piece of wood 12 inches square and 1 inch thick.

Benefits -- Goods and services that result from projects or programs. These goods and services may or may not be exchanged in markets. Timber, forage, and minerals are often said to be "commodity" benefits because they are typically sold to business to produce revenue. Recreation, water, and wildlife are often said to be "non-commodity" benefits because they are typically provided to individuals at little or no cost.

Cost Pool -- An accounting mechanism for the collection of expenditure data in like categories; the purpose of pools is to better match, for a particular reporting year, costs against related income. In TSPIRS, there are three types of cost pools that have been designed to conform to generally accepted accounting principles (GAAP). These are:

1.) Sale Activity Pool - This pool includes the costs of activities directly related to preparing timber for sale at auction. Funds obligated to these activities in any given year are added to the pool and annual expenses are calculated based on the following formula:

$$\text{Sale Activity Expense} = (PB_{cy})(V_h/V_h + V_{uc})$$

Where:

PB_{cy} = pool balance in current year
V_h = volume harvested
V_{uc} = Volume under contract

2.) Growth Activity Pool - This pool includes the costs of activities related to growing trees over a rotation period (i.e., from reforestation to harvest). These expenses, such as

reforestation and timber stand improvement costs, represent investments in the growth of trees. Funds obligated to these activities are added to the pool and annual expenses are calculated based on the following formula:

$$\text{Growth Activity Expense} = (PB_{cy}) \times (V_h / GS_v)$$

Where:

PB_{cy} = pool balance in current year
V_h = volume harvested
GS_v = growing stock volume on suitable lands

3.) Depreciation Pool - This pool includes expenditures associated with roads and facilities. These types of costs are depreciated over predetermined periods of time that have been set to approximate their anticipated useful lives. Facilities, including buildings, are depreciated over a 30-year useful life. Road design and construction costs are capitalized and depreciated by component. The following schedules are used for each component:

Prisms	-- 50 years
Surfacing	-- 10 years
Culverts	-- 30 years
Bridges	-- 50 years

Ecosystem Management -- The use of an ecological approach to achieve the multiple-use management of national forests and grasslands by blending the needs of people and environmental values in such a way that national forests and grasslands represent diverse, healthy, productive, and sustainable ecosystems.

Extraordinary Loss -- A loss that is both unusual and infrequent in occurrence. Unusual means that the loss was triggered by a highly abnormal event. Infrequent means that the loss was triggered by an event that would not reasonably be expected to occur again in the foreseeable future.

Forest Stewardship Component -- That portion of the overall national forest timber sale program composed of sales, or parts of sales, where the primarily reason for harvesting timber is to achieve some forest plan stewardship objective that requires vegetative manipulation. Stated another way, it is that portion of the overall program composed of vegetative management projects that, even if timber could not be sold, would nonetheless be undertaken through some other means such as prescribed burning. Timber harvested under this component of the sales program may come off lands classified as either suitable or unsuitable for timber management purposes, and may be obtained through either green or salvage sales. When timber harvesting is used to accomplish a stewardship objective that requires vegetative manipulation, it is generally the least net cost (i.e., cost minus revenue) method of attaining the desired goal. Sales or parts of sales designed primarily to achieve

forest stewardship objectives are coded as (FS) in the Timber Sale Accounting System, and the appropriate percent of sale volume is recorded.

General Administration (GA) Costs -- The cost of line management and program support that cannot be identified with specific programs. A proportionate amount of a forest's total GA is allocated to the timber program based on the estimated extent to which the program benefits from GA type activities.

Generally Accepted Accounting Principles (GAAP) -- Conventions, rules, and procedures defining accepted accounting practice, including both broad guidelines and detailed procedures developed by the Financial Accounting Standards Board.

Growing Stock -- An estimate of the current merchantable volume of timber, in trees 5 or more inches in DBH (diameter at breast height), that is growing on lands classified as suitable for timber management. In any given year, the current growing stock volume is estimated by adjusting the baseline timber inventory information from the forest plan for any growth, mortality, and removals that have occurred since implementation of the plan. If more recent inventory information is available for the suitable land base, it is used and updated accordingly. TSPIRS uses the growing stock volume at the beginning of the fiscal year to calculate the annual expenses to be charged to cost items in the "growth activity pool."

Harvest Administration -- The cost of supervising, administering, guiding, assisting, controlling, and reporting a purchaser's harvest of contracted timber volume. Timber purchasers conduct harvest activities in compliance with timber sale contracts that contain provisions designed to protect or enhance the forest environment and non-timber resources. Typical harvest administration activities include scaling, check scaling, day-to-day contract administration, inspections of operations, rate determinations, breach actions, contract modifications, and report preparation.

KV (Knutson-Vandenberg) Funds -- Funds collected from timber purchasers and subsequently used to conduct reforestation, timber stand improvements, and other resource enhancements on national forest timber sale areas. Collection of the funds was authorized by Congress when it passed the Knutson-Vandenberg Act in 1930.

MBF -- One thousand board feet of timber volume. A board foot is a piece of wood 12 inches square and 1 inch thick.

MMBF -- One million board feet of timber volume. A board foot is a piece of wood 12 inches square and 1 inch thick.

Multiple Use -- The management philosophy articulated by the Multiple Use - Sustained Yield Act of 1960. This law provides that the renewable resources of the national forests are to be managed in the combination that best meets the needs of the American people. It further stipulates that the Forest Service is to make judicious use of the land for some or all of

these resources and related services over areas large enough to ensure that sufficient latitude exists to subsequently adjust management in conformity with changing needs and conditions.

Obligations -- Funds (moneys) that the Federal government has committed itself to expend (payout) during a given fiscal year. Funds are considered to be obligated when they are owed to a receiving party. On an obligation basis, expenditures are counted when the government commits itself to payment, even though the actual cash transaction may not take place for some time.

Payments to States -- The 25 percent share of the gross receipts from national forest timber sales that is, by law, returned to the states and counties where timber was harvested and which is to be used to benefit local schools and roads. The original legislation authorizing such payments was passed in 1908, but Congress has sometimes modified the basic formula for determining payment amounts.

Personal Use Component -- That portion of the overall national forest timber sale program composed of sales, or parts of sales, where the primarily reason for harvesting timber is to provide firewood and other similar products to individuals for their own consumption. This component includes all free-use permits, paid permits, and sales involving less than or equal to the following quantities or values:

- 10 cords
- 5 MBF of timber
- 3 Christmas trees
- $20 worth of non-convertible products (i.e., products that cannot be converted to a board foot or cubic foot equivalent)

These permits and sales (with the exception of free-use) are coded as (PP) in the Timber Sale Accounting System.

Present Net Value -- The difference between the discounted value of the economic benefits to which dollar values could be assigned and the discounted value of the economic costs. In constructing the Economic Account of TSPIRS, a 4 percent real discount rate is assumed.

Purchaser Credit -- Credit earned by timber purchasers when they construct the roads needed to access national forest timber sales. The amount of credit earned is based on the value of the road as estimated by Forest Service engineers and is established in the timber sale contract. Earned purchaser credit may be used to pay stumpage charges above base rates, and TSPIRS treats such payments as timber sale revenue.

Reforestation (also Regeneration) -- Treatments or activities that help to reestablish stands of trees after harvest. Typical activities include preparing the soil, controlling pests, and planting seeds or seedlings.

Road Maintenance -- This cost category includes expenditures made to maintain timber sale access roads that would otherwise deteriorate because of the timber purchaser's use of the roads. The funds needed to cover these costs are collected from purchasers in accordance with terms specified in the timber sale contract.

Sale Preparation -- This cost category includes those expenditures associated with the timber-related field work needed to prepare timber sales, and with preparing timber sale contracts.

Salvage Sale -- A sale undertaken to remove dead, dying, or deteriorating trees before the timber becomes worthless for processing into wood products; and/or to prevent the spread of insects and diseases and thereby promote healthy, vigorous forests.

Sawtimber -- Trees of such size and quality that they contain logs suitable for processing into lumber.

Silvicultural Examination -- This cost category includes the expenditures required to gather detailed, on-site field data concerning the timber resource within a small subdivision of a forested area; such information is needed to assess management opportunities and set direction for the timber resource within the subdivision.

Silviculture -- The art, science, and practice of controlling the establishment, growth, composition, health, and quality of woodlands to meet the diverse needs and values of landowners and society on a sustainable basis.

Timber Commodity Component -- That portion of the overall national forest timber sale program composed of sales, or parts of sales, where the primarily reason for harvesting timber is to help meet the nation's demand for wood by providing wood fiber to the forest products industries. Timber harvested under this component of the sales program may only come off lands classified as suitable for timber management purposes, but it may be obtained through either green or salvage sales. Sales or parts of sales designed primarily to achieve timber commodity objectives are coded as (TC) in the Timber Sale Accounting (TSA) System, and the appropriate percent of sale volume is recorded.

Timber Stand Improvement (TSI) -- Noncommercial cutting and other treatments made to increase the growth and improve the quality of trees for timber uses. Treatments include thinning, pruning, weeding, prescribed burning, and fertilizing established stands of trees.

Timber Sale Program Information Reporting System (TSPIRS) -- A reporting system jointly developed by the Forest Service and the U.S. General Accounting Office for the purpose of providing annual information on the financial, economic, and employment-related performance of the national forest timber sales program.

Undepreciated Road Write-off -- This expense is the net book value of the roads obliterated during the fiscal year.

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APPENDIX A -- Employment, Income, and Program Level Account by Region and Forest

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EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT
for the Fiscal Year Ended September 30, 1998

Region 1 (Northern)

CATEGORY DESCRIPTION	IDAHO ID Panhandle	IDAHO Clearwater	IDAHO Nez Perce	IDAHO SUBTOTAL	MONTANA Beahd Deerlg	MONTANA Bitterroot
I. EMPLOYMENT & INCOME INFORMATION						
- 1 Timber Related Employment (Jobs)	2,809	1,205	774	4,788	366	493
- 2 Employment Related Income ($000)	86,131	37,693	24,548	148,372	13,872	19,563
- 3 Federal Income Tax Generated ($000)	12,920	5,654	3,628	22,256	2,081	2,934
II. TIMBER PROGRAM INFORMATION						
- 1 Volume Offered (MMBF)	76.38	30.19	22.38	128.95	12.36	9.18
- 2 Volume Sold and Awarded (MMBF)	64.04	37.10	25.46	126.59	16.61	12.01
- 3 Volume Harvested (MMBF)						
-- Sawtimber	78.05	25.79	19.71	123.55	8.73	7.43
-- Roundwood	4.34	6.24	1.64	12.23	2.70	0.72
-- Firewood	2.19	1.68	1.64	5.51	1.91	1.19
-- Other	0.07	0.71	0.42	1.19	0.91	0.35
Total Harvest Volume	**84.64**	**34.42**	**23.41**	**142.47**	**14.25**	**9.69**
- 4 Total Area Harvested (acres)	11,421	2,586	1,133	15,140	1,163	507
- 5 Free Use Firewood (MMBF)	0.00	0.00	0.00	0.00	0.00	0.00
- 6 Nonconvertible Products						
-- Christmas Trees Cut (trees)	2,692	636	322	3,650	1,472	1,113
-- Other Products Removed ($000)	5	0	0	5	0	0
- 7 Regeneration Treatment (acres)	5,324	2,552	2,265	10,141	1,452	713
- 8 Timber Stand Improvement (acres)	8,964	1,112	1,049	11,125	1,669	696
III. FOREST ROAD INFORMATION						
- 1 Road Construction (miles)						
-- Appropriated Construction	0.0	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Construction	11.5	1.1	0.0	12.6	1.8	0.1
Total Construction	**11.5**	**1.1**	**0.0**	**12.6**	**1.8**	**0.1**
- 2 Road Reconstruction (miles)						
-- Appropriated Reconstruction	0.1	0.0	0.0	0.1	9.7	0.0
-- Purchaser Credit Reconstruction	149.0	4.1	11.9	165.0	45.0	18.5
Total Reconstruction	**149.1**	**4.1**	**11.9**	**165.1**	**54.7**	**18.5**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT
for the Fiscal Year Ended September 30, 1998

Region 1 (Northern)

CATEGORY DESCRIPTION	MONTANA Custer	MONTANA Flathead	MONTANA Gallatin	MONTANA Helena	MONTANA Kootenai	MONTANA Lewis-Clark
I. EMPLOYMENT & INCOME INFORMATION						
- 1 Timber Related Employment (Jobs)	40	1,126	113	424	3,439	636
- 2 Employment Related Income ($000)1	1,550	40,276	3,914	15,129	107,743	22,938
- 3 Federal Income Tax Generated ($000)	232	6,041	587	2,269	16,161	3,441
II. TIMBER PROGRAM INFORMATION						
- 1 Volume Offered (MMBF)	2.96	16.07	3.62	3.43	81.60	8.34
- 2 Volume Sold and Awarded (MMBF)	2.86	12.69	7.29	1.54	65.78	5.44
- 3 Volume Harvested (MMBF)						
-- Sawtimber	0.00	20.30	0.79	9.06	48.35	15.49
-- Roundwood	0.06	1.89	0.10	2.26	33.72	1.22
-- Firewood	0.59	2.09	1.75	1.22	1.97	1.94
-- Other	0.00	9.58	0.04	0.44	4.11	0.23
Total Harvest Volume	**0.65**	**33.87**	**2.68**	**12.98**	**88.14**	**18.87**
- 4 Total Area Harvested (acres)	68	1,530	389	1,696	8,056	2,195
- 5 Free Use Firewood (MMBF)	0.00	0.00	0.00	0.00	0.00	0.00
- 6 Nonconvertible Products						
-- Christmas Trees Cut (trees)	1,982	5,083	4,076	3,188	1,862	6,890
-- Other Products Removed ($000)	0	0	1	0	4	0
- 7 Regeneration Treatment (acres)	550	2,850	436	96	5,873	1,539
- 8 Timber Stand Improvement (acres)	189	2,132	968	400	4,296	525
III. FOREST ROAD INFORMATION						
- 1 Road Construction (miles)						
-- Appropriated Construction	0.2	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Construction	4.6	0.0	5.0	0.0	1.7	0.6
Total Construction	**4.8**	**0.0**	**5.0**	**0.0**	**1.7**	**0.6**
- 2 Road Reconstruction (miles)						
-- Appropriated Reconstruction	1.5	0.0	4.3	2.0	20.5	0.0
-- Purchaser Credit Reconstruction	5.4	17.0	13.7	2.0	96.1	3.5
Total Reconstruction	**6.9**	**17.0**	**18.0**	**4.0**	**116.6**	**3.5**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT
for the Fiscal Year Ended September 30, 1998

Region 1 (Northern)

CATEGORY DESCRIPTION	MONTANA Lolo	MONTANA SUBTOTAL	Regional Office	REGIONAL TOTALS
I. EMPLOYMENT & INCOME INFORMATION				
- 1 Timber Related Employment (Jobs)	1,690	8,327	94	13,209
- 2 Employment Related Income ($000)	52,993	277,978	3,911	430,261
- 3 Federal Income Tax Generated ($000)	7,949	41,695	587	64,538
II. TIMBER PROGRAM INFORMATION				
- 1 Volume Offered (MMBF)	24.21	161.78	0.00	290.73
- 2 Volume Sold and Awarded (MMBF)	26.79	151.03	0.00	277.62
- 3 Volume Harvested (MMBF)				
-- Sawtimber	30.75	140.90	0.00	264.45
-- Roundwood	1.85	44.52	0.00	56.74
-- Firewood	1.54	14.20	0.00	19.71
-- Other	5.00	20.66	0.00	21.85
Total Harvest Volume	**39.14**	**220.28**	**0.00**	**362.75**
- 4 Total Area Harvested (acres)	4,093	19,697	0	34,837
- 5 Free Use Firewood (MMBF)	0.00	0.00	0.00	0.00
- 6 Nonconvertible Products				
-- Christmas Trees Cut (trees)	1,626	27,292	0	30,942
-- Other Products Removed ($000)	3	8	0	13
- 7 Regeneration Treatment (acres)	2,970	16,479	0	26,620
- 8 Timber Stand Improvement (acres)	2,282	13,157	0	24,282
III. FOREST ROAD INFORMATION				
- 1 Road Construction (miles)				
-- Appropriated Construction	0.0	0.2	0.0	0.2
-- Purchaser Credit Construction	3.3	17.1	0.0	29.7
Total Construction	**3.3**	**17.3**	**0.0**	**29.9**
- 2 Road Reconstruction (miles)				
-- Appropriated Reconstruction	1.4	39.4	0.0	39.5
-- Purchaser Credit Reconstruction	90.6	291.8	0.0	456.8
Total Reconstruction	**92.0**	**331.2**	**0.0**	**496.3**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT
for the Fiscal Year Ended September 30, 1998

Region 2 (Rocky Mountain)

CATEGORY DESCRIPTION	COLORADO Grd Mesa/U/G	COLORADO Arapaho/Roos	COLORADO Pike/San Isb	COLORADO San J/Rio G	COLORADO White River	COLORADO SUBTOTAL
I. EMPLOYMENT & INCOME INFORMATION						
- 1 Timber Related Employment (Jobs)	363	141	39	248	144	935
- 2 Employment Related Income ($000)	9,488	3,618	971	6,424	4,190	24,691
- 3 Federal Income Tax Generated ($000)	1,423	545	145	964	629	3,706
II. TIMBER PROGRAM INFORMATION						
- 1 Volume Offered (MMBF)	9.95	6.03	3.82	18.27	10.36	48.43
- 2 Volume Sold and Awarded (MMBF)	14.08	1.12	5.51	20.98	9.93	51.61
- 3 Volume Harvested (MMBF)						
-- Sawtimber	9.70	3.26	0.61	5.31	4.26	23.13
-- Roundwood	0.00	0.04	0.00	0.00	0.32	0.36
-- Firewood	2.19	0.49	2.51	4.48	1.63	11.30
-- Other	9.41	0.55	0.51	3.84	2.84	17.16
Total Harvest Volume	**21.30**	**4.34**	**3.64**	**13.63**	**9.05**	**51.96**
- 4 Total Area Harvested (acres)	2,324	74	77	1,956	1,188	5,619
- 5 Free Use Firewood (MMBF)	0.00	0.02	0.00	0.05	0.03	0.10
- 6 Nonconvertible Products						
-- Christmas Trees Cut (trees)	1,108	7,454	9,653	2,322	2,217	22,754
-- Other Products Removed ($000)	2	13	11	13	2	41
- 7 Regeneration Treatment (acres)	1,410	1,715	207	2,295	825	6,452
- 8 Timber Stand Improvement (acres)	478	912	1,501	1,664	543	5,098
III. FOREST ROAD INFORMATION						
- 1 Road Construction (miles)						
-- Appropriated Construction	0.0	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Construction	7.2	0.0	0.0	0.4	0.0	7.6
Total Construction	**7.2**	**0.0**	**0.0**	**0.4**	**0.0**	**7.6**
- 2 Road Reconstruction (miles)						
-- Appropriated Reconstruction	27.7	1.9	2.2	4.0	25.7	61.5
-- Purchaser Credit Reconstruction	2.6	4.0	0.0	24.9	11.2	42.7
Total Reconstruction	**30.3**	**5.9**	**2.2**	**28.9**	**36.9**	**104.2**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT

for the Fiscal Year Ended September 30, 1998

Region 2 (Rocky Mountain)

CATEGORY DESCRIPTION	NEBRASKA Nebraska	S. DAKOTA Blk Hills	WYOMING Big Horn	WYO./CO. Md Bow-Routt	WYOMING Shoshone
I. EMPLOYMENT & INCOME INFORMATION					
- 1 Timber Related Employment (Jobs)	0	1,251	88	327	59
- 2 Employment Related Income ($000)	0	27,229	2,058	7,614	1,445
- 3 Federal Income Tax Generated ($000)	0	4,084	309	1,142	217
II. TIMBER PROGRAM INFORMATION					
- 1 Volume Offered (MMBF)	0.01	77.05	5.51	39.89	3.57
- 2 Volume Sold and Awarded (MMBF)	0.03	80.94	2.68	24.24	5.67
- 3 Volume Harvested (MMBF)					
-- Sawtimber	0.00	65.20	1.73	14.50	0.39
-- Roundwood	0.01	0.02	0.29	0.20	0.00
-- Firewood	0.01	4.15	4.36	3.97	4.69
-- Other	0.00	1.02	0.02	1.34	0.54
Total Harvest Volume	**0.02**	**70.38**	**6.40**	**20.01**	**5.62**
- 4 Total Area Harvested (acres)	0	14,797	386	1,367	24
- 5 Free Use Firewood (MMBF)	0.00	0.27	0.00	0.00	0.02
- 6 Nonconvertible Products					
-- Christmas Trees Cut (trees)	92	6,103	2,545	3,386	2,065
-- Other Products Removed ($000)	0	1	0	5	1
- 7 Regeneration Treatment (acres)	0	9,426	761	2,140	4,024
- 8 Timber Stand Improvement (acres)	0	9,247	1,169	3,260	1,067
III. FOREST ROAD INFORMATION					
- 1 Road Construction (miles)					
-- Appropriated Construction	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Construction	0.0	13.3	0.0	5.9	2.0
Total Construction	**0.0**	**13.3**	**0.0**	**5.9**	**2.0**
- 2 Road Reconstruction (miles)					
-- Appropriated Reconstruction	4.0	7.9	0.5	1.0	4.0
-- Purchaser Credit Reconstruction	0.0	93.7	0.0	10.5	0.6
Total Reconstruction	**4.0**	**101.6**	**0.5**	**11.5**	**4.6**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT

for the Fiscal Year Ended September 30, 1998

Region 2 (Rocky Mountain)

CATEGORY DESCRIPTION	WYOMING SUBTOTAL	REGIONAL TOTALS
I. EMPLOYMENT & INCOME INFORMATION		
- 1 Timber Related Employment (Jobs)	474	2,660
- 2 Employment Related Income ($000)	11,117	63,037
- 3 Federal Income Tax Generated ($000)	1,668	9,458
II. TIMBER PROGRAM INFORMATION		
- 1 Volume Offered (MMBF)	48.97	174.46
- 2 Volume Sold and Awarded (MMBF)	32.60	165.17
- 3 Volume Harvested (MMBF)		
-- Sawtimber	16.61	104.94
-- Roundwood	0.49	0.87
-- Firewood	13.02	28.49
-- Other	1.90	20.08
Total Harvest Volume	**32.02**	**154.38**
- 4 Total Area Harvested (acres)	1,777	22,193
- 5 Free Use Firewood (MMBF)	0.02	0.39
- 6 Nonconvertible Products		
-- Christmas Trees Cut (trees)	7,996	36,945
-- Other Products Removed ($000)	6	48
- 7 Regeneration Treatment (acres)	6,925	22,803
- 8 Timber Stand Improvement (acres)	5,496	19,841
III. FOREST ROAD INFORMATION		
- 1 Road Construction (miles)		
-- Appropriated Construction	0.0	0.0
-- Purchaser Credit Construction	7.9	28.8
Total Construction	**7.9**	**28.8**
- 2 Road Reconstruction (miles)		
-- Appropriated Reconstruction	5.5	78.9
-- Purchaser Credit Reconstruction	11.1	147.5
Total Reconstruction	**16.6**	**226.4**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT
for the Fiscal Year Ended September 30, 1998

Region 3 (Southwestern)

CATEGORY DESCRIPTION	ARIZONA Apache Sit	ARIZONA Coconino	ARIZONA Coronado	ARIZONA Kaibab	ARIZONA Prescott	ARIZONA Tonto
I. EMPLOYMENT & INCOME INFORMATION						
- 1 Timber Related Employment (Jobs)	530	205	6	194	15	66
- 2 Employment Related Income ($000)	14,800	5,647	191	5,275	400	1,805
- 3 Federal Income Tax Generated ($000)	2,219	847	29	791	60	272
II. TIMBER PROGRAM INFORMATION						
- 1 Volume Offered (MMBF)	46.54	24.14	0.28	33.32	2.51	10.49
- 2 Volume Sold and Awarded (MMBF)	26.96	11.85	0.11	31.40	2.50	2.76
- 3 Volume Harvested (MMBF)						
-- Sawtimber	10.00	3.51	0.00	5.17	0.01	1.84
-- Roundwood	14.74	3.94	0.00	2.70	0.01	0.01
-- Firewood	7.71	7.48	0.11	2.40	2.12	2.11
-- Other	0.00	0.00	0.00	0.00	0.00	0.00
Total Harvest Volume	**32.45**	**14.93**	**0.11**	**10.27**	**2.14**	**3.95**
- 4 Total Area Harvested (acres)	6,557	526	0	1,282	236	411
- 5 Free Use Firewood (MMBF)	0.02	0.24	0.11	0.66	0.01	0.53
- 6 Nonconvertible Products						
-- Christmas Trees Cut (trees)	5,060	2,980	209	3,118	688	0
-- Other Products Removed ($000)	5	3	2	0	1	1
- 7 Regeneration Treatment (acres)	3,547	271	0	2,238	0	213
- 8 Timber Stand Improvement (acres)	3,090	1,883	0	1,771	514	652
III. FOREST ROAD INFORMATION						
- 1 Road Construction (miles)						
-- Appropriated Construction	0.0	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Construction	0.0	0.0	0.0	1.2	0.0	0.0
Total Construction	**0.0**	**0.0**	**0.0**	**1.2**	**0.0**	**0.0**
- 2 Road Reconstruction (miles)						
-- Appropriated Reconstruction	0.0	0.0	0.0	0.2	0.0	0.0
-- Purchaser Credit Reconstruction	0.0	0.0	0.0	12.0	0.0	0.0
Total Reconstruction	**0.0**	**0.0**	**0.0**	**12.2**	**0.0**	**0.0**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT

for the Fiscal Year Ended September 30, 1998

Region 3 (Southwestern)

CATEGORY DESCRIPTION	ARIZONA SUBTOTAL	NEW MEXICO Carson	NEW MEXICO Cibola	NEW MEXICO Gila	NEW MEXICO Lincoln	NEW MEXICO Santa Fe
I. EMPLOYMENT & INCOME INFORMATION						
- 1 Timber Related Employment (Jobs)	1,016	264	28	39	40	107
- 2 Employment Related Income ($000)	28,118	7,209	776	1,080	1,168	3,362
- 3 Federal Income Tax Generated ($000)	4,218	1,080	116	162	175	504
II. TIMBER PROGRAM INFORMATION						
- 1 Volume Offered (MMBF)	117.28	11.89	3.80	4.15	2.09	9.31
- 2 Volume Sold and Awarded (MMBF)	75.59	11.34	4.21	2.44	3.04	6.34
- 3 Volume Harvested (MMBF)						
-- Sawtimber	20.52	1.45	0.40	0.18	2.04	3.57
-- Roundwood	21.39	0.79	0.41	0.11	0.10	1.44
-- Firewood	21.93	7.17	3.13	1.86	1.36	5.62
-- Other	0.00	0.00	0.00	0.00	0.00	0.00
Total Harvest Volume	**63.85**	**9.41**	**3.95**	**2.15**	**3.51**	**10.62**
- 4 Total Area Harvested (acres)	9,012	82	0	0	661	331
- 5 Free Use Firewood (MMBF)	1.57	0.92	0.13	0.59	0.08	0.05
- 6 Nonconvertible Products						
-- Christmas Trees Cut (trees)	12,055	2,444	1,370	2,033	2,477	5,809
-- Other Products Removed ($000)	12	10	5	1	1	38
- 7 Regeneration Treatment (acres)	6,269	1,715	150	1,111	26	519
- 8 Timber Stand Improvement (acres)	7,910	2,147	1,065	905	195	1,683
III. FOREST ROAD INFORMATION						
- 1 Road Construction (miles)						
-- Appropriated Construction	0.0	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Construction	1.2	0.0	0.0	0.0	0.0	0.0
Total Construction	**1.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
- 2 Road Reconstruction (miles)						
-- Appropriated Reconstruction	0.2	0.0	0.0	0.0	0.0	5.9
-- Purchaser Credit Reconstruction	12.0	0.0	0.0	0.0	0.0	0.0
Total Reconstruction	**12.2**	**0.0**	**0.0**	**0.0**	**0.0**	**5.9**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT
for the Fiscal Year Ended September 30, 1998

Region 3 (Southwestern)

CATEGORY DESCRIPTION	NEW MEXICO SUBTOTAL	REGIONAL TOTALS
I. EMPLOYMENT & INCOME INFORMATION		
- 1 Timber Related Employment (Jobs)	478	1,494
- 2 Employment Related Income ($000)	13,595	41,713
- 3 Federal Income Tax Generated ($000)	2,037	6,255
II. TIMBER PROGRAM INFORMATION		
- 1 Volume Offered (MMBF)	31.25	148.53
- 2 Volume Sold and Awarded (MMBF)	27.36	102.95
- 3 Volume Harvested (MMBF)		
-- Sawtimber	7.64	28.17
-- Roundwood	2.86	24.25
-- Firewood	19.14	41.06
-- Other	0.00	0.00
Total Harvest Volume	**29.63**	**93.48**
- 4 Total Area Harvested (acres)	1,074	10,086
- 5 Free Use Firewood (MMBF)	1.76	3.33
- 6 Nonconvertible Products		
-- Christmas Trees Cut (trees)	14,133	26,188
-- Other Products Removed ($000)	54	66
- 7 Regeneration Treatment (acres)	3,521	9,790
- 8 Timber Stand Improvement (acres)	5,995	13,905
III. FOREST ROAD INFORMATION		
- 1 Road Construction (miles)		
-- Appropriated Construction	0.0	0.0
-- Purchaser Credit Construction	0.0	1.2
Total Construction	**0.0**	**1.2**
- 2 Road Reconstruction (miles)		
-- Appropriated Reconstruction	5.9	6.1
-- Purchaser Credit Reconstruction	0.0	12.0
Total Reconstruction	**5.9**	**18.1**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT

for the Fiscal Year Ended September 30, 1998

Region 4 (Intermountain)

CATEGORY DESCRIPTION	IDAHO Boise	IDAHO Caribou	IDAHO Payette	IDAHO Salmon/Chal	IDAHO Sawtooth	IDAHO Targhee
I. EMPLOYMENT & INCOME INFORMATION						
- 1 Timber Related Employment (Jobs)	1,045	161	871	174	69	142
- 2 Employment Related Income ($000)	50,990	8,694	44,921	7,984	3,278	6,457
- 3 Federal Income Tax Generated ($000)	7,648	1,304	6,738	1,198	492	969
II. TIMBER PROGRAM INFORMATION						
- 1 Volume Offered (MMBF)	60.13	5.84	54.72	9.13	4.72	2.85
- 2 Volume Sold and Awarded (MMBF)	29.12	5.03	29.25	5.95	7.45	2.84
- 3 Volume Harvested (MMBF)						
-- Sawtimber	36.97	9.33	33.88	4.64	0.43	2.69
-- Roundwood	0.66	0.02	3.59	0.28	0.18	0.09
-- Firewood	4.13	1.65	2.83	2.67	2.75	3.92
-- Other	0.17	0.00	1.14	0.00	0.00	0.00
Total Harvest Volume	**41.93**	**11.00**	**41.43**	**7.59**	**3.36**	**6.70**
- 4 Total Area Harvested (acres)	8,167	1,056	4,173	637	49	614
- 5 Free Use Firewood (MMBF)	0.04	0.30	0.18	0.56	0.00	0.24
- 6 Nonconvertible Products						
-- Christmas Trees Cut (trees)	4,087	3,372	916	1,185	2,215	3,452
-- Other Products Removed ($000)	0	0	0	0	2	5
- 7 Regeneration Treatment (acres)	6,568	382	1,607	1,155	258	2,897
- 8 Timber Stand Improvement (acres)	6,400	791	1,262	1,540	72	1,471
III. FOREST ROAD INFORMATION						
- 1 Road Construction (miles)						
-- Appropriated Construction	0.0	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Construction	13.9	7.8	0.0	0.0	0.0	0.0
Total Construction	**13.9**	**7.8**	**0.0**	**0.0**	**0.0**	**0.0**
- 2 Road Reconstruction (miles)						
-- Appropriated Reconstruction	15.7	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Reconstruction	20.1	5.2	45.4	0.6	0.0	0.0
Total Reconstruction	**35.8**	**5.2**	**45.4**	**0.6**	**0.0**	**0.0**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT
for the Fiscal Year Ended September 30, 1998

Region 4 (Intermountain)

CATEGORY DESCRIPTION	IDAHO SUBTOTAL	NEVADA Toiy./Humb.	UTAH Ashley	UTAH Dixie	UTAH Fishlake	UTAH Manti/LaSal
I. EMPLOYMENT & INCOME INFORMATION						
- 1 Timber Related Employment (Jobs)	2,462	49	174	179	129	127
- 2 Employment Related Income ($000)	122,324	2,466	9,166	9,388	7,091	7,023
- 3 Federal Income Tax Generated ($000)	18,349	370	1,375	1,408	1,064	1,053
II. TIMBER PROGRAM INFORMATION						
- 1 Volume Offered (MMBF)	137.39	3.40	4.09	15.42	12.65	2.07
- 2 Volume Sold and Awarded (MMBF)	79.65	2.68	4.47	14.23	11.95	3.11
- 3 Volume Harvested (MMBF)						
-- Sawtimber	87.94	0.52	8.75	9.54	8.37	6.29
-- Roundwood	4.82	0.01	1.94	0.03	0.04	0.53
-- Firewood	17.95	2.55	2.22	2.42	0.63	0.92
-- Other	1.32	0.00	0.00	0.00	0.00	0.00
Total Harvest Volume	**112.02**	**3.08**	**12.92**	**11.98**	**9.04**	**7.74**
- 4 Total Area Harvested (acres)	14,696	0	799	2,459	252	1,028
- 5 Free Use Firewood (MMBF)	1.32	0.03	0.25	0.13	0.15	0.04
- 6 Nonconvertible Products						
-- Christmas Trees Cut (trees)	15,227	4,488	3,561	5,723	645	2,154
-- Other Products Removed ($000)	7	1	1	0	1	2
- 7 Regeneration Treatment (acres)	12,867	0	2,468	1,021	420	380
- 8 Timber Stand Improvement (acres)	11,536	350	429	1,175	482	933
III. FOREST ROAD INFORMATION						
- 1 Road Construction (miles)						
-- Appropriated Construction	0.0	0.0	0.0	0.3	0.0	3.0
-- Purchaser Credit Construction	21.7	0.0	0.0	0.0	3.3	0.0
Total Construction	**21.7**	**0.0**	**0.0**	**0.3**	**3.3**	**3.0**
- 2 Road Reconstruction (miles)						
-- Appropriated Reconstruction	15.7	0.0	0.0	11.2	0.0	6.0
-- Purchaser Credit Reconstruction	71.3	0.0	3.4	10.3	6.0	1.0
Total Reconstruction	**87.0**	**0.0**	**3.4**	**21.5**	**6.0**	**7.0**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT

for the Fiscal Year Ended September 30, 1998

Region 4 (Intermountain)

CATEGORY DESCRIPTION	UTAH Uinta	UTAH Wasat/Cache	UTAH SUBTOTAL	WYOMING Bri/Teton	REGIONAL TOTALS
I. EMPLOYMENT & INCOME INFORMATION					
- 1 Timber Related Employment (Jobs)	54	64	727	121	3,359
- 2 Employment Related Income ($000)	2,895	3,219	38,782	5,844	169,416
- 3 Federal Income Tax Generated ($000)	434	483	5,817	877	25,413
II. TIMBER PROGRAM INFORMATION					
- 1 Volume Offered (MMBF)	2.46	7.65	44.34	11.50	196.64
- 2 Volume Sold and Awarded (MMBF)	6.15	7.73	47.64	8.12	138.10
- 3 Volume Harvested (MMBF)					
-- Sawtimber	2.12	1.78	36.86	2.60	127.92
-- Roundwood	0.00	0.02	2.56	0.19	7.58
-- Firewood	0.50	0.76	7.45	4.67	32.62
-- Other	0.00	0.00	0.00	0.10	1.42
Total Harvest Volume	**2.63**	**2.56**	**46.87**	**7.57**	**169.54**
- 4 Total Area Harvested (acres)	342	433	5,313	165	20,174
- 5 Free Use Firewood (MMBF)	0.00	0.00	0.57	0.00	1.92
- 6 Nonconvertible Products					
-- Christmas Trees Cut (trees)	1,500	1,534	15,117	2,205	37,037
-- Other Products Removed ($000)	1	0	5	2	16
- 7 Regeneration Treatment (acres)	85	849	5,223	334	18,424
- 8 Timber Stand Improvement (acres)	55	154	3,228	426	15,540
III. FOREST ROAD INFORMATION					
- 1 Road Construction (miles)					
-- Appropriated Construction	0.0	0.0	3.3	0.0	3.3
-- Purchaser Credit Construction	1.8	0.0	5.1	0.4	27.2
Total Construction	**1.8**	**0.0**	**8.4**	**0.4**	**30.5**
- 2 Road Reconstruction (miles)					
-- Appropriated Reconstruction	0.0	0.0	17.2	0.0	32.9
-- Purchaser Credit Reconstruction	1.4	0.0	22.1	3.9	97.3
Total Reconstruction	**1.4**	**0.0**	**39.3**	**3.9**	**130.2**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT
for the Fiscal Year Ended September 30, 1998

Region 5 (Pacific Southwest)

CATEGORY DESCRIPTION	CALIFORNIA Angeles	CALIFORNIA Cleveland	CALIFORNIA Eldorado	CALIFORNIA Inyo	CALIFORNIA Klamath	CALIFORNIA Lassen
I. EMPLOYMENT & INCOME INFORMATION						
- 1 Timber Related Employment (Jobs)	2	5	525	60	375	735
- 2 Employment Related Income ($000)	100	255	26,875	3,140	19,176	37,485
- 3 Federal Income Tax Generated ($000)	15	40	4,030	470	2,875	5,625
II. TIMBER PROGRAM INFORMATION						
- 1 Volume Offered (MMBF)	0.08	0.47	54.12	3.94	46.48	70.78
- 2 Volume Sold and Awarded (MMBF)	0.09	0.47	43.87	3.02	29.52	71.91
- 3 Volume Harvested (MMBF)						
-- Sawtimber	0.00	0.00	37.34	5.30	16.56	34.65
-- Roundwood	0.00	0.00	0.00	0.00	0.05	0.18
-- Firewood	0.00	0.47	3.73	3.01	3.98	8.00
-- Other	0.00	0.00	3.26	0.00	2.45	41.73
Total Harvest Volume	**0.00**	**0.47**	**44.33**	**8.31**	**23.04**	**84.56**
- 4 Total Area Harvested (acres)	50	0	40	1,717	3,040	22,055
- 5 Free Use Firewood (MMBF)	0.00	0.00	0.00	0.00	0.00	0.05
- 6 Nonconvertible Products						
-- Christmas Trees Cut (trees)	0	0	1,198	0	2187	9,679
-- Other Products Removed ($000)	2	1	0	0	27	0
- 7 Regeneration Treatment (acres)	314	0	1,531	263	3,942	2,484
- 8 Timber Stand Improvement (acres)	1,114	0	5,108	560	4,941	11,234
III. FOREST ROAD INFORMATION						
- 1 Road Construction (miles)						
-- Appropriated Construction	0.0	0.0	0.0	0.0	0.1	0.0
-- Purchaser Credit Construction	0.0	0.0	0.0	0.0	0.0	1.3
Total Construction	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**1.3**
- 2 Road Reconstruction (miles)						
-- Appropriated Reconstruction	21.0	0.0	0.0	10.0	11.4	0.0
-- Purchaser Credit Reconstruction	0.0	0.0	24.8	0.0	20.3	10.8
Total Reconstruction	**21.0**	**0.0**	**24.8**	**10.0**	**31.7**	**10.8**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT
for the Fiscal Year Ended September 30, 1998

Region 5 (Pacific Southwest)

CATEGORY DESCRIPTION	CALIFORNIA Los Padres	CALIFORNIA Mendocino	CALIFORNIA Modoc	CALIFORNIA Six Rivers	CALIFORNIA Plumas	CALIFORNIA San Bernard
I. EMPLOYMENT & INCOME INFORMATION						
- 1 Timber Related Employment (Jobs)	5	245	296	185	265	15
- 2 Employment Related Income ($000)	255	12,550	15,120	9,370	13,395	710
- 3 Federal Income Tax Generated ($000)	40	1,880	2,270	1,405	2,010	105
II. TIMBER PROGRAM INFORMATION						
- 1 Volume Offered (MMBF)	0.60	14.76	19.52	15.76	42.68	1.16
- 2 Volume Sold and Awarded (MMBF)	0.57	17.95	9.29	14.69	56.81	1.16
- 3 Volume Harvested (MMBF)						
-- Sawtimber	0.00	21.04	14.13	14.11	22.93	0.00
-- Roundwood	0.00	0.01	0.01	0.00	0.01	0.01
-- Firewood	0.55	0.70	2.10	1.34	4.10	0.95
-- Other	0.00	0.30	23.66	0.79	5.68	0.05
Total Harvest Volume	**0.55**	**22.05**	**39.90**	**16.24**	**32.73**	**1.01**
- 4 Total Area Harvested (acres)	0	24	3,742	26	28,212	0
- 5 Free Use Firewood (MMBF)	0.00	0.00	0.12	0.13	0.00	0.00
- 6 Nonconvertible Products						
-- Christmas Trees Cut (trees)	115	2,000	711	3,858	7,687	0
-- Other Products Removed ($000)	0	0	2	13	1	2
- 7 Regeneration Treatment (acres)	0	1,016	1,173	800	2,091	83
- 8 Timber Stand Improvement (acres)	0	3,049	3,152	7,171	4,983	135
III. FOREST ROAD INFORMATION						
- 1 Road Construction (miles)						
-- Appropriated Construction	0.0	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Construction	0.0	8.7	0.8	0.5	0.3	0.0
Total Construction	**0.0**	**8,7**	**0.8**	**0.5**	**0.3**	**0.0**
- 2 Road Reconstruction (miles)						
-- Appropriated Reconstruction	0.0	0.1	3.4	5.5	3.1	0.0
-- Purchaser Credit Reconstruction	0.0	38.3	5.0	15.7	33.3	0.0
Total Reconstruction	**0.0**	**38.4**	**8.4**	**21.2**	**36.4**	**0.0**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT

for the Fiscal Year Ended September 30, 1998

Region 5 (Pacific Southwest)

CATEGORY DESCRIPTION	CALIFORNIA Sequoia	CALIFORNIA Shasta Trin	CALIFORNIA Sierra	CALIFORNIA Stanislaus	CALIFORNIA Tahoe
I. EMPLOYMENT & INCOME INFORMATION					
- 1 Timber Related Employment (Jobs)	140	705	245	421	560
- 2 Employment Related Income ($000)	7,140	35,955	12,410	21,470	28,458
- 3 Federal Income Tax Generated ($000)	1,070	5,395	1,860	3,220	4,270
II. TIMBER PROGRAM INFORMATION					
- 1 Volume Offered (MMBF)	17.05	82.14	22.80	15.38	51.29
- 2 Volume Sold and Awarded (MMBF)	22.45	87.09	16.80	13.75	25.86
- 3 Volume Harvested (MMBF)					
-- Sawtimber	6.98	37.16	17.68	39.26	41.14
-- Roundwood	0.00	0.41	0.02	0.00	0.00
-- Firewood	2.02	4.16	3.66	3.12	1.99
-- Other	0.71	19.29	1.03	1.67	3.58
Total Harvest Volume	**9.72**	**61.02**	**22.39**	**44.05**	**46.71**
- 4 Total Area Harvested (acres)	284	12,745	1,066	6,195	11,753
- 5 Free Use Firewood (MMBF)	0.00	0.43	0.00	0.05	0.01
- 6 Nonconvertible Products					
-- Christmas Trees Cut (trees)	0	5,092	1,030	0	1,504
-- Other Products Removed ($000)	0	28	0	0	1
- 7 Regeneration Treatment (acres)	1,255	1,861	2,017	6,631	4,439
- 8 Timber Stand Improvement (acres)	3,057	8,901	3,768	4,172	14,036
III. FOREST ROAD INFORMATION					
- 1 Road Construction (miles)					
-- Appropriated Construction	0.0	0.6	0.0	0.0	0.0
-- Purchaser Credit Construction	0.0	0.0	2.5	0.2	1.8
Total Construction	**0.0**	**0.6**	**2.5**	**0.2**	**1.8**
- 2 Road Reconstruction (miles)					
-- Appropriated Reconstruction	0.0	0.8	0.0	0.0	0.0
-- Purchaser Credit Reconstruction	7.5	14.7	66.0	7.5	6.8
Total Reconstruction	**7.5**	**15.5**	**66.0**	**7.5**	**6.8**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT
for the Fiscal Year Ended September 30, 1998

Region 5 (Pacific Southwest)

CATEGORY DESCRIPTION	CALIFORNIA Lk Tahoe BMU	REGIONAL TOTALS
I. EMPLOYMENT & INCOME INFORMATION		
- 1 Timber Related Employment (Jobs)	65	4,849
- 2 Employment Related Income ($000)	3,215	247,079
- 3 Federal Income Tax Generated ($000)	480	37,060
II. TIMBER PROGRAM INFORMATION		
- 1 Volume Offered (MMBF)	4.60	463.62
- 2 Volume Sold and Awarded (MMBF)	10.04	425.35
- 3 Volume Harvested (MMBF)		
-- Sawtimber	2.56	310.85
-- Roundwood	0.00	0.72
-- Firewood	0.79	44.66
-- Other	1.75	105.94
Total Harvest Volume	**5.10**	**462.18**
- 4 Total Area Harvested (acres)	1,841	*92,790
- 5 Free Use Firewood (MMBF)	0.49	1.28
- 6 Nonconvertible Products		
-- Christmas Trees Cut (trees)	0	35,061
-- Other Products Removed ($000)	0	79
- 7 Regeneration Treatment (acres)	262	30,062
- 8 Timber Stand Improvement (acres)	710	76,091
III. FOREST ROAD INFORMATION		
- 1 Road Construction (miles)		
-- Appropriated Construction	0.0	0.7
-- Purchaser Credit Construction	0.0	16.1
Total Construction	**0.0**	**16.8**
- 2 Road Reconstruction (miles)		
-- Appropriated Reconstruction	7.0	62.3
-- Purchaser Credit Reconstruction	0.0	250.7
Total Reconstruction	**7.0**	**313.0**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT
for the Fiscal Year Ended September 30, 1998

Region 6 (Pacific Northwest)

CATEGORY DESCRIPTION	OREGON Deschutes	OREGON Fremont	OREGON Malheur	OREGON Mt. Hood	OREGON Ochoco	OREGON Rogue River
I. EMPLOYMENT & INCOME INFORMATION						
- 1 Timber Related Employment (Jobs)	485	561	300	804	366	285
- 2 Employment Related Income ($000)	14,187	16,349	8,473	27,894	10,738	8,031
- 3 Federal Income Tax Generated ($000)	2,128	2,452	1,271	4,184	1,611	1,205
II. TIMBER PROGRAM INFORMATION						
- 1 Volume Offered (MMBF)	68.27	43.65	77.08	66.60	24.40	22.90
- 2 Volume Sold and Awarded (MMBF)	46.93	35.31	79.93	42.60	28.28	19.10
- 3 Volume Harvested (MMBF)						
-- Sawtimber	14.91	22.63	20.25	34.92	13.87	16.03
-- Roundwood	1.36	0.91	0.31	0.04	0.07	0.45
-- Firewood	7.93	2.01	1.92	1.50	2.95	0.46
-- Other	56.81	9.57	7.66	4.69	5.49	2.12
Total Harvest Volume	**81.01**	**35.12**	**30.14**	**41.15**	**22.39**	**19.05**
- 4 Total Area Harvested (acres)	12,940	35,261	6,565	3,344	15,114	5,728
- 5 Free Use Firewood (MMBF)	0.17	0.00	0.19	0.00	0.93	0.05
- 6 Nonconvertible Products						
-- Christmas Trees Cut (trees)	5,138	1,022	824	4,294	698	5,927
-- Other Products Removed ($000)	3	0	0	24	1	25
- 7 Regeneration Treatment (acres)	8,221	2,537	10,952	2,830	4,060	1,012
- 8 Timber Stand Improvement (acres)	8,606	5,052	5,037	3,759	6,782	4,199
III. FOREST ROAD INFORMATION						
- 1 Road Construction (miles)						
-- Appropriated Construction	0.0	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Construction	0.0	0.0	2.8	7.2	4.2	1.9
Total Construction	**0.0**	**0.0**	**2.8**	**7.2**	**4.2**	**1.9**
- 2 Road Reconstruction (miles)						
-- Appropriated Reconstruction	0.0	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Reconstruction	22.1	0.0	150.2	6.3	23.0	4.8
Total Reconstruction	**22.1**	**0.0**	**150.2**	**6.3**	**23.0**	**4.8**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT
for the Fiscal Year Ended September 30, 1998

Region 6 (Pacific Northwest)

CATEGORY DESCRIPTION	OREGON Siskiyou	OREGON Siuslaw	OREGON Umatilla	OREGON Umpqua	OREGON Wallowa/Whit	OREGON Willamette
I. EMPLOYMENT & INCOME INFORMATION						
- 1 Timber Related Employment (Jobs)	309	564	383	872	394	1,136
- 2 Employment Related Income ($000)	8,703	19,202	10,794	25,072	11,120	36,719
- 3 Federal Income Tax Generated ($000)	1,305	2,880	1,619	3,761	1,668	5,508
II. TIMBER PROGRAM INFORMATION						
- 1 Volume Offered (MMBF)	24.67	2.97	61.68	45.62	40.33	119.80
- 2 Volume Sold and Awarded (MMBF)	9.95	23.15	50.60	43.56	34.28	87.00
- 3 Volume Harvested (MMBF)						
-- Sawtimber	17.60	27.45	22.78	49.88	26.12	63.36
-- Roundwood	0.03	0.02	0.13	0.03	0.74	0.15
-- Firewood	0.55	0.70	2.82	0.50	6.04	0.85
-- Other	1.75	0.00	23.14	5.15	8.66	5.57
Total Harvest Volume	**19.93**	**28.18**	**48.87**	**55.56**	**41.56**	**69.94**
- 4 Total Area Harvested (acres)	1,235	1,058	3,771	2,546	9,906	2,414
- 5 Free Use Firewood (MMBF)	0.00	0.03	0.03	0.01	0.02	0.16
- 6 Nonconvertible Products						
-- Christmas Trees Cut (trees)	1,852	716	2,050	2,724	281	11,175
-- Other Products Removed ($000)	94	109	3	22	7	10
- 7 Regeneration Treatment (acres)	1,229	409	10,312	1,884	5,636	3,391
- 8 Timber Stand Improvement (acres)	3,138	4,466	4,865	1,290	5,367	15,420
III. FOREST ROAD INFORMATION						
- 1 Road Construction (miles)						
-- Appropriated Construction	0.0	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Construction	3.4	0.5	0.0	1.3	0.1	4.9
Total Construction	**3.4**	**0.5**	**0.0**	**1.3**	**0.1**	**4.9**
- 2 Road Reconstruction (miles)						
-- Appropriated Reconstruction	0.0	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Reconstruction	27.4	21.8	8.3	67.5	46.7	155.9
Total Reconstruction	**27.4**	**21.8**	**8.3**	**67.5**	**46.7**	**155.9**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT

for the Fiscal Year Ended September 30, 1998

Region 6 (Pacific Northwest)

CATEGORY DESCRIPTION	OREGON Winema	OREGON SUBTOTAL	WASHINGTON Giff Pinchot	WASHINGTON Mt Baker Sno	WASHINGTON Okanogan	WASHINGTON Olympic
I. EMPLOYMENT & INCOME INFORMATION						
- 1 Timber Related Employment (Jobs)	344	6,803	520	242	223	251
- 2 Employment Related Income ($000)	9,914	207,196	15,979	8,193	6,518	8,002
- 3 Federal Income Tax Generated ($000)	1,487	31,079	2,397	1,229	978	1,200
II. TIMBER PROGRAM INFORMATION						
- 1 Volume Offered (MMBF)	41.74	639.74	31.80	11.65	14.43	13.23
- 2 Volume Sold and Awarded (MMBF)	11.06	511.74	33.30	11.99	6.19	11.94
- 3 Volume Harvested (MMBF)						
-- Sawtimber	15.77	345.57	31.60	7.15	11.38	12.91
-- Roundwood	2.14	6.38	0.02	0.04	0.05	0.83
-- Firewood	1.56	29.80	1.57	0.34	1.65	0.69
-- Other	10.75	141.37	0.55	1.30	0.90	0.45
Total Harvest Volume	**30.22**	**523.12**	**33.74**	**8.83**	**13.98**	**14.89**
- 4 Total Area Harvested (acres)	10,931	110,813	1,092	0	3,500	1,010
- 5 Free Use Firewood (MMBF)	0.20	1.79	0.00	0.00	1.85	0.00
- 6 Nonconvertible Products						
-- Christmas Trees Cut (trees)	2,267	38,968	2,215	172	830	1,097
-- Other Products Removed ($000)	55	352	286	6	0	69
- 7 Regeneration Treatment (acres)	3,626	56,099	1,190	139	2,220	208
- 8 Timber Stand Improvement (acres)	3,734	71,715	8,688	772	2,508	1,460
III. FOREST ROAD INFORMATION						
- 1 Road Construction (miles)						
-- Appropriated Construction	0.0	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Construction	0.0	27.2	0.0	0.0	0.0	2.0
Total Construction	**0.0**	**27.2**	**0.0**	**0.0**	**0.0**	**2.0**
- 2 Road Reconstruction (miles)						
-- Appropriated Reconstruction	0.0	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Reconstruction	0.0	534.0	14.3	19.8	0.0	2.1
Total Reconstruction	**0.0**	**534.0**	**14.3**	**19.8**	**0.0**	**2.1**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT

for the Fiscal Year Ended September 30, 1998

Region 6 (Pacific Northwest)

CATEGORY DESCRIPTION	WASHINGTON Wenatchee	WASHINGTON Colville	WASHINGTON SUBTOTAL	REGIONAL TOTALS
I. EMPLOYMENT & INCOME INFORMATION				
- 1 Timber Related Employment (Jobs)	275	925	2,436	9,239
- 2 Employment Related Income ($000)	8,264	25,873	72,829	280,025
- 3 Federal Income Tax Generated ($000)	1,240	3,881	10,925	42,004
II. TIMBER PROGRAM INFORMATION				
- 1 Volume Offered (MMBF)	43.22	36.25	149.97	789.71
- 2 Volume Sold and Awarded (MMBF)	48.95	28.14	140.52	652.26
- 3 Volume Harvested (MMBF)				
-- Sawtimber	13.10	35.02	111.17	456.74
-- Roundwood	0.17	0.08	1.19	7.56
-- Firewood	2.29	2.63	9.18	38.98
-- Other	11.42	2.78	17.39	158.77
Total Harvest Volume	**26.98**	**40.51**	**138.93**	**662.05**
- 4 Total Area Harvested (acres)	1,493	4,680	11,775	122,588
- 5 Free Use Firewood (MMBF)	0.00	0.00	1.85	3.63
- 6 Nonconvertible Products				
-- Christmas Trees Cut (trees)	2,848	119	7,281	46,249
-- Other Products Removed ($000)	44	1	407	759
- 7 Regeneration Treatment (acres)	16,253	1,649	21,659	77,758
- 8 Timber Stand Improvement (acres)	2,861	2,245	18,534	90,249
III. FOREST ROAD INFORMATION				
- 1 Road Construction (miles)				
-- Appropriated Construction	2.0	0.0	2.0	2.0
-- Purchaser Credit Construction	1.5	15.8	19.3	46.5
Total Construction	**3.5**	**15.8**	**21.3**	**48.5**
- 2 Road Reconstruction (miles)				
-- Appropriated Reconstruction	0.0	0.0	0.0	0.0
-- Purchaser Credit Reconstruction	3.0	52.8	92.0	626.0
Total Reconstruction	**3.0**	**52.8**	**92.0**	**626.0**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT
for the Fiscal Year Ended September 30, 1998

Region 8 (Southern)

CATEGORY DESCRIPTION	ALABAMA NFS in AL /2	ARK/OKL Ouachita	ARKANSAS Ozark/St Fra	ARK/OKL SUBTOTAL	FLORIDA NFS in FL	GEORGIA Chat/Oconee
I. EMPLOYMENT & INCOME INFORMATION						
- 1 Timber Related Employment (Jobs)	621	2,733	1,341	4,074	538	249
- 2 Employment Related Income ($000)	25,331	108,570	31,734	140,304	19,398	7,859
- 3 Federal Income Tax Generated ($000)	3,800	16,290	4,760	21,050	2,909	1,218
II. TIMBER PROGRAM INFORMATION						
- 1 Volume Offered (MMBF)	23.02	109.65	44.98	154.63	34.38	16.73
- 2 Volume Sold and Awarded (MMBF)	28.52	143.60	43.41	187.01	42.66	19.63
- 3 Volume Harvested (MMBF)						
-- Sawtimber	17.76	79.30	38.33	117.63	2.61	8.44
-- Roundwood	14.68	26.95	17.56	44.51	48.46	4.94
-- Firewood	0.26	0.66	0.80	1.46	0.16	0.38
-- Other	0.00	0.00	0.00	0.00	0.00	0.00
Total Harvest Volume	**32.69**	**106.92**	**56.69**	**163.61**	**51.23**	**13.75**
- 4 Total Area Harvested (acres)	4,837	26,606	11,854	38,460	5,839	3,373
- 5 Free Use Firewood (MMBF)	0.00	0.00	0.00	0.00	0.00	0.00
- 6 Nonconvertible Products						
-- Christmas Trees Cut (trees)	0	0	0	0	0	0
-- Other Products Removed ($000)	1	0	12	13	14	1
- 7 Regeneration Treatment (acres)	1,285	9,757	4,032	13,789	4,055	1,897
- 8 Timber Stand Improvement (acres)	2,312	9,237	2,404	11,641	834	3,299
III. FOREST ROAD INFORMATION						
- 1 Road Construction (miles)						
-- Appropriated Construction	0.0	15.6	0.0	15.6	0.0	1.5
-- Purchaser Credit Construction	0.0	0.0	0.8	0.8	0.0	0.0
Total Construction	**0.0**	**15.6**	**0.8**	**16.4**	**0.00**	**1.5**
- 2 Road Reconstruction (miles)						
-- Appropriated Reconstruction	0.0	61.0	0.0	61.0	0.0	0.6
-- Purchaser Credit Reconstruction	3.1	0.0	34.6	34.6	21.3	0.0
Total Reconstruction	**3.1**	**61.0**	**34.6**	**95.6**	**21.3**	**0.6**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT

for the Fiscal Year Ended September 30, 1998

Region 8 (Southern)

CATEGORY DESCRIPTION	KENTUCKY Dan Boone	LOUISIANA Kisatchie	MISSISSIPPI NFS in MS	N. CAROLINA NFS in NC	S. CAROLINA Marion/Sumter	TENNESSEE Cherokee
I. EMPLOYMENT & INCOME INFORMATION						
- 1 Timber Related Employment (Jobs)	405	811	1,314	600	270	189
- 2 Employment Related Income ($000)	12,202	30,857	21,578	18,779	6,440	3,259
- 3 Federal Income Tax Generated ($000)	1,980	4,629	3,237	2,817	966	394
II. TIMBER PROGRAM INFORMATION						
- 1 Volume Offered (MMBF)	1.30	53.63	152.86	28.25	34.68	15.93
- 2 Volume Sold and Awarded (MMBF)	1.30	58.18	121.99	29.63	28.03	12.17
- 3 Volume Harvested (MMBF)						
-- Sawtimber	7.84	20.43	61.84	15.96	5.47	8.38
-- Roundwood	0.80	28.00	50.67	9.50	12.93	3.88
-- Firewood	0.80	0.11	0.24	0.68	0.21	0.11
-- Other	0.00	0.00	0.00	0.00	0.00	0.00
Total Harvest Volume	**9.43**	**48.55**	**112.75**	**26.14**	**18.61**	**12.37**
- 4 Total Area Harvested (acres)	0	10,046	19,182	4,611	5,499	1,033
- 5 Free Use Firewood (MMBF)	0.00	0.00	0.00	0.00	0.00	0.00
- 6 Nonconvertible Products						
-- Christmas Trees Cut (trees)	0	0	0	0	0	0
-- Other Products Removed ($000)	2	0	1	79	1	11
- 7 Regeneration Treatment (acres)	1,275	1,106	6,559	2,946	581	1,313
- 8 Timber Stand Improvement (acres)	328	3,989	3,129	3,562	8,611	1,860
III. FOREST ROAD INFORMATION						
- 1 Road Construction (miles)						
-- Appropriated Construction	0.0	0.0	8.3	0.0	0.0	0.0
-- Purchaser Credit Construction	0.0	1.1	2.8	1.5	0.6	2.2
Total Construction	**0.0**	**1.1**	**11.1**	**1.5**	**0.6**	**2.2**
- 2 Road Reconstruction (miles)						
-- Appropriated Reconstruction	0.0	0.0	0.0	0.7	4.5	0.0
-- Purchaser Credit Reconstruction	0.0	86.8	145.8	19.8	29.4	11.2
Total Reconstruction	**0.0**	**86.8**	**145.8**	**20.5**	**33.9**	**11.2**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT

for the Fiscal Year Ended September 30, 1998

Region 8 (Southern)

CATEGORY DESCRIPTION	TEXAS NFS in TX	VIRGINIA GW/Jeff.	REGIONAL TOTALS
I. EMPLOYMENT & INCOME INFORMATION			
- 1 Timber Related Employment (Jobs)	2,766	724	12,561
- 2 Employment Related Income ($000)	102,600	24,918	413,525
- 3 Federal Income Tax Generated ($000)	15,390	3,737	62,127
II. TIMBER PROGRAM INFORMATION			
- 1 Volume Offered (MMBF)	111.24	23.08	649.72
- 2 Volume Sold and Awarded (MMBF)	120.76	17.42	667.30
- 3 Volume Harvested (MMBF)			
-- Sawtimber	98.41	12.11	376.88
-- Roundwood	19.66	13.78	251.81
-- Firewood	0.10	3.56	8.06
-- Other	0.00	0.00	0.00
Total Harvest Volume	**118.16**	**29.46**	**636.75**
- 4 Total Area Harvested (acres)	33,291	2,742	128,913
- 5 Free Use Firewood (MMBF)	0.00	0.00	0.00
- 6 Nonconvertible Products			
-- Christmas Trees Cut (trees)	0	0	0
-- Other Products Removed ($000)	0	4	127
- 7 Regeneration Treatment (acres)	1,172	2,311	38,289
- 8 Timber Stand Improvement (acres)	795	2,716	43,076
III. FOREST ROAD INFORMATION			
- 1 Road Construction (miles)			
-- Appropriated Construction	0.0	0.4	25.8
-- Purchaser Credit Construction	0.4	0.9	10.3
Total Construction	**0.4**	**1.3**	**36.1**
- 2 Road Reconstruction (miles)			
-- Appropriated Reconstruction	0.0	6.3	73.1
-- Purchaser Credit Reconstruction	173.3	0.0	525.3
Total Reconstruction	**173.3**	**6.3**	**598.4**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT

for the Fiscal Year Ended September 30, 1998

Region 9 (Eastern)

CATEGORY DESCRIPTION	ILLINOIS Shawnee	INDIANA Hoosier	OHIO Wayne	MICHIGAN Huron/Manist	MICHIGAN Ottawa	MICHIGAN Hiawatha
I. EMPLOYMENT & INCOME INFORMATION						
- 1 Timber Related Employment (Jobs)	2	67	5	469	765	358
- 2 Employment Related Income ($000)	99	3,872	231	26,922	40,559	24,193
- 3 Federal Income Tax Generated ($000)	15	582	35	4,039	6,084	3,629
II. TIMBER PROGRAM INFORMATION						
- 1 Volume Offered (MMBF)	0.05	0.10	0.28	61.34	69.23	49.50
- 2 Volume Sold and Awarded (MMBF)	0.05	0.34	0.27	58.30	81.30	45.55
- 3 Volume Harvested (MMBF)						
-- Sawtimber	0.03	3.84	0.04	13.76	10.00	5.93
-- Roundwood	0.00	1.84	0.05	47.06	73.36	38.35
-- Firewood	0.05	0.05	0.10	0.09	0.01	0.25
-- Other	0.00	0.00	0.00	1.75	0.00	0.00
Total Harvest Volume	**0.09**	**5.73**	**0.19**	**62.66**	**83.36**	**44.53**
- 4 Total Area Harvested (acres)	10	773	25	7,023	15,077	8,672
- 5 Free Use Firewood (MMBF)	0.00	0.01	0.10	0.50	1.30	0.20
- 6 Nonconvertible Products						
-- Christmas Trees Cut (trees)	0	0	0	282	211	207
-- Other Products Removed ($000)	0	0	0	0	3	3
- 7 Regeneration Treatment (acres)	744	44	80	4,402	9,308	5,723
- 8 Timber Stand Improvement (acres)	256	0	0	431	588	2,404
III. FOREST ROAD INFORMATION						
- 1 Road Construction (miles)						
-- Appropriated Construction	0.0	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Construction	0.0	0.0	0.0	0.5	0.0	2.9
Total Construction	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**2.9**
- 2 Road Reconstruction (miles)						
-- Appropriated Reconstruction	0.0	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Reconstruction	0.0	0.0	0.0	10.5	0.0	12.3
Total Reconstruction	**0.0**	**0.0**	**0.0**	**10.5**	**0.0**	**12.3**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT

for the Fiscal Year Ended September 30, 1998

Region 9 (Eastern)

CATEGORY DESCRIPTION	MICHIGAN SUBTOTALS	MINNESOTA Chippewa	MINNESOTA Superior	MINNESOTA SUBTOTAL	MISSOURI Mark Twain	NEW HAMP White Mtn
I. EMPLOYMENT & INCOME INFORMATION						
- 1 Timber Related Employment (Jobs)	1,592	490	627	1,117	883	523
- 2 Employment Related Income ($000)	91,674	31,986	41,671	73,657	30,149	29,830
- 3 Federal Income Tax Generated ($000)	13,752	4,798	6,251	11,049	4,522	4,474
II. TIMBER PROGRAM INFORMATION						
- 1 Volume Offered (MMBF)	180.08	61.73	59.96	121.69	44.94	19.51
- 2 Volume Sold and Awarded (MMBF)	185.16	60.04	55.46	115.51	44.53	18.96
- 3 Volume Harvested (MMBF)						
-- Sawtimber	29.69	9.04	5.81	14.85	41.06	8.06
-- Roundwood	158.77	51.33	51.39	102.72	3.58	17.99
-- Firewood	0.34	0.00	0.02	0.02	7.11	0.16
-- Other	1.75	0.00	0.00	0.00	0.52	0.00
Total Harvest Volume	**190.56**	**60.38**	**57.21**	**117.58**	**52.26**	**26.21**
- 4 Total Area Harvested (acres)	30,772	6,095	6,281	12,376	13,682	4,420
- 5 Free Use Firewood (MMBF)	2.00	0.50	0.30	0.80	0.14	0.00
- 6 Nonconvertible Products						
-- Christmas Trees Cut (trees)	700	574	373	947	0	198
-- Other Products Removed ($000)	6	3	2	6	0	11
- 7 Regeneration Treatment (acres)	19,433	5,681	9,378	15,059	8,817	2,156
- 8 Timber Stand Improvement (acres)	3,423	1,047	1,412	2,459	3,206	0
III. FOREST ROAD INFORMATION						
- 1 Road Construction (miles)						
-- Appropriated Construction	0.0	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Construction	3.4	3.9	1.0	4.9	0.0	0.0
Total Construction	**3.4**	**3.9**	**1.0**	**4.9**	**0.0**	**0.0**
- 2 Road Reconstruction (miles)						
-- Appropriated Reconstruction	0.0	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Reconstruction	22.8	3.3	0.4	3.7	38.4	4.0
Total Reconstruction	**22.8**	**3.3**	**0.4**	**3.7**	**38.4**	**4.0**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT
for the Fiscal Year Ended September 30, 1998

Region 9 (Eastern)

CATEGORY DESCRIPTION	PENNSYL. Allegheny	VERMONT Green Mtn	WISCONSIN Chequamegon	WISCONSIN Nicolet	WISCONSIN SUBTOTALS
I. EMPLOYMENT & INCOME INFORMATION					
- 1 Timber Related Employment (Jobs)	691	90	1,265	828	2,093
- 2 Employment Related Income ($000)	43,004	3,879	77,210	50,250	127,460
- 3 Federal Income Tax Generated ($000)	6,450	582	11,581	7,537	19,118
II. TIMBER PROGRAM INFORMATION					
- 1 Volume Offered (MMBF)	8.61	6.86	71.03	46.99	118.02
- 2 Volume Sold and Awarded (MMBF)	9.80	5.81	64.99	46.96	111.95
- 3 Volume Harvested (MMBF)					
-- Sawtimber	28.52	3.71	9.51	6.96	16.46
-- Roundwood	21.56	2.04	79.56	50.43	129.99
-- Firewood	1.00	0.13	0.34	1.14	1.48
-- Other	0.00	0.00	0.00	0.00	0.00
Total Harvest Volume	**51.08**	**5.89**	**89.40**	**58.53**	**147.93**
- 4 Total Area Harvested (acres)	4,976	1,062	8,760	9,597	18,357
- 5 Free Use Firewood (MMBF)	0.00	0.10	0.00	0.00	0.00
- 6 Nonconvertible Products					
-- Christmas Trees Cut (trees)	0	250	392	1,270	1,662
-- Other Products Removed ($000)	0	3	15	4	19
- 7 Regeneration Treatment (acres)	3,899	792	4,245	2,414	6,659
- 8 Timber Stand Improvement (acres)	553	137	580	500	1,080
III. FOREST ROAD INFORMATION					
- 1 Road Construction (miles)					
-- Appropriated Construction	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Construction	0.3	0.0	0.8	4.0	4.8
Total Construction	**0.3**	**0.0**	**0.8**	**4.0**	**4.8**
- 2 Road Reconstruction (miles)					
-- Appropriated Reconstruction	0.0	0.0	0.0	0.0	0.0
-- Purchaser Credit Reconstruction	17.0	0.0	0.3	6.3	6.6
Total Reconstruction	**17.0**	**0.0**	**0.3**	**6.3**	**6.6**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT

for the Fiscal Year Ended September 30, 1998

Region 9 (Eastern)

CATEGORY DESCRIPTION	W. VIRGINIA Monongahela	REGIONAL TOTALS
I. EMPLOYMENT & INCOME INFORMATION		
- 1 Timber Related Employment (Jobs)	310	7,373
- 2 Employment Related Income ($000)	11,203	415,058
- 3 Federal Income Tax Generated ($000)	1,681	62,260
II. TIMBER PROGRAM INFORMATION		
- 1 Volume Offered (MMBF)	14.55	514.70
- 2 Volume Sold and Awarded (MMBF)	9.89	502.26
- 3 Volume Harvested (MMBF)		
-- Sawtimber	19.88	166.14
-- Roundwood	4.36	442.92
-- Firewood	0.28	10.72
-- Other	0.00	2.27
Total Harvest Volume	**24.53**	**622.04**
- 4 Total Area Harvested (acres)	2,518	88,971
- 5 Free Use Firewood (MMBF)	0.00	3.15
- 6 Nonconvertible Products		
-- Christmas Trees Cut (trees)	23	3,780
-- Other Products Removed ($000)	2	36
- 7 Regeneration Treatment (acres)	1,273	58,956
- 8 Timber Stand Improvement (acres)	1,549	12,663
III. FOREST ROAD INFORMATION		
- 1 Road Construction (miles)		
-- Appropriated Construction	0.6	0.6
-- Purchaser Credit Construction	9.1	22.5
Total Construction	**9.7**	**23.1**
- 2 Road Reconstruction (miles)		
-- Appropriated Reconstruction	1.4	1.4
-- Purchaser Credit Reconstruction	2.5	95.0
Total Reconstruction	**3.9**	**96.4**

EMPLOYMENT, INCOME, AND PROGRAM LEVEL ACCOUNT

for the Fiscal Year Ended September 30, 1998

Region 10 (Alaska)

CATEGORY DESCRIPTION	ALASKA Tongass	ALASKA Chugach	REGIONAL TOTALS
I. EMPLOYMENT & INCOME INFORMATION			
- 1 Timber Related Employment (Jobs)	989	5	994
- 2 Employment Related Income ($000)	44,365	197	44,562
- 3 Federal Income Tax Generated ($000)	8,429	38	8,467
II. TIMBER PROGRAM INFORMATION			
- 1 Volume Offered (MMBF)	187.06	0.11	187.16
- 2 Volume Sold and Awarded (MMBF)	24.05	0.23	24.28
- 3 Volume Harvested (MMBF)			
-- Sawtimber	107.56	0.77	108.33
-- Roundwood	11.98	0.05	12.03
-- Firewood	0.03	0.61	0.64
-- Other	0.19	0.00	0.19
Total Harvest Volume	**119.76**	**1.43**	**121.19**
- 4 Total Area Harvested (acres)	4,062	171	4,233
- 5 Free Use Firewood (MMBF)	1.65	0.32	1.97
- 6 Nonconvertible Products			
-- Christmas Trees Cut (trees)	265	0	265
-- Other Products Removed ($000)	0	0	0
- 7 Regeneration Treatment (acres)	10,093	107	10,200
- 8 Timber Stand Improvement (acres)	4,484	71	4,555
III. FOREST ROAD INFORMATION			
- 1 Road Construction (miles)			
-- Appropriated Construction	0.7	0.0	0.7
-- Purchaser Credit Construction	5.7	0.0	5.7
Total Construction	**6.4**	**0.0**	**6.4**
- 2 Road Reconstruction (miles)			
-- Appropriated Reconstruction	8.2	0.4	8.6
-- Purchaser Credit Reconstruction	44.0	0.0	44.0
Total Reconstruction	**52.2**	**0.4**	**52.6**

APPENDIX B -- Economic Account by Region and Forest

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Economic Account

For the Fiscal Year 1998 Timber Harvest

Region 1

(in thousands of 1998 dollars)

State	National Forest	PV of Benefits	PV of Costs	Timber Only NPV	All Resources NPV
ID	Idaho Panhandle	37,428	25,589	11,892	11,840
ID	Clearwater	13,206	8,592	4,485	4,614
ID	Nez Perce	6,085	6,032	23	52
ID	**State Subtotals**	**56,720**	**40,214**	**16,400**	**16,506**
MT	Beaverhead Deerlodge	3,014	2,211	802	802
MT	Bitterroot	1,313	1,180	132	132
MT	Custer	49	178	-158	-129
MT	Flathead	5,689	4,351	1,338	1,338
MT	Gallatin	133	855	-723	-723
MT	Helena	2,687	1,710	1,044	977
MT	Kootenai	27,852	16,981	10,822	10,871
MT	Lewis & Clark	4,082	2,198	1,913	1,884
MT	Lolo	8,943	6,141	2,789	2,802
MT	**State Subtotals**	**53,760**	**35,806**	**17,959**	**17,954**
All	**Regional Totals**	**110,480**	**76,020**	**51,365**	**34,460**

Economic Account

For the Fiscal Year 1998 Timber Harvest

Region 2

(in thousands of 1998 dollars)

State	National Forest	PV of Benefits	PV of Costs	Timber Only NPV	All Resources NPV
CO	Grand Mesa Unc Gunnison	1,463	1,406	57	57
CO	Arapaho-Roosevelt	303	1,741	-1,468	-1,438
CO	Pike-San Isabel	328	488	-180	-160
CO	San Juan Rio Grande	1,872	1,427	445	445
CO	White River	1,138	230	667	908
CO	**State Subtotals**	**5,104**	**5,292**	**-479**	**-188**
NE	Nebraska	0	0	0	0
SD	Black Hills	27,483	20,067	3,052	7,416
WY	Bighorn	766	600	-52	166
WY/CO	Medicine Bow Routt	4,470	2,327	1,347	2,143
WY	Shoshone	328	412	-84	-84
WY	**State Subtotals**	**5,564**	**3,339**	**1,211**	**2,225**
All	**Regional Totals**	**38,151**	**28,698**	**3,784**	**9,453**

Economic Account

For the Fiscal Year 1998 Timber Harvest

Region 3

(in thousands of 1998 dollars)

State	National Forest	PV of Benefits	PV of Costs	Timber Only NPV	All Resources NPV
AZ	Apache-Sitgreaves	7,319	7,927	-1,072	-608
AZ	Coconino	3,742	2,422	-1,296	1,320
AZ	Coronado	43	126	-112	-83
AZ	Kaibab	23,263	6,907	-3,519	16,356
AZ	Prescott	299	399	-370	-100
AZ	Tonto	16,785	2,445	-1,884	14,340
AZ	**State Subtotals**	**51,451**	**20,226**	**-8,253**	**31,225**
NM	Carson	4,925	5,307	-3,879	-382
NM	Cibola	185	1,263	-1,095	-1,078
NM	Gila	4,771	1,460	-1,199	3,311
NM	Lincoln	4,533	1,306	-862	3,227
NM	Santa Fe	370	1,634	-1,285	-1,264
NM	**State Subtotals**	**14,784**	**10,970**	**-8,320**	**3,814**
All	**Regional Totals**	**66,235**	**31,196**	**-16,573**	**35,039**

Economic Account

For the Fiscal Year 1998 Timber Harvest

Region 4

(in thousands of 1998 dollars)

State	National Forest	PV of Benefits	PV of Costs	Timber Only NPV	All Resources NPV
ID	Boise	11,136	5,657	5,376	5,479
ID	Caribou	2,091	1,627	439	464
ID	Payette	4,409	4,478	-69	-69
ID	Salmon Challis	1,162	745	374	417
ID	Sawtooth	210	398	-228	-188
ID	Targhee	689	676	-181	13
ID	**State Subtotals**	**19,697**	**13,581**	**5,711**	**6,116**
NV	Humbolt Toiyabe	125	450	-325	-325
UT	Ashley	1,327	1,100	227	227
UT	Dixie	2,493	2,313	141	180
UT	Fishlake	1,073	596	410	477
UT	Manti-Lasal	798	612	70	186
UT	Uinta	647	371	254	276
UT	Wasatch Cache	334	165	106	169
UT	**State Subtotals**	**6,672**	**5,157**	**1,208**	**1,515**
WY	Bridger-Teton 2	577	1,058	-491	-481
All	**Regional Totals**	**27,071**	**20,246**	**6,103**	**6,825**

Economic Account

For the Fiscal Year 1998 Timber Harvest

Region 5

(in thousands of 1998 dollars)

State	National Forest	PV of Benefits	PV of Costs	Timber Only NPV	All Resources NPV
CA	Angeles	3	52	-50	-48
CA	Cleveland	9	71	-63	-62
CA	Eldorado	7,101	8,700	-1,615	-1,599
CA	Inyo	1,742	766	969	975
CA	Klamath	3,976	9,821	-5,861	-5,846
CA	Lassen	8,817	9,470	-676	-653
CA	Los Padres	24	68	-45	-44
CA	Mendocino	6,294	4,887	1,378	1,408
CA	Modoc	5,549	6,047	-524	-498
CA	Six Rivers	3,127	5,469	-2,351	-2,342
CA	Plumas	5,613	8,307	-2,722	-2,694
CA	San Bernardino	202	226	-174	-24
CA	Sequoia	1,431	3,737	-2,317	-2,306
CA	Shasta Trinity	11,593	13,485	-1,949	-1,892
CA	Sierra	4,944	5,980	-1,061	-1,036
CA	Stanislaus	4,402	9,250	-4,865	-4,848
CA	Tahoe	6,162	10,072	-3,943	-3,910
CA	Lake Tahoe Basin	609	1,536	-952	-927
All	**Regional Totals**	**71,597**	**97,944**	**-26,820**	**-26,346**

Economic Account

For the Fiscal Year 1998 Timber Harvest

Region 6

(in thousands of 1998 dollars)

State	National Forest	PV of Benefits	PV of Costs	Timber Only NPV	All Resources NPV
OR	Deschutes	20,784	8,119	12,665	12,665
OR	Fremont	6,628	2,861	3,669	3,767
OR	Malheur	16,042	7,495	8,144	8,547
OR	Mt. Hood	9,578	6,057	4,918	3,521
OR	Ochoco	6,015	5,971	528	44
OR	Rogue River	11,567	2,530	9,037	9,037
OR	Siskiyou	8,891	3,047	5,766	5,844
OR	Siuslaw	11,399	5,090	6,309	6,309
OR	Umatilla	18,763	6,162	12,951	12,601
OR	Umpqua	29,353	4,540	24,813	24,813
OR	Wallowa-Whitman	12,277	7,501	4,776	4,776
OR	Willamette	28,980	7,545	20,307	21,435
OR	Winema	4,161	5,818	-1,657	-1,657
OR	**State Subtotals**	**184,438**	**72,736**	**112,226**	**111,702**
WA	Gifford Pinchot	8,328	4,333	3,995	3,995
WA	Mt. Baker-Snoqualmie	1,225	987	165	238
WA	Okanogan	4,587	2,923	1,631	1,664
WA	Olympic	5,576	3,170	2,412	2,406
WA	Wenatchee	5,424	4,729	695	695
WA	Colville	9,829	5,600	4,260	4,229
WA	**State Subtotals**	**34,969**	**21,742**	**13,158**	**13,227**
All	**Regional Totals**	**219,407**	**94,478**	**125,384**	**124,929**

Economic Account

For the Fiscal Year 1998 Timber Harvest

Region 8

(in thousands of 1998 dollars)

State	National Forest	PV of Benefits	PV of Costs	Timber Only NPV	All Resources NPV
AL	NF's in Alabama	6,059	5,078	847	981
AR OK	Ouachita	41,654	20,961	21,304	20,693
AR	Ozark St. Francis	26,611	11,490	10,876	15,121
AR/OK	**State Subtotals**	**68,265**	**32,451**	**32,180**	**35,814**
FL	NF's in Florida	4,587	2,327	1,739	2,260
GA	Chattahoochee-Oconee	2,188	1,343	748	845
KY	Daniel Boone	1,491	1,086	201	405
LA	Kisatchie	25,338	13,501	11,804	11,837
MS	NF's in Mississippi	14,943	8,436	6,131	6,507
NC	NF's in North Carolina	6,559	5,296	1,319	1,263
SC	Marion-Sumter	6,458	2,404	3,965	4,054
TN	Cherokee	2,101	3,081	-1,205	-980
TX	NF's in Texas	47,195	18,817	27,411	28,378
VA	George Wash./Jefferson	2,311	1,357	585	954
All	**Regional Totals**	**187,495**	**95,177**	**85,725**	**92,318**

Economic Account

For the Fiscal Year 1998 Timber Harvest

Region 9

(in thousands of 1998 dollars)

State	National Forest	PV of Benefits	PV of Costs	Timber Only NPV	All Resources NPV
IL	Shawnee	5	78	-73	-73
IN	Hoosier	673	547	78	127
OH	Wayne	28	210	-192	-181
MI	Huron-Manistee	7,452	3,160	4,153	4,292
MI	Ottawa	17,017	5,140	11,560	11,877
MI	Hiawatha	8,338	4,212	3,856	4,126
MI	**State Subtotals**	**32,807**	**12,511**	**19,569**	**20,295**
MN	Chippewa	6,472	4,923	1,355	1,549
MN	Superior	4,767	6,523	-2,197	-1,755
MN	**State Subtotals**	**11,239**	**11,445**	**-841**	**-206**
MO	Mark Twain	10,649	6,112	4,174	4,536
NH	White Mountain	2,578	1,934	638	644
PA	Allegheny	13,878	4,881	8,977	8,997
VT	Green Mountain	831	446	325	385
WV	Monongahela	7,265	4,538	2,939	2,727
WI	Chequamegon	18,881	8,377	9,877	10,504
WI	Nicolet	13,067	6,678	5,769	6,389
WI	**State Subtotals**	**31,948**	**15,055**	**15,646**	**16,893**
All	**Regional Totals**	**111,901**	**57,757**	**51,241**	**54,144**

Economic Account

For the Fiscal Year 1998 Timber Harvest

Region 10

(in thousands of 1998 dollars)

State	National Forest	PV of Benefits	PV of Costs	Timber Only NPV	All Resources NPV
AK	Tongass	5,786	45,408	-39,622	-39,622
AK	Chugach	129	674	-655	-545
All	**Regional Totals**	**5,915**	**46,082**	**-40,277**	**-40,167**

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APPENDIX C -- Statement of Revenues and Expenses by Region

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STATEMENT OF TIMBER SALE REVENUES AND EXPENSES

For the Fiscal Year Ended September 30, 1998

National Summary by Region

(In Thousands of Dollars, Except as Noted)

Account Description	Region 01	Region 02	Region 03	Region 04	Region 05	Region 06	Region 08
Revenues							
Timber Sales	61,174	23,498	4,058	19,666	56,124	125,781	91,962
Purchaser Road Credit	4,877	2,426	387	1,785	6,855	11,295	11,645
Associated Charges	7,156	1,278	338	1,342	8,080	22,556	1,879
Interest And Penalties	30	57	7	43	65	7,316	52
Total Revenues	**73,237**	**27,259**	**4,790**	**22,836**	**71,124**	**166,948**	**105,538**
Direct Expenses							
Timber Sale Expenses							
Harvest Admin /1	5,979	2,999	1,960	3,200	11,413	11,948	9,771
General Admin - Sales /1	13,153	6,877	4,547	8,070	15,277	26,414	14,436
Sale Preparation /2	9,200	5,700	3,609	7,372	22,502	28,402	16,523
Analysis/Documentation /2	12,203	3,334	2,004	4,104	4,297	16,725	4,891
Appeals/Litigation - Sales /2	134	60	397	50	284	1,938	52
Brush Disposal Fund /2	2,972	292	417	614	3,718	6,550	0
Road Maintenance /2	2,317	365	356	373	1,665	3,665	918
Undepreciated Road Write-Off /1	0	0	0	0	0	299	0
Depreciation Expenses /3							
Road Design And Construction	11,809	4,069	2,221	4,089	13,543	24,011	7,024
Purchaser Road Credits	10,143	2,056	1,638	2,004	9,975	36,049	6,764
Total Timber Sale Expenses	**67,910**	**25,752**	**17,149**	**29,876**	**82,674**	**156,001**	**60,379**
Timber Program Expenses							
Transportation Planning /1	1,840	404	356	702	2,167	6,330	1,118
Silvicultural Examinations /2	3,490	916	1,135	1,087	1,792	3,511	3,324
Genetic Tree Improvement /4	1,463	13	27	163	1,634	3,496	1,260
Appropriated Reforestation /4	612	187	228	462	557	871	1,193
K-V Reforestation /4	644	32	110	365	1,036	1,933	1,901
Appropriated Stand Improv. /4	277	166	149	149	416	754	695
K-V Stand Improvement /4	158	223	215	117	584	644	465
Depreciation /3							
Facilities Depreciation	227	16	22	66	350	1,106	104
Total Timber Program Expenses	**8,711**	**1,957**	**2,242**	**3,111**	**8,536**	**18,645**	**10,060**
Total Direct Expenses	**76,621**	**27,709**	**19,391**	**32,987**	**91,210**	**174,646**	**70,439**

STATEMENT OF TIMBER SALE REVENUES AND EXPENSES

For the Fiscal Year Ended September 30, 1998

National Summary by Region

(In Thousands of Dollars, Except as Noted)

Account Description	Region 01	Region 02	Region 03	Region 04	Region 05	Region 06	Region 08
Indirect Expenses							
Timber Sale Expenses							
Appeals/Litigation /1	184	60	123	108	233	840	322
R-10 Appropriated Road Mtce /2	0	0	0	0	0	0	0
R-10 Land Line Location /2	0	0	0	0	0	0	0
Total Timber Sale Indirect	**184**	**60**	**123**	**108**	**233**	**840**	**322**
Timber Program Expenses							
General Admin - Prog /1	10,214	2,585	2,750	4,810	13,129	16,197	9,303
Total Timber Prog Indirect	**10,214**	**2,585**	**2,750**	**4,810**	**13,129**	**16,197**	**9,303**
Total Indirect Expenses	**10,398**	**2,645**	**2,873**	**4,918**	**13,362**	**17,037**	**9,625**
Total Timber Expenses	**87,019**	**30,354**	**22,264**	**37,905**	**104,572**	**191,683**	**80,064**
Gain/Loss Before Extraord. Exp.	**-13,782**	**-3,095**	**-17,474**	**-15,069**	**-33,448**	**-24,735**	**25,474**
Extraordinary Expense	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Net Gain Or Loss	**-13,782**	**-3,095**	**-17,474**	**-15,069**	**-33,448**	**-24,735**	**25,474**
Volume Harvested (MBF)	**362,772**	**154,374**	**93,845**	**169,543**	**474,617**	**662,409**	**636,751**

/1 Annual Expense
/2 Sale Activity Pool Cost, Amortized On Basis Of Annual Harvest
/3 Depreciated On Basis Of Useful Lives
/4 Growth Activity Pool Cost, Amortized On Basis Of Growing Stock Inventory

STATEMENT OF TIMBER SALE REVENUES AND EXPENSES

For the Fiscal Year Ended September 30, 1998

National Summary by Region

(In Thousands of Dollars, Except as Noted)

Account Description	Region 09	Region 10	Wash Off.	Natl Total
Revenues				
Timber Sales	63,611	5,881	0	451,755
Purchaser Road Credit	3,230	627	0	43,127
Associated Charges	844	88	0	43,561
Interest And Penalties	55	15	0	7,640
Total Revenues	**67,740**	**6,611**	**0**	**546,083**
Direct Expenses				
Timber Sale Expenses				
Harvest Admin /1	4,168	1,645	1,942	55,025
General Admin - Sales /1	8,549	4,711	12,606	114,640
Sale Preparation /2	13,108	6,651	4,810	117,877
Analysis/Documentation /2	4,056	5,246	375	57,235
Appeals/Litigation - Sales /2	187	48	0	3,150
Brush Disposal Fund /2	15	5	217	14,800
Road Maintenance /2	624	91	0	10,374
Undepreciated Road Write-Off /1	0	20	0	319
Depreciation Expenses /3				
Road Design And Construction	3,695	6,772	1	77,234
Purchaser Road Credits	2,087	5,382	0	76,098
Total Timber Sale Expenses	**36,489**	**30,571**	**19,951**	**526,752**
Timber Program Expenses				
Transportation Planning /1	1,189	5,223	954	20,283
Silvicultural Examinations /2	3,268	1,184	526	20,233
Genetic Tree Improvement /4	479	0	194	8,729
Appropriated Reforestation /4	906	59	960	6,035
K-V Reforestation /4	410	38	233	6,702
Appropriated Stand Improv. /4	347	109	354	3,416
K-V Stand Improvement /4	138	36	0	2,580
Depreciation /3				
Facilities Depreciation	48	550	17	2,506
Total Timber Program Expenses	**6,785**	**7,199**	**3,238**	**70,484**
Total Direct Expenses	**43,274**	**37,770**	**23,189**	**597,236**

STATEMENT OF TIMBER SALE REVENUES AND EXPENSES

For the Fiscal Year Ended September 30, 1998

National Summary by Region

(In Thousands of Dollars, Except as Noted)

Account Description	Region 09	Region 10	Wash Off	Natl Total
Indirect Expenses				
Timber Sale Expenses				
Appeals Litigation /1	238	268	199	2,575
R-10 Appropriated Road Mtce /2	0	4	0	4
R-10 Land Line Location /2	0	4	0	4
Total Timber Sale Indirect	**238**	**276**	**199**	**2,583**
Timber Program Expenses				
General Admin - Prog /1	5,347	2,282	5,546	72,163
Total Timber Prog Indirect	**5,347**	**2,282**	**5,546**	**72,163**
Total Indirect Expenses	**5,585**	**2,558**	**5,745**	**74,746**
Total Timber Expenses	**48,859**	**40,328**	**28,934**	**671,982**
Gain/Loss Before Extraord. Exp.	**18,881**	**-33,717**	**-28,934**	**-125,899**
Extraordinary Expense	**0**	**0**	**0**	**0**
Net Gain Or Loss	**18,881**	**-33,717**	**-28,934**	**-125,899**
Volume Harvested (MBF)	**622,720**	**121,193**	**0**	**3,298,224**

/1 Annual Expense
/2 Sale Activity Pool Cost, Amortized On Basis Of Annual Harvest
/3 Depreciated On Basis Of Useful Lives
/4 Growth Activity Pool Cost, Amortized On Basis Of Growing Stock Inventory

APPENDIX D -- Summary of Revenues and Expenses by Region, Forest, and Program Component

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Summary of Timber Sale Revenues and Expenses

Region 1

Fiscal Year 1998

(in thousands of dollars, except as noted)

Timber Commodity Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
ID	Idaho Panhandle	17,061	12,835	4,226	64.0	75.7
ID	Clearwater	7,177	8,737	-1,560	32.0	92.9
ID	Nez Perce	5,025	6,243	-1,217	20.8	88.8
ID	**State Subtotals**	**29,263**	**27,815**	**1,449**	**116.8**	**82.0**
MT	Beaverhead Deerlodge	1,707	2,279	-572	8.9	62.2
MT	Bitterroot	76	139	-63	0.5	5.1
MT	Custer	1	273	-272	0.0	0.6
MT	Flathead	102	315	-214	1.2	3.6
MT	Gallatin	1	15	-14	0.0	0.0
MT	Helena	332	373	-40	1.8	13.9
MT	Kootenai	18,183	17,131	1,052	85.2	96.6
MT	Lewis & Clark	3,077	1,744	1,333	13.0	69.0
MT	Lolo	6,339	5,324	1,016	25.6	65.5
MT	**State Subtotals**	**29,818**	**27,592**	**2,226**	**136.2**	**61.8**
	Regional Office	0	6,686	-6,686	0.0	0.0
All	**Regional Totals**	**59,081**	**62,093**	**-3,012**	**253.0**	**69.7**

Forest Stewardship Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
ID	Idaho Panhandle	2,315	3,373	-1,058	18.5	21.8
ID	Clearwater	123	261	-138	0.6	1.8
ID	Nez Perce	189	244	-55	0.8	3.3
ID	**State Subtotals**	**2,627**	**3,878**	**-1,251**	**19.9**	**13.9**
MT	Beaverhead Deerlodge	815	1,155	-341	3.2	22.5
MT	Bitterroot	1,206	1,904	-697	7.9	81.6
MT	Custer	0	19	-19	0.0	0.0
MT	Flathead	4,742	6,610	-1,868	30.5	90.2
MT	Gallatin	88	712	-624	1.0	37.2
MT	Helena	1,933	1,941	-8	9.9	76.6
MT	Kootenai	62	208	-146	1.0	1.2
MT	Lewis & Clark	566	683	-117	4.8	25.3
MT	Lolo	1,822	2,469	-647	12.0	30.6
MT	**State Subtotals**	**11,235**	**15,702**	**-4,467**	**70.4**	**31.9**
	Regional Office	0	2,247	-2,247	0.0	0.0
All	**Regional Totals**	**13,862**	**21,827**	**-7,965**	**90.2**	**24.9**

Summary of Timber Sale Revenues and Expenses

Region 1

Fiscal Year 1998
(in thousands of dollars, except as noted)

Personal Use Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
ID	Idaho Panhandle	27	224	-197	2.1	2.5
ID	Clearwater	21	254	-233	1.8	5.3
ID	Nez Perce	19	201	-182	1.8	7.9
ID	**State Subtotals**	**67**	**679**	**-612**	**5.8**	**4.1**
MT	Beaverhead Deerlodge	40	281	-241	2.2	15.3
MT	Bitterroot	21	179	-158	1.3	13.3
MT	Custer	16	282	-266	0.6	99.4
MT	Flathead	21	238	-217	2.1	6.2
MT	Gallatin	41	322	-281	1.7	62.7
MT	Helena	23	153	-130	1.2	9.5
MT	Kootenai	21	260	-238	2.0	2.2
MT	Lewis & Clark	22	134	-112	1.1	5.7
MT	Lolo	22	148	-125	1.5	4.0
MT	**State Subtotals**	**227**	**1,995**	**-1,767**	**13.7**	**6.2**
	Regional Office	0	426	-426	0.0	0.0
All	**Regional Totals**	**294**	**3,100**	**-2,805**	**19.5**	**5.4**

Summary of Timber Sale Revenues and Expenses

Region 2

Fiscal Year 1998

(in thousands of dollars, except as noted)

Timber Commodity Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
CO	Grand Mesa/Unc Gunn	1,851	2,136	-286	14.7	69.1
CO	Arapaho-Roosevelt	17	47	-30	0.1	5.0
CO	Pike-San Isabel	64	231	-167	0.9	24.7
CO	San Juan-Rio Grande	248	1,160	-912	3.4	25.0
CO	White River	789	1,443	-654	5.6	61.7
CO	**State Subtotals**	**2,968**	**5,017**	**-2,049**	**24.7**	**50.6**
NE	Nebraska	0	0	0	0.0	0.0
SD	Black Hills	13,560	5,542	8,018	47.2	67.1
WY	Bighorn	247	502	-255	1.3	20.9
WY CO	Medicine Bow-Routt	3,925	3,497	428	16.3	70.3
WY	Shoshone	94	382	-288	0.9	15.8
WY	**State Subtotals**	**4,266**	**4,381**	**-115**	**18.5**	**52.6**
	Regional Office	0	2,344	-2,344	0.0	0.0
All	**Regional Totals**	**20,795**	**17,285**	**3,510**	**90.4**	**58.6**

Forest Stewardship Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
CO	Grand Mesa/Unc Gunn	304	626	-322	4.4	20.8
CO	Arapaho-Roosevelt	112	649	-536	0.7	62.0
CO	Pike-San Isabel	29	20[illegible]	-176	0.9	23.7
CO	San Juan-Rio Grande	311	2,113	-1,802	6.2	45.3
CO	White River	157	396	-239	1.8	20.4
CO	**State Subtotals**	**913**	**3,988**	**-3,075**	**14.0**	**28.8**
NE	Nebraska	0	15	-14	0.0	30.0
SD	Black Hills	4,149	2,268	1,881	19.0	27.0
WY	Bighorn	68	148	-80	0.4	6.4
WY CO	Medicine Bow-Routt	464	525	-60	2.5	10.8
WY	Shoshone	6	10	-3	0.0	0.5
WY	**State Subtotals**	**538**	**682**	**-144**	**3.0**	**8.4**
	Regional Office	0	1,882	-1,882	0.0	0.0
All	**Regional Totals**	**5,601**	**8,835**	**-3,234**	**36.0**	**23.3**

Summary of Timber Sale Revenues and Expenses

Region 2

Fiscal Year 1998

(in thousands of dollars, except as noted)

Personal Use Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
CO	Grand Mesa Unc Gunn	54	220	-166	2.1	10.1
CO	Arapaho-Roosevelt	68	176	-108	0.4	33.0
CO	Pike-San Isabel	167	229	-62	1.9	51.6
CO	San Juan-Rio Grande	108	778	-670	4.1	29.8
CO	White River	56	252	-195	1.6	17.9
CO	**State Subtotals**	**453**	**1,655**	**-1,202**	**10.1**	**20.7**
NE	Nebraska	1	34	-33	0.0	70.0
SD	Black Hills	92	299	-207	4.1	5.9
WY	Bighorn	86	640	-554	4.6	72.7
WY CO	Medicine Bow-Routt	141	522	-381	4.4	18.8
WY	Shoshone	91	459	-368	4.7	83.7
WY	**State Subtotals**	**319**	**1,621**	**-1,302**	**13.7**	**39.0**
	Regional Office	0	628	-628	0.0	0.0
All	**Regional Totals**	**864**	**4,236**	**-3,373**	**27.9**	**18.1**

Summary of Timber Sale Revenues and Expenses

Region 3

Fiscal Year 1998

(in thousands of dollars, except as noted)

Timber Commodity Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
AZ	Apache-Sitgreaves	1,218	2,329	-1,111	14.6	46.1
AZ	Coconino	2	48	-46	0.2	1.2
AZ	Coronado	0	0	0	0.0	0.0
AZ	Kaibab	4	125	-120	0.1	0.7
AZ	Prescott	0	0	0	0.0	0.0
AZ	Tonto	136	466	-330	1.0	23.9
AZ	**State Subtotals**	**1,360**	**2,968**	**-1,607**	**15.9**	**25.1**
NM	Carson	15	130	-115	0.2	1.8
NM	Cibola	30	231	-201	0.6	15.9
NM	Gila	0	4	-4	0.0	0.0
NM	Lincoln	4	28	-25	0.1	3.1
NM	Santa Fe	10	22	-12	0.1	0.6
NM	**State Subtotals**	**59**	**415**	**-356**	**1.0**	**3.2**
	Regional Office	0	728	-728	0.0	0.0
All	**Regional Totals**	**1,419**	**4,110**	**-2,691**	**16.9**	**18.0**

Forest Stewardship Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
AZ	Apache-Sitgreaves	494	1,686	-1,192	10.9	34.4
AZ	Coconino	353	2,203	-1,850	7.6	50.8
AZ	Coronado	0	76	-76	0.0	0.0
AZ	Kaibab	844	1,611	-767	8.2	79.4
AZ	Prescott	8	249	-241	0.4	18.3
AZ	Tonto	184	767	-582	1.5	35.2
AZ	**State Subtotals**	**1,884**	**6,592**	**-4,708**	**28.6**	**45.0**
NM	Carson	156	1,026	-871	1.9	19.8
NM	Cibola	40	270	-231	0.7	18.1
NM	Gila	37	620	-584	0.7	25.7
NM	Lincoln	103	532	-428	2.0	55.9
NM	Santa Fe	314	1,568	-1,254	5.1	47.7
NM	**State Subtotals**	**649**	**4,016**	**-3,367**	**10.3**	**34.1**
	Regional Office	0	1,026	-1,026	0.0	0.0
All	**Regional Totals**	**2,534**	**11,635**	**-9,101**	**38.9**	**41.5**

Summary of Timber Sale Revenues and Expenses

Region 3

Fiscal Year 1998
(in thousands of dollars, except as noted)

Personal Use Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total
AZ	Apache-Sitgreaves	108	727	-619	6.2	19.5
AZ	Coconino	126	1,101	-974	7.2	48.0
AZ	Coronado	14	171	-157	0.1	100.0
AZ	Kaibab	71	286	-215	2.0	19.9
AZ	Prescott	35	317	-282	1.7	81.7
AZ	Tonto	38	432	-394	1.8	40.9
AZ	**State Subtotals**	**391**	**3,033**	**-2,642**	**19.0**	**29.9**
NM	Carson	89	1,054	-964	7.4	78.4
NM	Cibola	70	402	-332	2.6	66.0
NM	Gila	65	454	-388	2.2	74.3
NM	Lincoln	41	164	-123	1.4	41.0
NM	Santa Fe	179	753	-574	5.5	51.7
NM	**State Subtotals**	**445**	**2,827**	**-2,381**	**19.1**	**62.8**
	Regional Office	0	661	-661	0.0	0.0
All	**Regional Totals**	**837**	**6,520**	**-5,684**	**38.1**	**40.6**

Summary of Timber Sale Revenues and Expenses

Region 4

Fiscal Year 1998

(in thousands of dollars, except as noted)

Timber Commodity Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
ID	Boise	3,465	6,478	-3,014	24.4	58.1
ID	Caribou	1,137	940	198	8.0	72.7
ID	Payette	7,434	5,826	1,608	27.8	67.1
ID	Salmon Challis	1,057	2,296	-1,239	5.5	72.2
ID	Sawtooth	0	12	-12	0.0	0.1
ID	Targhee	189	1,218	-1,029	3.2	48.3
ID	**State Subtotals**	**13,283**	**16,770**	**-3,487**	**68.9**	**61.5**
NV	Toiyabe-Humbolt	0	11	-11	0.0	1.0
UT	Ashley	836	1,049	-212	8.1	62.8
UT	Dixie	54	138	-84	0.4	3.5
UT	Fishlake	399	374	26	4.1	45.2
UT	Manti-Lasal	41	85	-43	0.8	10.1
UT	Uinta	0	0	0	0.0	0.0
UT	Wasatch-Cache	213	195	17	0.7	28.3
UT	**State Subtotals**	**1,543**	**1,840**	**-297**	**14.1**	**30.2**
WY	Bridger-Teton	61	190	-130	0.8	11.0
	Regional Office	0	1,575	-1,575	0.0	0.0
All	**Regional Totals**	**14,887**	**20,387**	**-5,500**	**83.9**	**49.5**

Summary of Timber Sale Revenues and Expenses

Region 4

Fiscal Year 1998
(in thousands of dollars, except as noted)

Forest Stewardship Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
ID	Boise	1,607	3,322	-1,715	14.0	33.5
ID	Caribou	109	169	-60	1.3	12.0
ID	Payette	2,604	2,023	581	10.9	26.2
ID	Salmon/Challis	9	51	-42	0.1	0.8
ID	Sawtooth	70	300	-230	1.0	29.8
ID	Targhee	188	641	-453	1.7	25.1
ID	**State Subtotals**	**4,586**	**6,505**	**-1,919**	**29.0**	**25.9**
NV	Toiyabe-Humbolt	63	390	-328	0.6	19.6
UT	Ashley	78	261	-184	2.5	19.1
UT	Dixie	696	2,243	-1,547	9.1	76.0
UT	Fishlake	346	336	10	3.9	42.7
UT	Manti-Lasal	614	650	-36	5.9	76.8
UT	Uinta	503	474	29	2.1	80.9
UT	Wasatch-Cache	44	265	-221	1.1	41.2
UT	**State Subtotals**	**2,280**	**4,229**	**-1,949**	**24.6**	**52.4**
WY	Bridger-Teton	328	668	-340	2.9	38.5
	Regional Office	0	1,348	-1,348	0.0	0.0
All	**Regional Totals**	**7,257**	**13,141**	**-5,884**	**57.1**	**33.7**

Summary of Timber Sale Revenues and Expenses

Region 4

Fiscal Year 1998

(in thousands of dollars, except as noted)

Personal Use Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
ID	Boise	91	622	-531	3.5	8.4
ID	Caribou	45	134	-90	1.7	15.3
ID	Payette	47	371	-324	2.8	6.7
ID	Salmon Challis	28	559	-531	2.0	27.0
ID	Sawtooth	62	337	-274	2.4	70.1
ID	Targhee	70	320	-250	1.8	26.5
ID	**State Subtotals**	**342**	**2,343**	**-2,001**	**14.2**	**12.6**
NV	Toiyabe-Humbolt	62	265	-203	2.4	79.4
UT	Ashley	45	158	-114	2.3	18.1
UT	Dixie	56	385	-329	2.5	20.5
UT	Fishlake	40	86	-46	1.1	12.0
UT	Manti-Lasal	26	73	-47	1.0	13.0
UT	Uinta	26	71	-45	0.5	19.1
UT	Wasatch-Cache	31	138	-107	0.8	30.5
UT	**State Subtotals**	**224**	**912**	**-688**	**8.2**	**17.4**
WY	Bridger-Teton	63	457	-394	3.8	50.5
	Regional Office	0	400	-400	0.0	0.0
All	**Regional Totals**	**692**	**4,377**	**-3,685**	**28.6**	**16.9**

Summary of Timber Sale Revenues and Expenses

Region 5

Fiscal Year 1998

(in thousands of dollars, except as noted)

Timber Commodity Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
CA	Angeles	0	0	0	0.0	0.0
CA	Cleveland	0	0	0	0.0	0.0
CA	Eldorado	2,103	1,953	150	9.0	20.1
CA	Inyo	1,640	568	1,072	5.4	64.6
CA	Klamath	187	193	-6	0.4	1.7
CA	Lassen	1,148	1,119	29	9.5	11.2
CA	Los Padres	0	0	0	0.0	0.0
CA	Mendocino	4,968	2,549	2,419	11.3	51.2
CA	Modoc	3,501	2,234	1,268	12.6	31.7
CA	Six Rivers	253	377	-124	0.8	5.1
CA	Plumas	4,880	5,868	-989	22.6	68.5
CA	San Bernardino	0	0	0	0.0	0.0
CA	Sequoia	1,143	2,036	-893	5.1	52.0
CA	Shasta Trinity	3,108	4,444	-1,336	22.6	31.9
CA	Sierra	1,987	1,726	261	6.1	27.1
CA	Stanislaus	343	1,279	-936	5.8	13.1
CA	Tahoe	1,809	663	1,146	3.3	7.2
CA	Lake Tahoe Basin	0	0	0	0.0	0.0
CA	**State Subtotals**	**27,070**	**25,008**	**2,062**	**114.5**	**24.1**
	Regional Office	0	1,998	-1,998	0.0	0.0
All	**Regional Totals**	**27,070**	**27,006**	**64**	**114.5**	**24.1**

Summary of Timber Sale Revenues and Expenses

Region 5

Fiscal Year 1998

(in thousands of dollars, except as noted)

Forest Stewardship Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
CA	Angeles	1	26	-25	0.0	50.0
CA	Cleveland	1	5	-4	0.0	0.0
CA	Eldorado	4,922	6,426	-1,504	32.8	73.2
CA	Inyo	44	60	-16	0.5	6.6
CA	Klamath	3,743	9,029	-5,286	21.6	86.7
CA	Lassen	7,365	7,578	-213	66.9	79.1
CA	Los Padres	8	21	-13	0.2	28.2
CA	Mendocino	1,271	2,251	-980	10.1	45.6
CA	Modoc	2,002	3,681	-1,679	25.9	65.0
CA	Six Rivers	2,828	4,889	-2,062	14.1	86.7
CA	Plumas	569	1,896	-1,327	6.5	19.7
CA	San Bernardino	12	64	-52	0.2	17.5
CA	Sequoia	239	1,241	-1,001	2.8	28.6
CA	Shasta Trinity	8,348	8,609	-261	44.3	62.6
CA	Sierra	2,894	3,704	-810	12.7	56.6
CA	Stanislaus	3,994	7,630	-3,636	35.3	80.2
CA	Tahoe	4,280	9,147	-4,867	41.4	88.7
CA	Lake Tahoe Basin	573	1,409	-836	4.8	94.6
CA	**State Subtotals**	**43,095**	**67,667**	**-24,572**	**320.1**	**67.4**
	Regional Office	0	4,230	-4,230	0.0	0.0
All	**Regional Totals**	**43,095**	**71,896**	**-28,802**	**320.1**	**67.4**

Summary of Timber Sale Revenues and Expenses

Region 5

Fiscal Year 1998
(in thousands of dollars, except as noted)

Personal Use Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
CA	Angeles	0	25	-25	0.0	50.0
CA	Cleveland	7	66	-59	0.5	100.0
CA	Eldorado	61	321	-260	3.0	6.7
CA	Inyo	50	138	-88	2.4	28.8
CA	Klamath	30	599	-569	2.9	11.6
CA	Lassen	282	774	-493	8.2	9.7
CA	Los Padres	15	47	-32	0.4	71.8
CA	Mendocino	26	86	-60	0.7	3.2
CA	Modoc	20	133	-113	1.3	3.3
CA	Six Rivers	37	203	-165	1.3	8.2
CA	Plumas	137	543	-406	3.9	11.8
CA	San Bernardino	40	162	-122	0.8	82.5
CA	Sequoia	38	461	-423	1.9	19.4
CA	Shasta Trinity	80	431	-351	3.9	5.6
CA	Sierra	38	550	-512	3.7	16.3
CA	Stanislaus	48	341	-293	2.9	6.7
CA	Tahoe	39	262	-222	1.9	4.1
CA	Lake Tahoe Basin	11	127	-116	0.3	5.4
CA	**State Subtotals**	**958**	**5,268**	**-4,310**	**40.1**	**8.4**
	Regional Office	0	399	-399	0.0	0.0
All	**Regional Totals**	**958**	**5,667**	**-4,709**	**40.1**	**8.4**

Summary of Timber Sale Revenues and Expenses

Region 6

Fiscal Year 1998

(in thousands of dollars, except as noted)

Timber Commodity Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
OR	Deschutes	363	790	-427	5.4	6.6
OR	Fremont	894	1,347	-454	5.8	16.4
OR	Malheur	4,555	4,150	405	12.8	41.3
OR	Mt. Hood	4,995	5,719	-724	20.3	49.2
OR	Ochoco	188	1,044	-856	3.1	14.2
OR	Rogue River	4,537	4,480	57	11.2	59.0
OR	Siskiyou	4,912	5,347	-436	9.9	49.5
OR	Siuslaw	26,853	3,964	22,889	11.4	40.3
OR	Umatilla	697	655	42	3.6	7.4
OR	Umpqua	20,668	11,413	9,255	42.6	76.7
OR	Wallowa-Whitman	315	592	-277	1.3	3.2
OR	Willamette	25,689	14,551	11,139	54.7	78.1
OR	Winema	1,395	6,124	-4,729	17.5	57.8
OR	**State Subtotals**	**96,060**	**60,178**	**35,883**	**199.5**	**38.1**
WA	Gifford Pinchot	7,886	7,166	719	21.8	64.8
WA	Mt. Baker-Snoqualmie	764	2,312	-1,548	2.7	30.4
WA	Okanogan	1,122	2,453	-1,331	6.1	43.7
WA	Olympic	10	61	-51	0.0	0.2
WA	Wenatchee	781	1,344	-563	5.3	19.8
WA	Colville	2,649	3,470	-821	14.4	35.6
WA	**State Subtotals**	**13,212**	**16,807**	**-3,595**	**50.4**	**36.3**
	Regional Office	0	3,567	-3,567	0.0	0.0
All	**Regional Totals**	**109,272**	**80,552**	**28,720**	**250.0**	**37.7**

Summary of Timber Sale Revenues and Expenses

Region 6

Fiscal Year 1998

(in thousands of dollars, except as noted)

Forest Stewardship Program Component						
State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
OR	Deschutes	5,511	9,873	-4,362	68.3	84.4
OR	Fremont	3,972	6,008	-2,035	27.7	78.9
OR	Malheur	2,425	5,257	-2,832	15.9	51.4
OR	Mt. Hood	3,359	5,576	-2,217	19.3	46.8
OR	Ochoco	1,416	5,329	-3,913	16.3	74.5
OR	Rogue River	1,490	2,998	-1,508	7.4	38.6
OR	Siskiyou	3,849	4,693	-844	9.5	47.7
OR	Siuslaw	4,455	4,694	-239	16.2	57.6
OR	Umatilla	2,561	8,090	-5,529	42.6	87.2
OR	Umpqua	3,332	3,188	143	12.5	22.5
OR	Wallowa-Whitman	4,212	8,468	-4,256	35.1	84.5
OR	Willamette	5,570	4,108	1,462	14.5	20.7
OR	Winema	1,207	4,466	-3,259	12.2	40.2
OR	**State Subtotals**	**43,360**	**72,749**	**-29,389**	**297.5**	**56.8**
WA	Gifford Pinchot	3,396	3,162	234	10.6	31.3
WA	Mt. Baker-Snoqualmie	608	4,453	-3,845	5.8	65.4
WA	Okanogan	1,584	2,555	-971	6.2	44.6
WA	Olympic	2,655	6,910	-4,255	14.2	95.2
WA	Wenatchee	1,293	5,204	-3,910	19.1	70.8
WA	Colville	3,872	5,410	-1,538	24.0	59.3
WA	**State Subtotals**	**13,408**	**27,694**	**-14,285**	**79.9**	**57.5**
	Regional Office	0	4,988	-4,988	0.0	0.0
All	**Regional Totals**	**56,768**	**105,430**	**-48,662**	**377.3**	**57.0**

Summary of Timber Sale Revenues and Expenses

Region 6

Fiscal Year 1998

(in thousands of dollars, except as noted)

Personal Use Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
OR	Deschutes	289	823	-534	7.3	9.0
OR	Fremont	28	138	-110	1.7	4.7
OR	Malheur	50	361	-311	2.3	7.3
OR	Mt. Hood	72	218	-146	1.6	3.9
OR	Ochoco	57	427	-370	2.5	11.3
OR	Rogue River	8	102	-94	0.5	2.4
OR	Siskiyou	18	185	-167	0.6	2.8
OR	Siuslaw	16	70	-54	0.6	2.1
OR	Umatilla	42	346	-304	2.6	5.4
OR	Umpqua	25	82	-57	0.4	0.8
OR	Wallowa-Whitman	71	655	-584	5.1	12.3
OR	Willamette	43	219	-176	0.8	1.2
OR	Winema	19	220	-201	0.6	1.9
OR	**State Subtotals**	**738**	**3,845**	**-3,107**	**26.5**	**5.1**
WA	Gifford Pinchot	37	166	-129	1.3	4.0
WA	Mt. Baker-Snoqualmie	31	44	-13	0.4	4.2
WA	Okanogan	21	390	-369	1.6	11.8
WA	Olympic	12	106	-94	0.7	4.6
WA	Wenatchee	43	354	-311	2.5	9.4
WA	Colville	25	359	-334	2.0	5.1
WA	**State Subtotals**	**168**	**1,419**	**-1,250**	**8.6**	**6.2**
	Regional Office	0	437	-437	0.0	0.0
All	**Regional Totals**	**907**	**5,701**	**-4,794**	**35.1**	**5.3**

Summary of Timber Sale Revenues and Expenses

Region 8

Fiscal Year 1998
(in thousands of dollars, except as noted)

Timber Commodity Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
PR	Caribbean	0	0	0	0.0	0.0
AL	NF's in Alabama	2,098	1,687	411	13.8	42.3
AR/OK	Ouachita	17,459	7,873	9,586	85.8	80.2
AR	Ozark-St. Francis	9,767	4,905	4,862	53.8	94.9
AR/OK	**State Subtotals**	**27,226**	**12,778**	**14,448**	**139.6**	**85.3**
FL	NF's in Florida	887	549	338	7.4	14.4
GA	Chattahoochee-Oconee	916	1,761	-846	8.0	58.0
KY	Daniel Boone	327	1,177	-850	3.0	32.1
LA	Kisatchie	6,471	3,203	3,269	31.9	65.7
MS	NF's in Mississippi	16,289	6,582	9,707	77.0	68.3
NC	NF's in North Carolina	1,522	2,698	-1,175	14.8	56.7
SC	Marion-Sumter	942	815	127	4.8	25.9
TN	Cherokee	475	1,010	-535	5.1	41.5
TX	NF's in Texas	1,220	526	694	6.3	5.3
VA	Geo. Washington Jefferson	1,187	1,572	-384	9.5	32.2
	Regional Office	0	5,060	-5,060	0.0	0.0
All	**Regional Totals**	**59,561**	**39,416**	**20,144**	**321.0**	**50.4**

Summary of Timber Sale Revenues and Expenses

Region 8

Fiscal Year 1998

(in thousands of dollars, except as noted)

Forest Stewardship Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
PR	Caribbean	0	43	-43	0.0	0.0
AL	NF's in Alabama	2,432	1,914	518	18.6	57.0
AR/OK	Ouachita	3,436	1,864	1,572	20.6	19.2
AR	Ozark-St. Francis	95	191	-96	2.0	3.6
AR/OK	**State Subtotals**	**3,531**	**2,055**	**1,476**	**22.6**	**13.8**
FL	NF's in Florida	4,540	3,488	1,052	43.7	85.3
GA	Chattahoochee-Oconee	259	1,109	-849	5.4	39.1
KY	Daniel Boone	552	2,152	-1,600	5.6	59.2
LA	Kisatchie	2,740	1,576	1,164	16.6	34.1
MS	NF's in Mississippi	5,671	2,852	2,820	35.5	31.5
NC	NF's in North Carolina	729	1,921	-1,192	10.7	40.9
SC	Marion-Sumter	1,317	2,038	-721	13.6	73.0
TN	Cherokee	723	1,225	-502	7.1	57.7
TX	NF's in Texas	21,555	11,764	9,791	111.7	94.5
VA	Geo. Washington Jefferson	1,735	3,012	-1,277	17.0	57.8
	Regional Office	0	4,504	-4,504	0.0	0.0
All	**Regional Totals**	**45,786**	**39,654**	**6,132**	**308.0**	**48.4**

Summary of Timber Sale Revenues and Expenses

Region 8

Fiscal Year 1998

(in thousands of dollars, except as noted)

Personal Use Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
PR	Caribbean	0	0	0	0.0	0.0
AL	NF's in Alabama	3	16	-13	0.2	0.7
AR/OK	Ouachita	6	42	-36	0.6	0.5
AR	Ozark-St. Francis	31	69	-38	0.9	1.5
AR/OK	**State Subtotals**	**37**	**111**	**-74**	**1.4**	**0.9**
FL	NF's in Florida	4	15	-11	0.1	0.3
GA	Chattahoochee-Oconee	7	65	-58	0.4	2.9
KY	Daniel Boone	10	184	-174	0.8	8.7
LA	Kisatchie	2	12	-11	0.1	0.2
MS	NF's in Mississippi	4	19	-15	0.3	0.2
NC	NF's in North Carolina	60	86	-26	0.6	2.4
SC	Marion-Sumter	2	20	-18	0.2	1.1
TN	Cherokee	2	43	-42	0.1	0.8
TX	NF's in Texas	18	8	10	0.2	0.1
VA	Geo. Washington Jefferson	43	325	-282	2.9	10.0
	Regional Office	0	94	-94	0.0	0.0
All	**Regional Totals**	**192**	**997**	**-805**	**7.0**	**1.2**

Summary of Timber Sale Revenues and Expenses

Region 9

Fiscal Year 1998

(in thousands of dollars, except as noted)

Timber Commodity Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Value
IL	Shawnee	0	0	0	0.0	0.0
IN	Hoosier	0	0	0	0.0	0.0
OH	Wayne	1	77	-76	0.0	16.1
MI	Huron-Manistee	3,274	2,285	989	44.7	71.4
MI	Ottawa	2,961	2,459	502	47.2	56.6
MI	Hiawatha	968	1,214	-246	16.0	35.9
MI	**State Subtotals**	**7,202**	**5,958**	**1,245**	**107.9**	**56.6**
MN	Chippewa	3,168	2,264	904	40.7	67.4
MN	Superior	2,158	2,195	-37	34.9	60.9
MN	**State Subtotals**	**5,326**	**4,459**	**867**	**75.6**	**64.3**
MO	Mark Twain	5,275	3,762	1,513	46.8	89.6
NH	White Mountain	1,034	1,847	-813	14.7	54.8
PA	Allegheny	18,927	5,586	13,341	40.4	79.1
VT	Green Mountain	682	668	14	3.0	51.2
WV	Monongahela	6,497	3,772	2,725	24.0	97.8
WI	Chequamegon Nicolet	7,977	5,876	2,101	121.3	82.0
	Regional Office	0	2,067	-2,067	0.0	0.0
All	**Regional Totals**	**52,921**	**34,..2**	**18,849**	**433.9**	**69.7**

Summary of Timber Sale Revenues and Expenses

Region 9

Fiscal Year 1998

(in thousands of dollars, except as noted)

Forest Stewardship Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
IL	Shawnee	0	79	-79	0.0	5.7
IN	Hoosier	539	582	-43	5.6	97.2
OH	Wayne	1	178	-177	0.1	30.6
MI	Huron-Manistee	920	858	62	15.7	25.0
MI	Ottawa	2,111	1,881	230	36.2	43.4
MI	Hiawatha	1,856	1,907	-51	28.0	62.9
MI	**State Subtotals**	**4,887**	**4,646**	**240**	**79.8**	**41.9**
MN	Chippewa	1,351	1,230	121	19.7	32.6
MN	Superior	1,174	1,483	-310	22.3	39.0
MN	**State Subtotals**	**2,524**	**2,713**	**-189**	**42.0**	**35.7**
MO	Mark Twain	500	374	126	4.8	9.1
NH	White Mountain	641	1,295	-653	12.0	44.6
PA	Allegheny	3,568	1,211	2,357	9.7	18.9
VT	Green Mountain	567	553	13	2.7	46.0
WV	Monongahela	28	33	-5	0.1	0.4
WI	Chequamegon Nicolet	1,428	1,447	-19	25.2	17.0
	Regional Office	0	853	-853	0.0	0.0
All	**Regional Totals**	**14,682**	**13,964**	**718**	**181.8**	**29.2**

Summary of Timber Sale Revenues and Expenses

Region 9

Fiscal Year 1998

(in thousands of dollars, except as noted)

Personal Use Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
IL	Shawnee	4	234	-229	0.1	94.3
IN	Hoosier	4	15	-10	0.2	2.8
OH	Wayne	1	135	-134	0.1	53.2
MI	Huron-Manistee	40	90	-50	2.3	3.6
MI	Ottawa	1	3	-2	0.0	0.0
MI	Hiawatha	11	27	-16	0.5	1.2
MI	**State Subtotals**	**52**	**120**	**-68**	**2.8**	**1.5**
MN	Chippewa	3	14	-12	0.0	0.0
MN	Superior	1	3	-2	0.0	0.0
MN	**State Subtotals**	**3**	**17**	**-14**	**0.0**	**0.0**
MO	Mark Twain	7	56	-49	0.7	1.3
NH	White Mountain	4	19	-15	0.2	0.6
PA	Allegheny	10	81	-71	1.0	2.0
VT	Green Mountain	7	20	-14	0.2	2.9
WV	Monongahela	10	37	-27	0.4	1.7
WI	Chequamegon Nicolet	35	66	-32	1.5	1.0
	Regional Office	0	24	-24	0.0	0.0
All	**Regional Totals**	**137**	**824**	**-687**	**7.1**	**1.1**

Summary of Timber Sale Revenues and Expenses

Region 10

Fiscal Year 1998

(in thousands of dollars, except as noted)

Timber Commodity Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
AK	Tongass	6,571	35,637	-29,066	119.7	100.0
AK	Chugach	0	4	-4	0.0	0.3
AK	**State Subtotals**	**6,571**	**35,641**	**-29,070**	**119.8**	**98.8**
	Regional Office	0	3,501	-3,501	0.0	0.0
All	**Regional Totals**	**6,571**	**39,142**	**-32,570**	**119.8**	**98.8**

Forest Stewardship Program Component

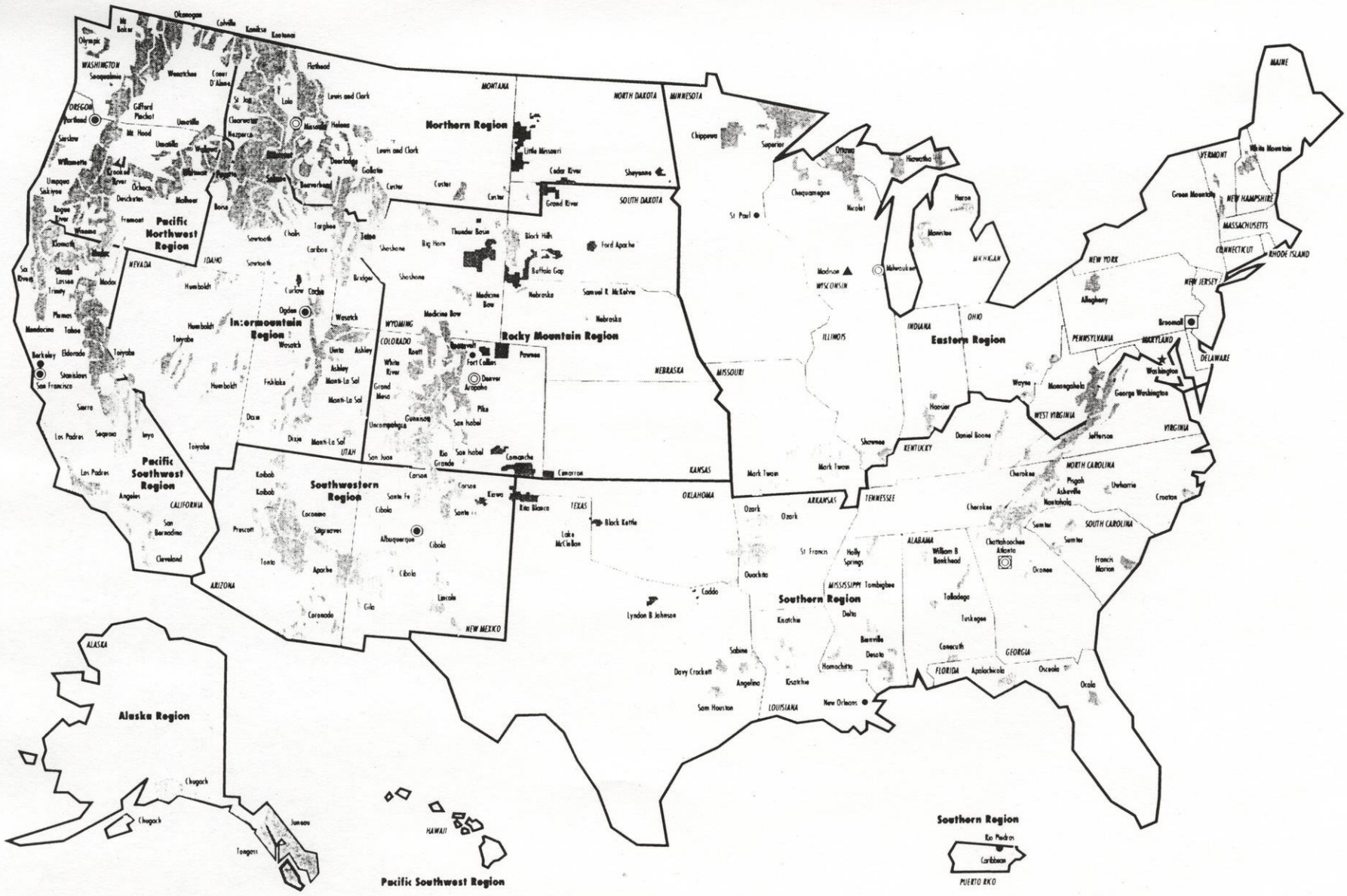
State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
AK	Tongass	1	7	-6	0.0	0.0
AK	Chugach	37	1,120	-1,083	1.4	99.7
AK	**State Subtotals**	**38**	**1,127**	**-1,089**	**1.4**	**1.2**
	Regional Office	0	37	-37	0.0	0.0
All	**Regional Totals**	**38**	**1,164**	**-1,126**	**1.4**	**1.2**

Personal Use Program Component

State	National Forest	Revenues	Expenses	Net Revenue	MMBF Harvested	Percent of Total Harvest
AK	Tongass	1	21	-20	0.0	0.0
AK	Chugach	0	0	0	0.0	0.0
AK	**State Subtotals**	**1**	**21**	**-20**	**0.0**	**0.0**
	Regional Office	0	0	0	0.0	0.0
All	**Regional Totals**	**1**	**22**	**-20**	**0.0**	**0.0**

APPENDIX E -- Map of Regions and National Forests

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Northern Region
Pacific Northwest Region
Intermountain Region
Rocky Mountain Region
Pacific Southwest Region
Southwestern Region
Eastern Region
Southern Region
Alaska Region
Pacific Southwest Region
Southern Region
National Grasslands
National Forests
Regional Boundaries
Regional Headquarters
Forest and Range Experiment Station Headquarters
Forest Products Laboratory
State and Private Forestry Area Headquarters
In other Regions S&PF activities are directed from Regional headquarters

