

**GAO**

United States General Accounting Office

Report to the Honorable  
Ron Wyden, House of Representatives

February 1995

**PRIVATE  
TIMBERLANDS**

**Private Timber  
Harvests Not Likely to  
Replace Declining  
Federal Harvests**



---

---



United States  
General Accounting Office  
Washington, D.C. 20548

**Resources, Community, and  
Economic Development Division**

B-259111

February 16, 1995

The Honorable Ron Wyden  
House of Representatives

Dear Mr. Wyden:

Timberlands in Washington state, Oregon, and California are owned by the federal government, state and local governments, the forest products industry, or other private owners of timberlands.<sup>1</sup> Timber harvest volumes from all of these sources have decreased in the past 5 years. However, most notable is the drop in timber harvests on federal lands from 7.2 billion to 2.4 billion board feet, mainly as a result of efforts to protect the habitats of threatened or endangered species.

Concerned about the effect of these significant decreases in federal timber harvests on the long-term timber supply in the Pacific Northwest, you asked us to provide you with information on the potential timber supply from private timberlands and on associated issues related to private landowners' land management decisions. Specifically, for Washington, Oregon, and California, we agreed to identify (1) trend data on private timberland acreage and on volumes of timber harvested; (2) requirements for reforestation and the use of active timber management practices (such as fertilization or thinning) on private timberlands; (3) incentive programs to encourage private landowners to actively manage their timberlands and other factors that influence their land management decisions; and (4) federal tax provisions that affect timber management decisions, including the changes that occurred in the 1986 Tax Reform Act.

---

## Results in Brief

From 1952 through 1992, private timberland acreage decreased from 31 to 23 percent of all timberlands in Washington, Oregon, and California. Most of this change came from converting land to agriculture, urban areas, or other nontimber uses. In addition, Oregon's and Washington's combined timber harvests from private timberlands also dropped from 2.5 billion board feet in 1989 to 2.3 billion board feet in 1993. California's timber harvest statistics did not distinguish between private timberlands and the forest industry. However, combined timber harvests from these sources also dropped from 2.6 billion board feet in 1989 to 2.3 billion board feet in 1993.

---

<sup>1</sup>Timberland is land that is producing or is capable of producing crops of industrial wood (i.e., more than 20 cubic feet per acre per year), is not withdrawn from timber utilization by law or regulation, and represents the land potentially available for harvesting timber resources.

Washington, Oregon, and California have had state laws guiding timber operations on private timberlands since the 1970s. Among other things, these laws require private landowners to reforest harvested timberlands unless the land is converted to other uses. While these laws and the implementing regulations are among the most comprehensive in the nation, the forest practices acts do not apply until private landowners undertake timber operations, such as harvesting or road construction.

Although federal and state programs offer technical, educational, and financial assistance to encourage private landowners to actively manage timberlands for long-term production, these programs provide no assurance that landowners will choose to do so. Landowners' decisions about managing their lands or harvesting timber are also affected by many other factors, including federal and state tax provisions, concerns about future restrictions on land use, and the current market price for timber.

Historically, the federal tax code has had three tax incentives that benefit the owners of private timberlands. Specifically, these incentives are (1) a lower tax rate on income earned from timber operations from treating such income as a capital gain, (2) the treatment of the annual costs of timber stand management as a current deduction against income, and (3) a reforestation tax credit and deduction of reforestation expenses over a 7-year period instead of when the timber is cut or sold. The Tax Reform Act of 1986 maintained the capital gains classification of timber income and the reforestation tax credit, although the act reduced the differential between the lower tax rate for capital gains and the tax rate for ordinary income. The act also placed limits on the amount of timber management expenses that could be deducted annually, unless the landowner meets the criteria for active involvement in the timber operation (generally more than 500 hours per year).

---

## Background

Federal timberlands currently represent almost half (47.8 percent) of the total timberlands in Washington, Oregon, and California. These lands are generally managed by the Forest Service, within the Department of Agriculture, and the Bureau of Land Management, within the Department of the Interior. If the federal lands within the range of the northern spotted owl in Washington, Oregon, and northern California were adjusted to protect the owl's habitat, lands available for commercial timber production would be reduced from 24 million acres to 4 million acres. Harvests from these federal timberlands could be further reduced by plans to protect threatened and endangered salmon.

Associated with the restricted acreage, timber harvests from these federal lands declined from 7.2 billion board feet in 1989 to 2.4 billion in 1993, a decrease of 66.7 percent. This significant decrease resulted from the federal courts imposing injunctions on federal timber sales, beginning in May 1991; the injunctions virtually halted all federal timber sales within the habitat of the northern spotted owl. Although the courts lifted the injunctions on federal timber sales by June 1994, virtually no new federal sales have occurred because of new suits to prevent harvesting.

Because relatively few new federal timber sales have occurred in the area since the early 1990s, purchasers have been harvesting timber available under prior federal sale contracts, but the amount of this timber is decreasing rapidly. From 1989 through 1993, the volume of uncut timber under contract on federal lands decreased from 11.1 billion board feet in 1989 to 3.9 billion board feet in 1993. Some of the remaining volume, however, may come under further harvesting restrictions because of continued efforts to protect habitat for threatened and endangered species. In addition, the time needed to prepare federal timber for sale—usually 1 to 8 years—will cause the inventory of uncut timber under contract to remain at low levels for years to come.

---

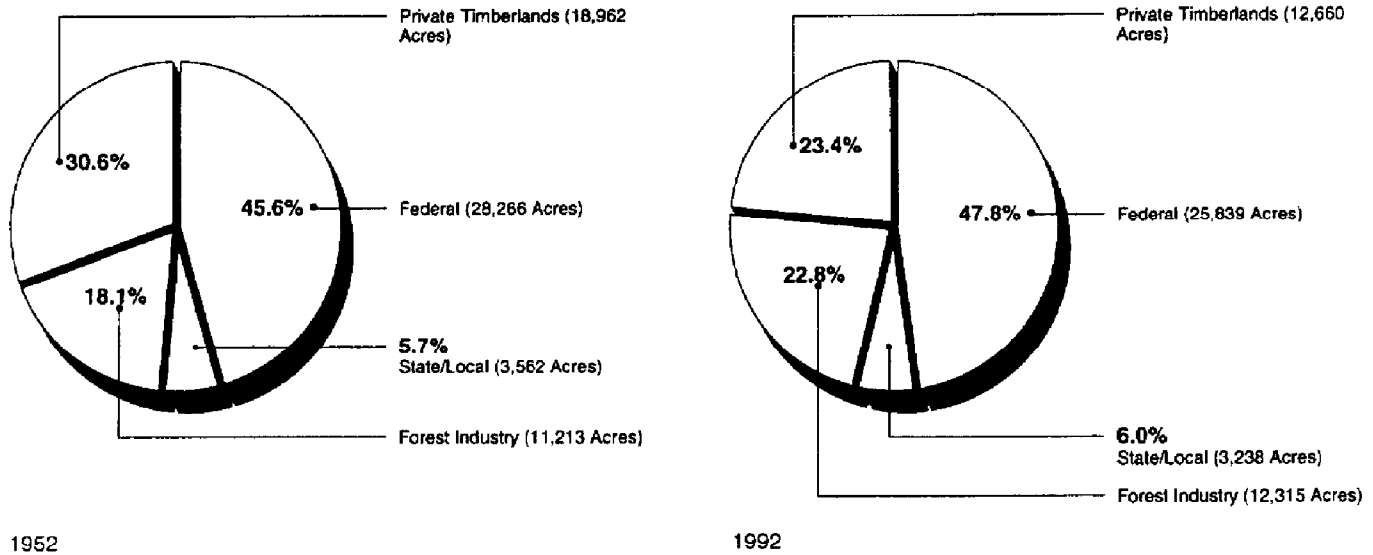
## Acreage and Harvests From Private Timberlands Have Declined

Most of the nation's timberland is owned by either the forest industry or by private landowners. Nationwide, about 6 million individuals own private timberlands, but only about 10 percent of these holdings exceed 100 acres. In 1992, private timberlands accounted for 287.6 million acres, or 58.7 percent, of the nation's 489.6 million acres of timberland. However, private timberlands represent a significantly smaller percentage (23.4 percent) of the total available timberlands in Washington, Oregon and California.

Between 1952 and 1992, total timberland acreage in Washington, Oregon, and California decreased from 62 million acres to 54.1 million acres because of reclassification to reflect better estimates of productivity at sites or because of the conversion of timberlands to other uses, such as agriculture or urban areas. Of this decrease, private timberlands shrank from about 19 million to about 12.7 million acres. While the largest decreases occurred between 1952 and 1987, the decline appears to have stabilized in the past several years.

Figure 1 compares the total combined acres of timberland in Washington, Oregon, and California by ownership category for 1952 and 1992.

Figure 1: Comparison of 1952 and 1992 Timberland Ownership in Washington, Oregon, and California



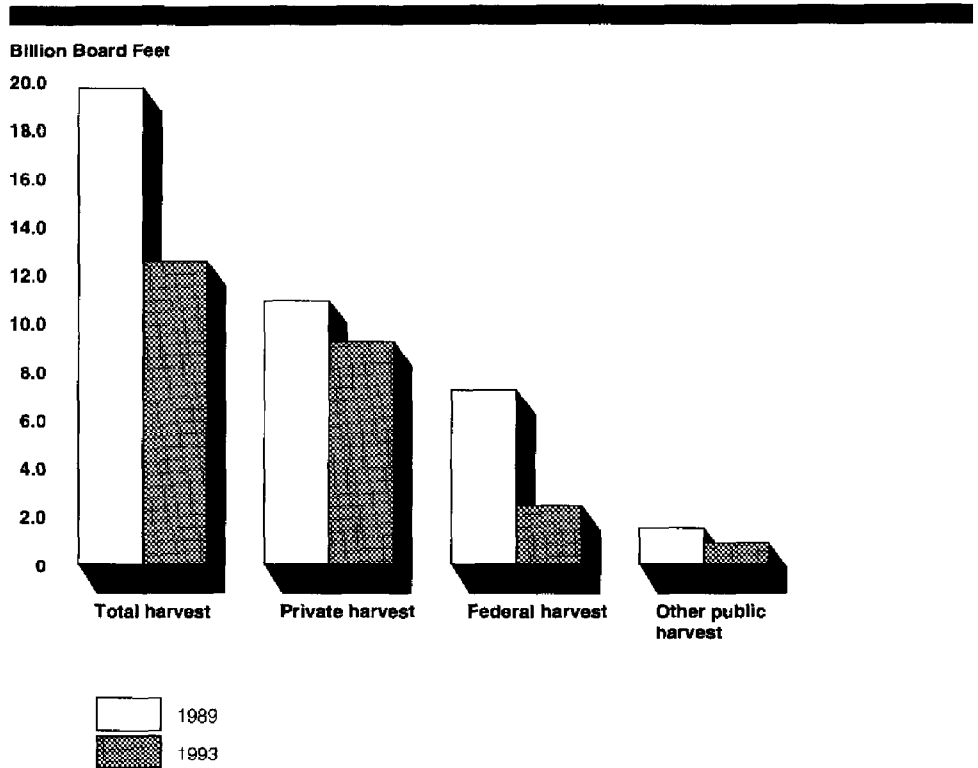
Note 1: Values are in thousands of acres.  
 Note 2: Total timberland in 1952: 62,003,000 acres.  
 Note 3: Total timberland in 1992: 54,052,000 acres.  
 Source: Forest Resources of the United States, 1992.

While private timberlands, by definition, are lands capable of producing commercial timber harvests, private landowners may or may not manage these lands for maximum productivity or may or may not ever harvest the timber. Therefore, including all of the private timberlands in the suitable timber base will overstate the potential for future production.

Timber is also harvested from state and local lands and from the lands owned by the forest industry. While state and local ownership remained relatively stable from 1952 through 1992, the forest industry has increased its relative share of total timberlands in Washington, Oregon, and California from 11.2 million acres in 1952 to 12.3 million acres in 1992—an increase of almost 10 percent.

In the past 5 years, total timber volume harvested in all three states declined because of the increasing restrictions on timber sales and harvests. Combined harvests from forest industry and private timberlands decreased from 10.9 billion board feet in 1989 to 9.2 billion in 1993; timber harvests from state lands in Washington and Oregon also decreased. California has a minor amount of state timberlands, and virtually no harvesting is done from these lands. Figure 2 compares the combined timber harvests for the three states in 1989 and 1993.

**Figure 2: Comparison of 1989 and 1993 Combined Timber Harvests in Washington, Oregon, and California**



Source: Washington Department of Natural Resources, Oregon Department of Forestry, and California Board of Equalization.

The downward trend in timber harvests is not expected to improve in the near future. According to state forestry officials, harvests from state and forest industry lands are already at the maximum levels that can be

sustained over the long term, and federal harvests are not expected to attain previous levels; therefore, the only potential for increased production is from private timberlands.

Appendix I provides further information on the number of acres of private timberland and volumes of timber harvested for the past 15 years in Washington, Oregon, and California.

## State Forest Practices Acts Do Not Require Active Management of Private Timberlands

Since the 1970s, Washington, Oregon, and California have had forest practices acts to govern timber operations on private timberlands and to promote the production of high-quality timber products while protecting other natural resources, such as water quality and wildlife habitat.<sup>2</sup> The forest practices acts and implementing regulations in these three states are among the most comprehensive in the nation. Each state's act provides specific regulations on timber harvesting, land conversion, and reforestation. While setting forth specific requirements for timber operations, the acts do not, however, require private landowners to manage their timberlands for higher productivity. In addition, if private landowners do not undertake an action that would qualify as a timber operation, the forest practices acts do not apply.

In each of the three states we reviewed, before conducting timber operations on private timberlands—such as harvesting trees or building roads—private landowners must notify the state's department of forestry. Exempt from the notification requirements are certain minor activities, such as planting seedlings, that are determined not to have a potential for damaging a natural resource, but the private landowners must still comply with other regulations.

The forest practices acts also include extensive regulations on conducting harvest operations, including the protection of streams and surrounding areas and wildlife habitat. In addition, private landowners must notify the state departments of forestry when they intend to convert timberlands to other uses. In California, such conversions require the Board of Forestry's approval.

All three states require reforestation after a timber harvest on private timberlands, unless the harvest method leaves enough trees to meet minimum acceptable stocking levels. That is, within a specified number of years of the harvest (usually from 3 to 5), the regulations require that a

<sup>2</sup>The states' forest practices acts also govern operations on forest industry and state lands.



certain number of healthy, growing trees per acre are well distributed throughout the harvest area. If the private landowner does not meet these minimum stocking levels, additional planting is required. Reforestation, however, is required only after a timber harvest. If timberlands are damaged or destroyed by fire, insects, or disease and no harvesting is done, private landowners are not required to reforest.

The states' forest practices acts and associated regulations require that private landowners conduct timber operations to protect the natural resources and that harvested lands be returned to a productive condition. However, once the reforestation is successful, no requirements exist for active management to enhance future productivity. In addition, no provisions in the forest practices acts require private landowners of idle or underproductive timberlands to increase the productivity of these timberlands.

Appendix II provides additional detail on the states' forest practices acts, including specific state-by-state requirements.

---

## Availability of Incentive Programs May Encourage Active Management of Private Timberlands

Federal and state programs offer financial, technical, and educational assistance to private landowners in an effort to encourage active management of private timberlands. Achieving this objective, however, depends on private landowners' awareness of the program's availability and choosing to participate. Because the purpose of our review was to identify and describe the existing incentive programs, we did not attempt to quantify the degree to which these programs may or may not affect the land management decisions made by private landowners.

---

## Financial Assistance Programs

Several federal and state cost-sharing programs provide private landowners with financial assistance to perform various timber operations. The federal cost-share programs, administered through the states' forestry departments, are part of the Forest Service's cooperative forestry efforts to encourage the production of timber on private timberlands while meeting multiple-use objectives, such as preserving water quality and wildlife habitat. In Washington, Oregon, and California, these cost-share programs may be used to prepare the land for planting and to improve timber stands by fertilizing, pruning, or precommercial thinning. However, these programs may not be used for the minimum reforestation that is already required under the states' forest practices acts.

The federal cost-share programs are generally limited to land ownerships of 1,000 acres or less, and participation is limited to available funds. For example, in fiscal year 1993, \$32.7 million was available for these programs nationwide, and assistance was provided to 190,256 private landowners, 14,558 of whom lived in Oregon, Washington, and California. Since there are about 6 million private landowners nationwide, these federal programs can reach only a small percentage of them annually.

In addition to the federal programs, in 1993 Oregon authorized a program—the Forest Resource Trust—designed to convert underproductive private forest lands into healthy, productive forests. The stated goal of the Forest Resource Trust is to reforest and rehabilitate 250,000 acres of underproductive land over the next 15 years. Under this program, private landowners and the Trust share the risks and the benefits of long-term investment in productive timberlands. The Trust will pay up to 100 percent of the costs of initial site preparation, tree planting, and removal of competing vegetation. Payments are limited to a maximum of \$100,000 per landowner over a 2-year period. If and when the private landowner harvests the timber from these lands, the owner agrees to pay the Trust a specified percentage of the revenues. However, the private landowner is not required to ever harvest the timber.

According to officials at all three states' forestry departments, no new assistance programs are needed to encourage active management of timberlands; rather, the officials believe existing programs could be extended to more private landowners with additional funding. In addition, representatives of landowner associations in the three states cited two problems with the current financial assistance programs: the lack of a single point of contact for private landowners and the fact that many landowners do not know where to go for information or assistance.

---

## Technical and Educational Assistance

In addition to the cost-share programs, the Forest Service's Cooperative Forestry organization and the Department of Agriculture's Extension Service provide educational and technical assistance to private landowners. Extension Service foresters are usually affiliated with state universities and sponsor educational programs and seminars for private landowners. These foresters work closely with the states' forestry departments and associations of private landowners to disseminate timber-related information.

Educational and technical assistance is also available through the states' forestry departments, associations that represent private landowners, and individual forest industry corporations. Although numerous sources of information and assistance exist, representatives of landowner associations in the three states we reviewed stated that many private landowners either do not know about such assistance or are unsure of where or how to obtain it.

Additional information on existing incentives for active management is included in appendix III.

---

## Other Factors Also Affect Private Landowners' Land Management Decisions

Whether private landowners decide to actively manage their lands or harvest their timber also depends on other factors, such as state tax provisions, federal and state regulations, and the market prices for timber. Because the purpose of our review was only to identify factors that may influence landowners' land management decisions, we did not attempt to quantify the degree to which these factors may or may not affect private landowners' land management decisions.

---

## State Tax Provisions

Washington, Oregon, and California have tax provisions that affect private timberlands. These tax provisions are generally perceived as having a neutral effect on private landowners' decisions on land use. In all three states, private landowners receive preferential treatment for property taxes, in that timberland is assessed at the value of the "bare land for growing timber" rather than at the "highest and best use" rate. Since this assessed valuation is usually lower than it would otherwise be, the private landowner pays lower property taxes overall. This favorable treatment is balanced, however, by an excise or yield tax on timber harvests, which is assessed as a percentage of the value of the timber when it is harvested.

To encourage the development of underproductive forest land, Oregon also allows a reforestation tax credit against the state income tax. Owners of at least 5 acres of land capable of growing commercial timber may deduct up to 30 percent of the costs for site preparation, planting, and other expenses related to establishing new timber stands. The credit, however, may not be used for expenses associated with reforestation that is required under the forest practices act or for reimbursements received under federal cost-share programs.

---

## Federal and State Regulations

Representatives of several private landowner associations in the three states reviewed told us that private landowners are very concerned about

---

the actual or potential increase in federal or state regulations affecting private timberland. The representatives cited the Pacific Northwest as an example of an area where landowners are uncertain of the impact on private timberlands of federal and state plans to protect the habitat of threatened and endangered species. They further believed that some private landowners, faced with this uncertainty and with high market prices for timber, may choose to harvest their timber now rather than have their options limited by future land-use restrictions. Since harvest volume statistics for 1994 are not yet available, we could not determine whether private landowners are increasing harvesting because of these concerns.

---

### Market Prices for Timber

Associated with the other factors affecting private landowners' decisions on managing their timberlands may be the potential revenue that could be obtained from harvesting stands of timber. How important this factor is depends on such things as the long-term objectives of the private landowner and the federal and state tax structures. By themselves, high market prices for timber may not encourage private landowners to harvest and/or actively manage their timberlands. However, if private landowners are concerned about further restrictions on their land activities and market prices are high, the combination of factors could result in harvesting on private timberlands. Since harvest volume statistics for 1994 are not yet available, we could not determine whether private landowners have been increasing harvesting because of timber market prices.

---

### Federal Tax Provisions Affect Timber Management Decisions

The federal tax treatment of income and expenses from timber operations on private timberlands may be an additional factor that private landowners consider when determining whether to actively manage their timberlands. In addition, federal estate taxes, which are assessed at the time when timberland is transferred to heirs, may affect private landowners' long-term land-use decisions.

---

### Income Tax Incentives

Tax incentives, also called tax preferences, are reductions in the overall federal income tax liability that result from preferential treatment of certain activities under the federal tax code. Historically, the federal tax code has had three tax incentives to benefit owners of private timberlands. Specifically, these incentives are (1) the classification of timber income as a capital gain that had a special lower tax rate than for ordinary income; (2) the treatment of annual timber management costs as a current deduction; and (3) a reforestation tax credit and deduction of reforestation

---

expenses over a 7-year period instead of when the timber is cut or sold. (Additional information on federal tax incentives is included in app. IV.)

The Tax Reform Act of 1986 maintained the capital gains classification of timber income and the reforestation tax credit. However, the act eliminated the special lower tax rate for capital gains income (before 1986, the maximum rate for capital gains was 20 percent, whereas the highest tax rate for ordinary income was 50 percent), a change that affected all investments but was an important tax incentive for private landowners. Subsequent tax law changes have raised the maximum individual tax rates on ordinary income to 39.6 percent while maintaining the tax rate on capital gains at 28 percent, thus partially restoring the rate differential.

The 1986 act also placed limits on the amount of annual expenses that a private landowner could deduct for an activity, unless that activity produced income during the year. In order to fully deduct the annual expenses of managing a timber stand, a private landowner now must normally be actively involved in the business for at least 500 hours per year. A representative of the Forest Industry Council on Taxation told us that private landowners with small timber operations may find it difficult to spend enough hours performing timber-related activities to meet this "hours test." As a result, private landowners would be limited in the amount of timber-related expenses they can deduct and thus could incur higher taxes.

---

## Estate Taxes

Inheritances are not included in the federal income tax base but instead are subject to a tax that is assessed on estates at the time of transfer to heirs. In determining the taxable base for estate taxes, a lifetime exclusion of \$600,000 is allowed, and a tax-free estate of any amount may be left to a qualifying spouse. Estates inherited by heirs other than spouses and exceeding \$600,000 in value are subject to a federal estate tax at rates from 18 to 55 percent, depending on the size of the estate.

Although timberland is assessed at the value of the "bare land for growing timber" for state property tax purposes in Washington, Oregon, and California, timberland generally must be assessed at its "highest and best use" for federal estate taxation purposes. This requirement can result in timberlands' being assessed at the market value for residential or resort development, which is usually much higher than the value of the land for growing timber. According to a representative from the Forest Industry Council on Taxation, the need to pay estate taxes based on this higher

market value could cause the heirs to either sell their timberland or convert it to other uses in order to pay the taxes.

---

## Conclusions

The timber supply in Washington, Oregon, and California depends on harvests from the forest industry, private timberlands and state and federal lands. Because harvests from forest industry and state lands are already at the maximum levels that can be sustained over the long term, any changes in the timber supply will depend on private and federal timberlands. Federal harvests, however, have decreased dramatically and most likely will not increase in the near term because of harvest restrictions to protect the habitat of the northern spotted owl, the continued decline in federal timber under contract, and the lengthy period required to prepare federal timber for sale.

The only remaining source of timber—private timberlands—also has decreased both in acreage and production. It is unlikely that harvests from these timberlands can be increased to a level that would replace the dramatic drop in harvests from federal lands because these lands currently represent a significantly smaller proportion of total timberlands than the federal lands.

In addition, no assurances exist that private landowners will harvest the timber on their lands or manage their lands to maximize productivity. While the states' forest practices acts encourage private landowners to actively manage their timberlands, the acts do not apply until a timber operation is undertaken. Likewise, while federal and state incentive programs assist private landowners by providing educational, technical, and financial assistance, participation is strictly voluntary. Many factors, such as federal and state tax provisions, increased or potential regulation on land use, and the market price for timber, affect private landowners' ultimate decisions on how to manage their lands.

---

## Agency Comments

We discussed applicable portions of a draft of this report with officials at the Forest Service's Pacific Northwest Forest and Range Experiment Station; the Cooperative Forestry Staff at both Washington, D.C., and the Pacific Northwest Region; and the head of Timber Management in Washington, D.C.; the Director, Office of Tax Analysis, Department of the Treasury; and officials at the Washington Department of Natural Resources, the Oregon Department of Forestry, the California Department of Forestry, and Board of Equalization. These officials agreed with the

information and conclusions presented and indicated that the material was an accurate presentation of the issues discussed.

---

## Scope and Methodology

To obtain inventory information on private timberlands in Washington, Oregon, and California, we interviewed officials at the Forest Service's Pacific Northwest Forest and Range Experiment Station and reviewed documentation provided by them, including the Forest Resources of the United States, 1992. Harvest information was obtained from the departments of forestry and/or taxing authorities of the three states.

We did not attempt to validate the methodology used to compile the statistics or the reliability of the data obtained from these sources. The data include limitations in that the length of the 10-year inventory cycle and the sampling methods used for inventories limit the timeliness and accuracy of inventory data on private lands. For example, these inventories are scheduled throughout the 10-year cycle, and the timeliness of the data varies among the states. Although the Forest Service and the states recognize these limitations, they consider the information adequate to demonstrate trends within the states.

To obtain information on the states' forest practices acts, we interviewed officials at the Washington Department of Natural Resources, the Oregon Department of Forestry, and the California Department of Forestry and reviewed the associated legislation and regulations for each state.

To determine the current incentives for active management of private timberlands, we interviewed officials of the Forest Service's Cooperative Forestry Staff at both Washington, D.C., and the Pacific Northwest Region for information on technical and financial assistance programs and reviewed documentation provided by them. We also interviewed stewardship coordinators with the Washington, Oregon, and California departments of forestry, representatives of national and state associations of private timberland owners, and a representative of the Forest Industry Council on Taxation.

To provide the historical perspective of federal income tax provisions affecting timber, we reviewed pertinent tax and natural resource journals and documents on tax expenditures prepared by the Congressional Research Service. We also interviewed a tax expert at the Forest Industry Council on Taxation and economists at the Forest Service's Washington Office and the Congressional Research Service.

---

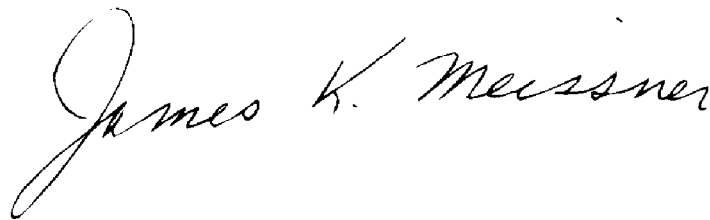
Our review was performed from March 1994 through January 1995 in accordance with generally accepted government auditing standards.

---

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after the date of this letter. At that time, we will send copies to the Secretaries of Agriculture and the Treasury and to officials at the Washington Department of Natural Resources, the Oregon Department of Forestry, and the California Department of Forestry. We will make copies available to other interested parties on request.

Please call me at (206) 287-4810 if you or your staff have any questions about this report. Major contributors to this report are listed in appendix V.

Sincerely yours,

A handwritten signature in cursive script that reads "James K. Meissner". The signature is written in black ink and is positioned above the typed name and title.

James K. Meissner  
Associate Director, Timber  
Management Issues





---

# Contents

---

Letter		1
Appendix I		18
Inventory of Timberlands and Harvest Volumes in Washington, Oregon, and California	Inventory of Timberlands Harvest Volumes	18 24
Appendix II		30
Forest Practices Acts for Washington, Oregon, and California	Washington Oregon California	30 32 33
Appendix III		37
Factors Influencing Landowners' Decisions About Active Management of Private Timberlands	Educational, Technical, and Financial Assistance Programs State Tax Provisions	37 39
Appendix IV		42
Federal Tax Treatment of Timber	Impact of the Tax Reform Act of 1986 Federal Estate Taxes	42 44
Appendix V		46
Major Contributors to This Report		
Tables	Table I.1: 1992 Total Land Area and Timberland in Washington, Oregon, and California	19

---

Contents

---

Table I.2: Total Acres of Timberland by Ownership for United States, Washington, Oregon, and California From 1952 Through 1992	23
Table I.3: Decreases in Total and Federal Timber Harvests From 1989 Through 1993	27
Table I.4: Decrease in Volume of Timber Under Federal Contract From 1989 Through 1993	28

---

**Figures**

Figure 1: Comparison of 1952 and 1992 Timberland Ownership in Washington, Oregon, and California	4
Figure 2: Comparison of 1989 and 1993 Combined Timber Harvests in Washington, Oregon, and California	5
Figure I.1: Timberland Ownership in Washington	20
Figure I.2: Timberland Ownership in Oregon	21
Figure I.3: Timberland Ownership in California	22
Figure I.4: Annual Washington Timber Volumes Harvested From 1979 Through 1993	25
Figure I.5: Annual Oregon Timber Volumes Harvested From 1979 Through 1993	26
Figure I.6: Annual California Timber Volumes Harvested From 1979 Through 1993	27
Figure I.7: Uncut Federal Timber Volume Under Contract From 1979 Through 1993	29

# Inventory of Timberlands and Harvest Volumes in Washington, Oregon, and California

This appendix provides detailed information on trends in timberland acreage and timber harvests in Washington, Oregon, and California. The information also identifies the various ownership categories of timberlands: federal lands, state and local timberlands, the forest industry, and private timberlands.

## Inventory of Timberlands

The Forest and Rangeland Renewable Resources Planning Act of 1974 (16 U.S.C. 1600 *et seq.*) requires the Forest Service to assess the nation's renewable resources on public and private forests as part of its overall planning process. To implement this act, the Forest Service inventories present and potential renewable resources, including timber, every 10 years. Information compiled for the 1992 Resource Planning Act Assessment Update was published in the Forest Resources of the United States, 1992.

The Forest Service's Pacific Northwest Forest and Range Experiment Station performs these periodic inventories on private lands in Washington, Oregon, and California by using various estimating techniques and on-the-ground examination to verify the lands' classification and to obtain detailed information on the types and sizes of trees and who owns the land. Researchers then use these data to estimate the total acres of timberland. This inventory process may take 3 to 5 years to complete.

Both the length of the 10-year inventory cycle and the sampling methods used for inventories limit the timeliness and accuracy of inventory data on private lands. For example, since the Pacific Northwest Forest and Range Experiment Station is responsible for conducting inventories in the three West Coast states, plus Alaska and Hawaii, these inventories are scheduled throughout the 10-year cycle, and the timeliness of the data varies among the states.

Although the Forest Service recognizes these limitations, it considers the information adequate for its long-term planning and emphasizes that increasing the inventory's accuracy would be costly. The states' forestry and land-use planning agencies also use the Forest Service's inventory data in their long-term planning. Accordingly, since the growing cycle for timber on the West Coast may range from 40 to more than 80 years and it is difficult to make accurate projections that far in the future, these resource managers also accept reduced levels of accuracy.

**Appendix I  
Inventory of Timberlands and Harvest  
Volumes in Washington, Oregon, and  
California**

The following timberland inventory figures represent total acreage and do not exclude land that is inaccessible, timber stands that are not practical to harvest, or private timberlands that may never be harvested by the owner. Total land area and timberlands for Washington, Oregon, and California in 1992 are shown in table I.1.

**Table I.1: 1992 Total Land Area and Timberland in Washington, Oregon, and California**

Thousands of acres				
<b>Category</b>	<b>Washington</b>	<b>Oregon</b>	<b>California</b>	<b>Total</b>
Total land area	42,612	61,442	99,823	<b>203,877</b>
Total timberland	16,238	21,614	16,200	<b>54,052</b>
Percentage of total timberland to total land area	38.1	35.2	16.2	<b>26.5</b>

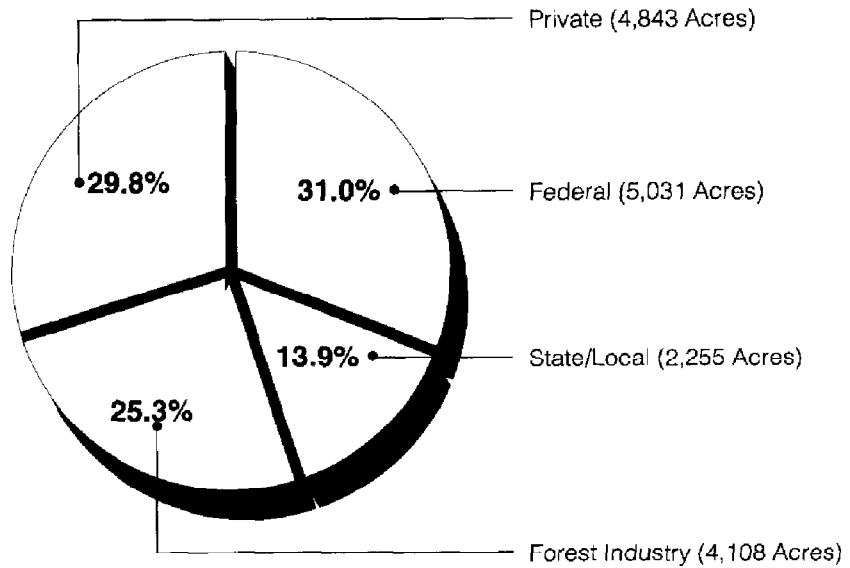
Source: Forest Resources of the United States, 1992.

**Ownership**

Figures I.1 through I.3 show the breakdown of timberland ownership based on 1992 published data. These figures show that private ownership ranges from 17 percent in Oregon to 29.8 percent in Washington.

Appendix I  
Inventory of Timberlands and Harvest  
Volumes in Washington, Oregon, and  
California

Figure I.1: Timberland Ownership in  
Washington

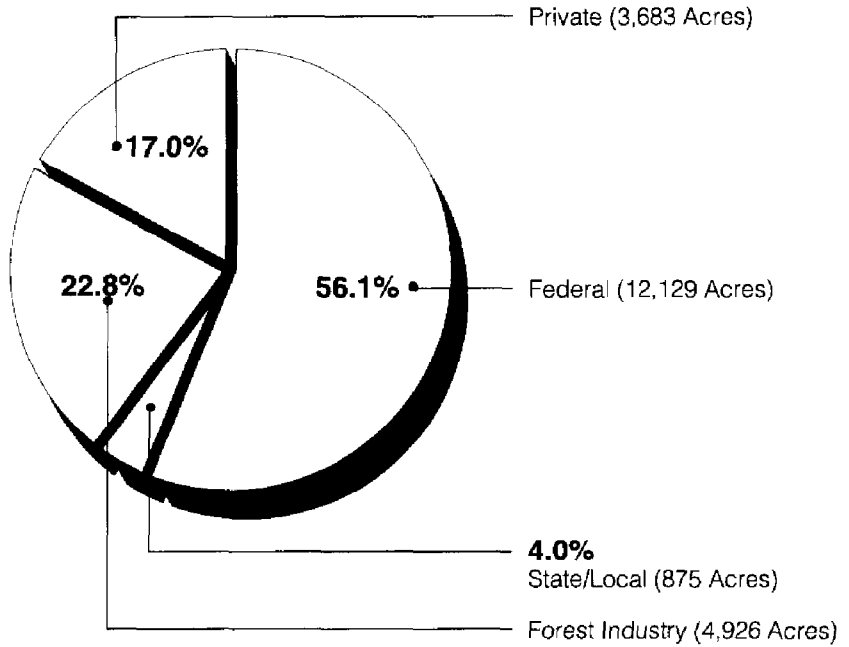


Note 1: Values are in thousands of acres.

Note 2: Total timberland in Washington: 16,238,000 acres.

**Appendix I  
Inventory of Timberlands and Harvest  
Volumes in Washington, Oregon, and  
California**

**Figure I.2: Timberland Ownership in  
Oregon**



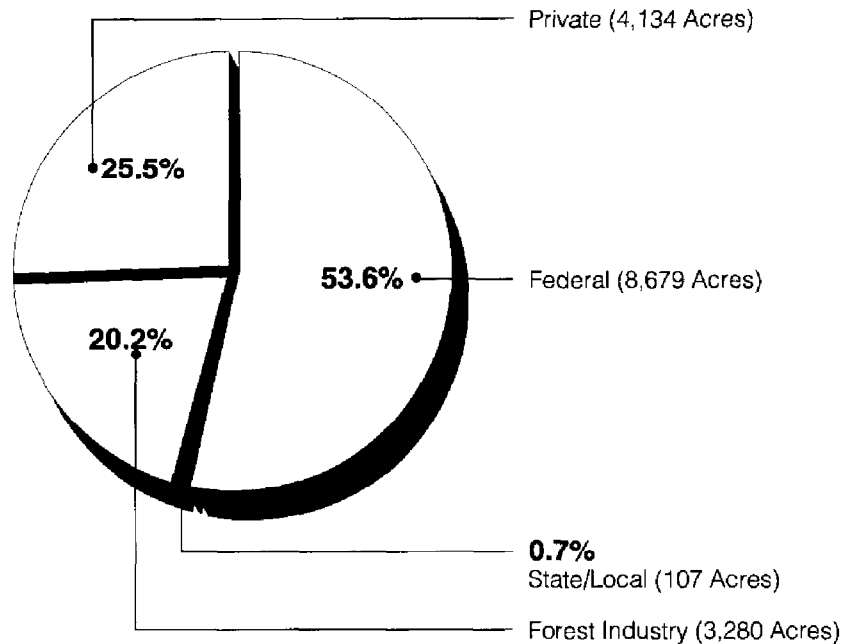
Note 1: Values are in thousands of acres.

Note 2: Total timberland in Oregon: 21,614,000 acres.

Note 3: Percentages do not total 100 due to rounding.

**Appendix I  
Inventory of Timberlands and Harvest  
Volumes in Washington, Oregon, and  
California**

**Figure I.3: Timberland Ownership in  
California**



Note 1: Values are in thousands of acres.

Note 2: Total timberland in California: 16,200,000 acres

These data do not reflect restrictions on federal lands in the Pacific Northwest, the result of protection of habitat for the threatened northern spotted owl or threatened and endangered salmon, that have occurred since the publication of the inventory in 1992. If the acres of federal timberland were adjusted for subsequent withdrawals of these lands, all other ownership categories would increase as a percentage of the total available timberlands.

**Ownership Trends**

According to information compiled for the 1992 Resource Planning Act Assessment Update, timberland has decreased nationwide by 4 percent, or about 19.3 million acres, since 1952. The Forest Service Research Staff attributed this decline primarily to the withdrawals of public timberland



**Appendix I**  
**Inventory of Timberlands and Harvest**  
**Volumes in Washington, Oregon, and**  
**California**

from resource production for wilderness or other land uses, such as recreation, that do not permit timber harvest. During the same period, total timberland in the three states we reviewed decreased by 12.8 percent, or about 8 million acres. Table I.2 shows the trends in total acres of timberland by ownership category from 1952 through the most current data published in 1992 (years presented are the only data available).

**Table I.2: Total Acres of Timberland by Ownership for United States, Washington, Oregon, and California From 1952 Through 1992**

Thousands of Acres					
	Total	Federal	State and county	Forest industry	Private
<b>National</b>					
1952	508,854	118,056	27,379	58,979	304,440
1962	515,118	118,903	27,253	61,434	307,528
1977	492,355	106,887	31,282	68,937	285,249
1987	484,936	97,052	33,973	70,347	283,564
1992	489,555	96,655	34,839	70,455	287,606
Change 1952-92	(19,299)	(21,401)	7,460	11,476	(16,834)
Percent change	-3.8	-18.1	+27.2	+19.4	-5.5
<b>Washington</b>					
1952	19,188	5,882	2,309	4,385	6,612
1962	18,860	5,829	2,289	4,338	6,404
1977	17,922	5,382	2,266	4,319	5,955
1987	16,849	5,026	2,250	4,588	4,985
1992	16,238	5,031	2,255	4,109	4,843
Change 1952-92	(2,950)	(851)	(54)	(276)	(1,769)
Percent change	-15.4	-14.4	-2.3	-6.3	-26.8
<b>Oregon</b>					
1952	25,688	13,654	1,052	4,661	6,321
1962	25,623	14,296	937	5,088	5,302
1977	24,211	13,817	926	5,522	3,946
1987	22,085	12,462	929	5,114	3,580
1992	21,614	12,129	876	4,926	3,683
Change 1952-92	(4,074)	(1,525)	(176)	265	(2,638)
Percent change	-15.9	-11.2	-16.7	+5.7	-41.7

(continued)

**Appendix I  
Inventory of Timberlands and Harvest  
Volumes in Washington, Oregon, and  
California**

Thousands of Acres

	<b>Total</b>	<b>Federal</b>	<b>State and county</b>	<b>Forest industry</b>	<b>Private</b>
<b>California</b>					
1952	17,127	8,730	201	2,167	6,029
1962	17,198	9,244	72	2,445	5,437
1977	16,303	8,434	106	2,687	5,076
1987	16,712	9,051	107	2,757	4,797
1992	16,200	8,679	107	3,280	4,134
Change 1952-92	(927)	(51)	(94)	1,113	(1,895)
Percent change	-5.4	-0.6	-46.8	+51.4	-31.4

Source: Forest Resources of the United States, 1992.

## Harvest Volumes

Since timber harvests from private lands are subject to a harvest, yield, or severance tax in all three states, private landowners must report the volumes of timber harvested to the states' taxing authorities, either the department of revenue or the state board of equalization. These data on timber harvest volumes are collected by the state's taxing authority, compiled, and later provided to the state's department of forestry for tracking purposes. Harvest information from a previous year is usually not available until September of the following year; therefore, recent data are not available. It is also possible that the reporting of timber volumes for the purpose of taxation may not reflect the total timber harvest from private lands because of the voluntary nature of such reporting.

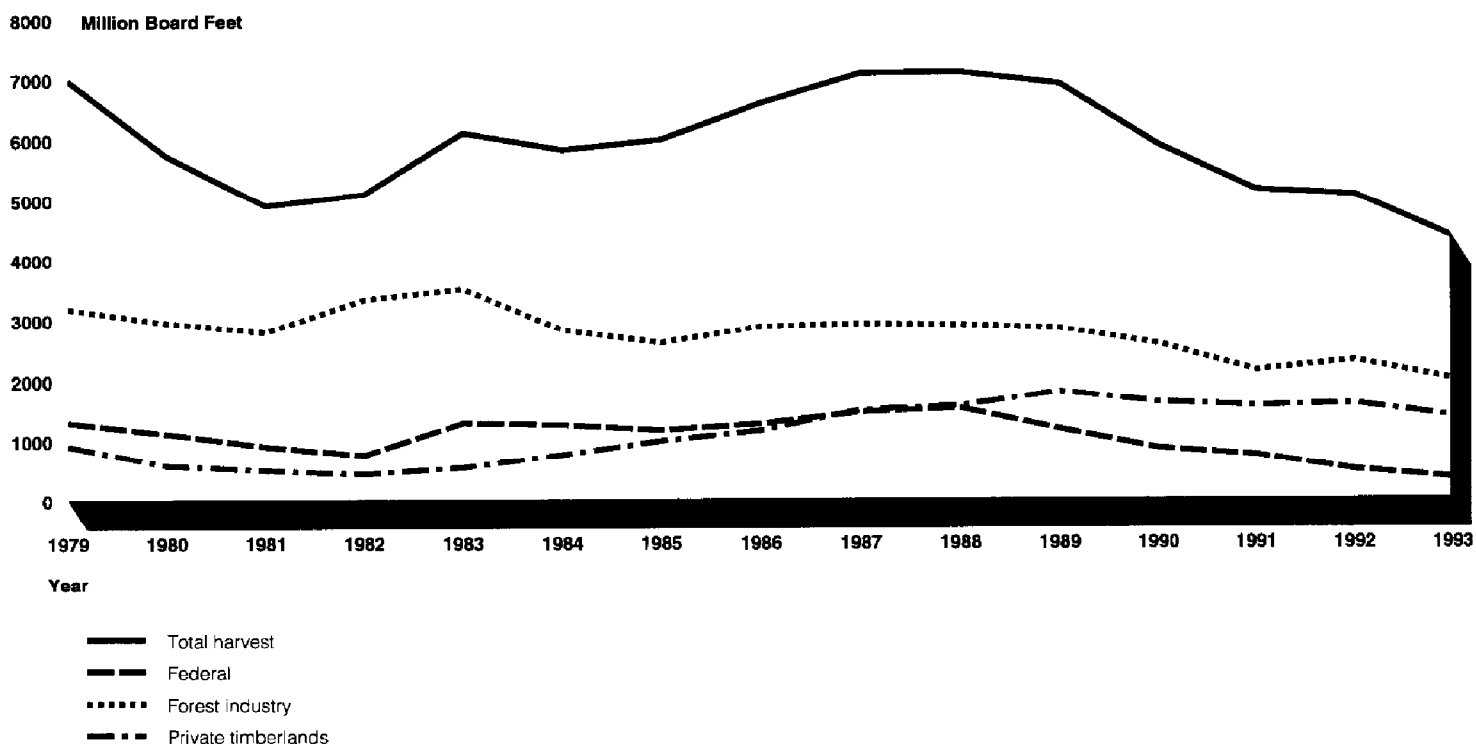
All three states had data on timber harvest volumes from 1979 through 1993. However, the method used to report the data differed among the states. For example, both Washington and Oregon separate forest industry harvests from private landowner harvests, while California separates the harvest data only into public and private components. According to the California State Board of Equalization, the harvest volumes in California that are shown as public come almost exclusively from the national forests, while the private harvest volumes include both the forest industry and private timberlands. While the data are not totally comparable, they may be useful in reflecting trends within each state.

Figures I.4 through I.6 show the total annual timber volumes harvested in the three states for the most recent 15 years and harvests from federal and

**Appendix I  
Inventory of Timberlands and Harvest  
Volumes in Washington, Oregon, and  
California**

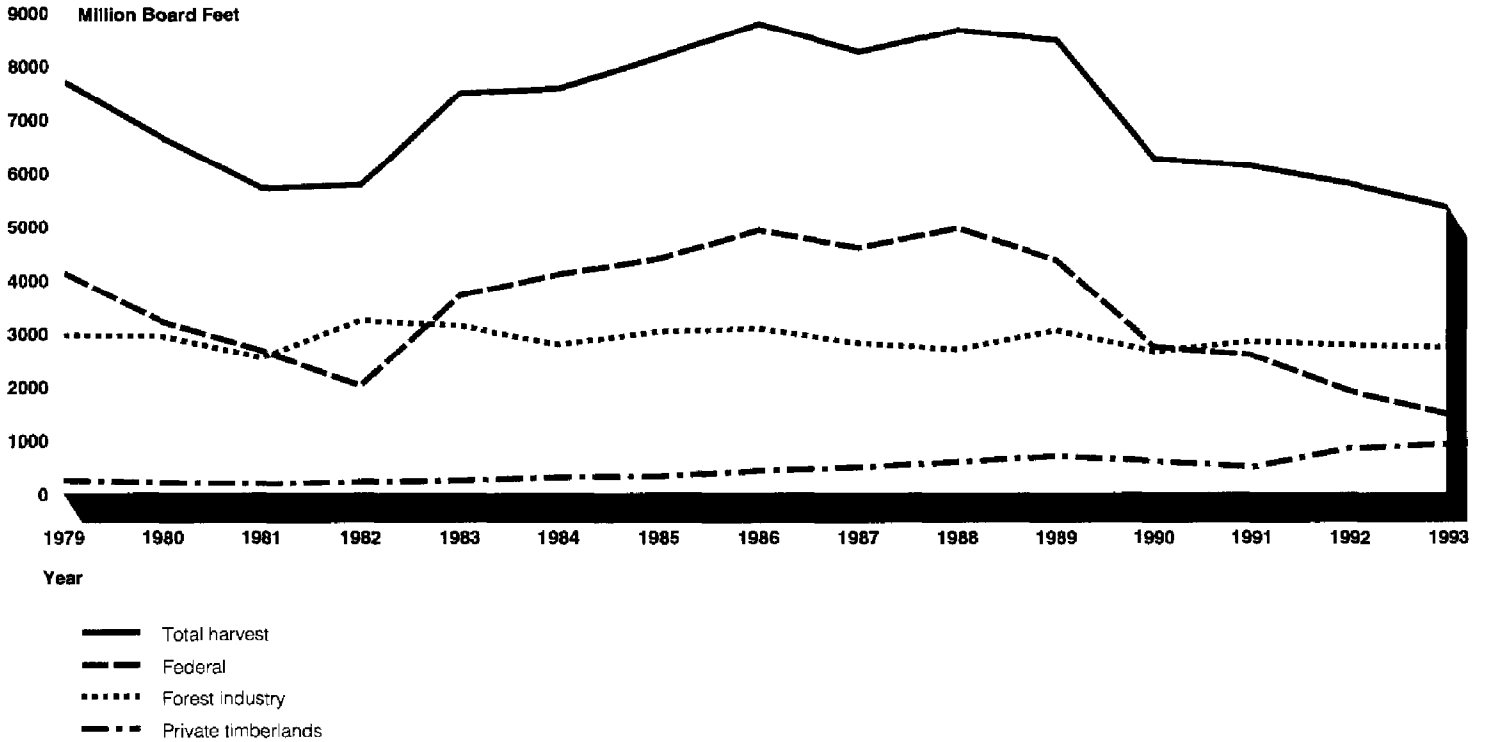
private lands. Washington and Oregon also have timber harvests from state and local government lands that are reflected in the total harvest volumes but not shown separately.

**Figure I.4: Annual Washington Timber Volumes Harvested From 1979 Through 1993**



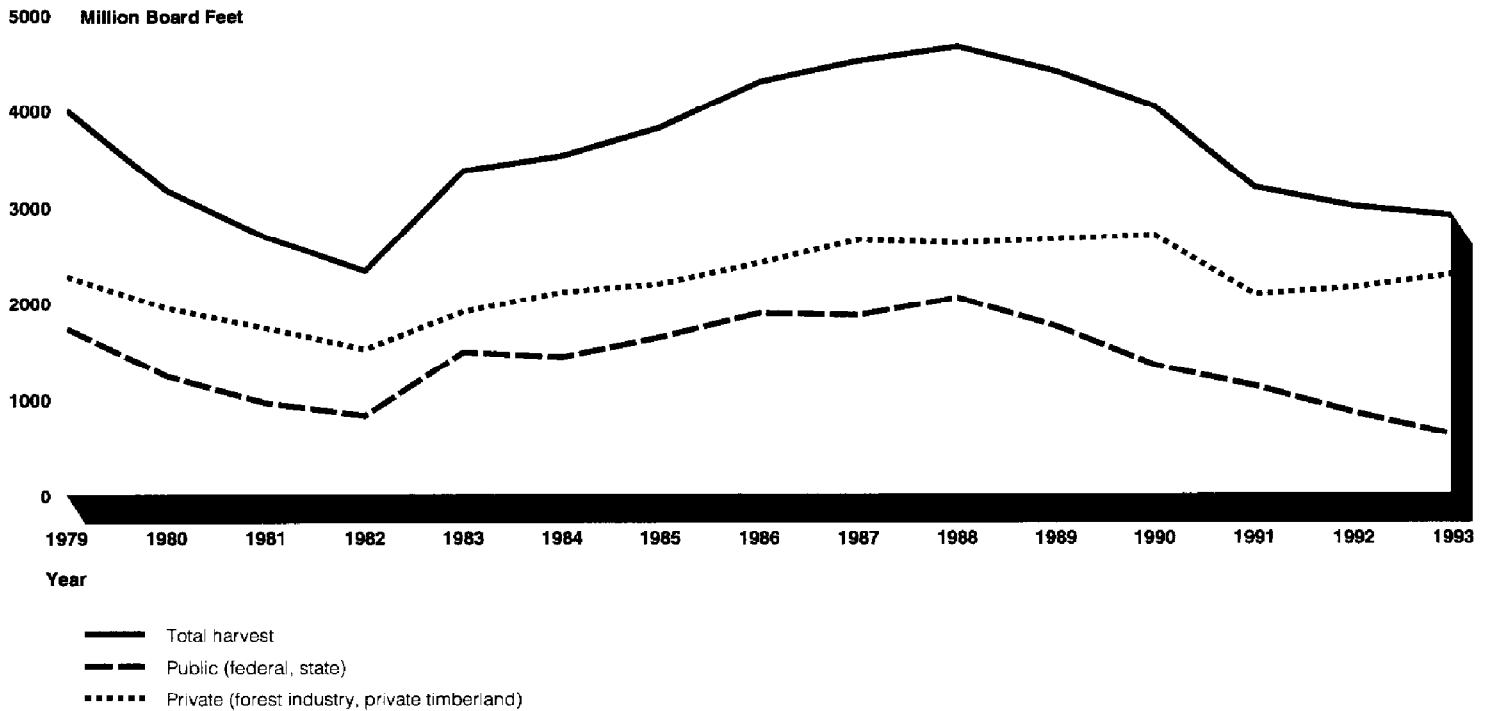
**Appendix I  
Inventory of Timberlands and Harvest  
Volumes in Washington, Oregon, and  
California**

**Figure I.5: Annual Oregon Timber Volumes Harvested From 1979 Through 1993**



**Appendix I  
Inventory of Timberlands and Harvest  
Volumes in Washington, Oregon, and  
California**

**Figure I.6: Annual California Timber Volumes Harvested From 1979 Through 1993**



In the past 5 years, the decrease in the federal timber harvest during the period ranges from 64.7 percent in California to 75.0 percent in Washington. Table I.3 shows the timber harvests in 1989 and 1993 and the percentage of decrease for all three states.

**Table I.3: Decreases in Total and Federal Timber Harvests From 1989 Through 1993**

Billions of board feet

State	Total timber harvest			Federal timber harvest		
	1989	1993	Percent decrease	1989	1993	Percent decrease
Washington	6.9	4.3	37.7	1.2	0.3	75.0
Oregon	8.4	5.3	36.9	4.3	1.5	65.1
California	4.4	2.9	34.1	1.7	0.6	64.7
<b>Three-state total</b>	<b>19.7</b>	<b>12.5</b>	<b>36.5</b>	<b>7.2</b>	<b>2.4</b>	<b>66.7</b>

Source: Washington Department of Natural Resources, Oregon Department of Forestry, California Board of Equalization.

**Appendix I  
Inventory of Timberlands and Harvest  
Volumes in Washington, Oregon, and  
California**

**Uncut Volume Under  
Federal Timber Contracts**

During the same 5-year period (1989-93), the volumes of uncut timber under contract on federal lands were also sharply reduced, as shown in table I.4.

**Table I.4: Decrease in Volume of  
Timber Under Federal Contract From  
1989 Through 1993**

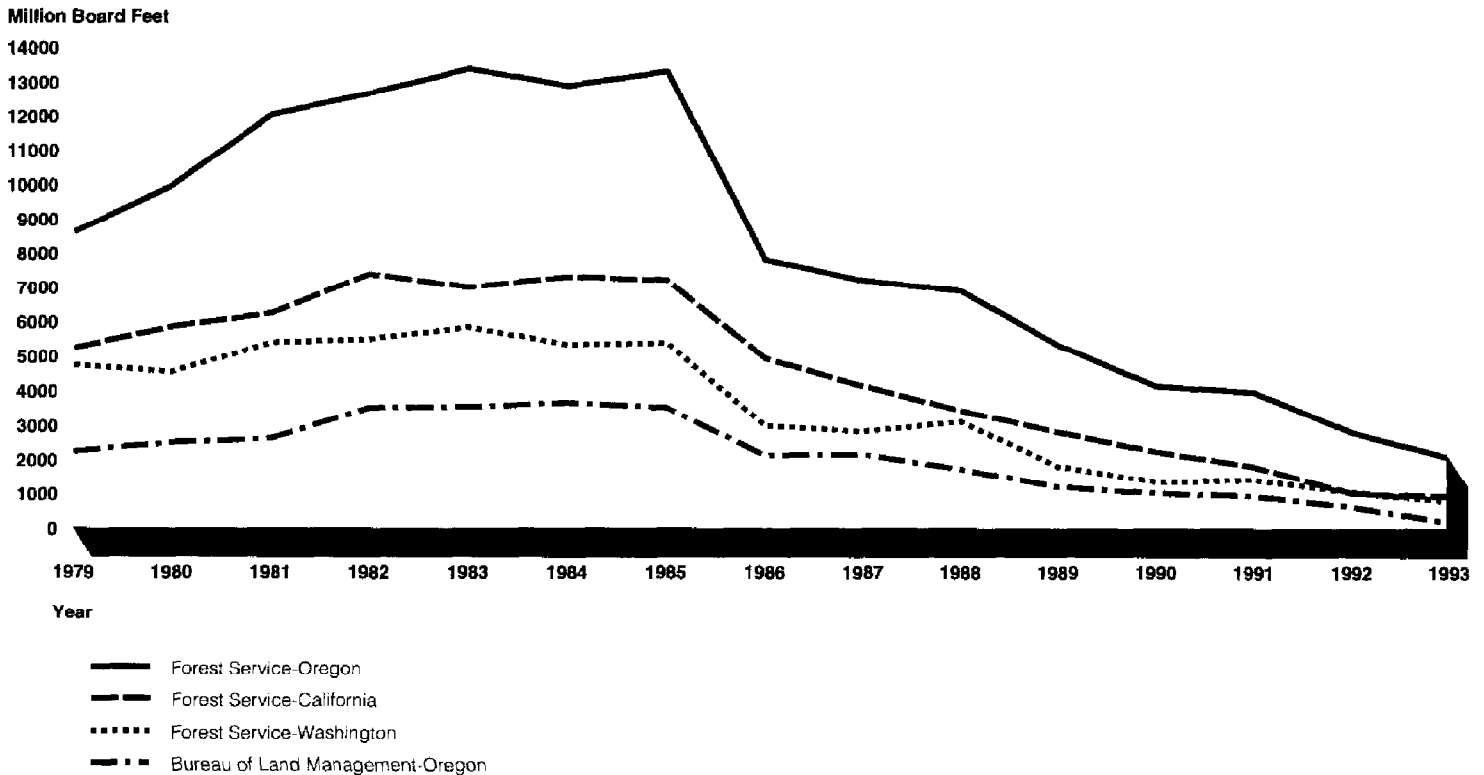
<b>Billions of board feet</b>				
<b>State</b>	<b>Volume of timber</b>		<b>Volume decrease</b>	<b>Percentage decrease</b>
	<b>1989</b>	<b>1993</b>		
Washington	1.8	0.8	1.0	55.6
Oregon	6.5	2.2	4.3	66.2
California	2.8	0.9	1.9	67.9
<b>Three state total</b>	<b>11.1</b>	<b>3.9</b>	<b>7.2</b>	<b>64.9</b>

Source: Forest Service Pacific Northwest Forest and Range Experiment Station.

Timber under federal contract in the three states declined from a total of 11.1 billion board feet in 1989 to 3.9 billion board feet in 1993, a decrease of 7.2 billion board feet. If this uncut volume under contract had not been available for harvest, federal timber harvests for the 5-year period would have been even smaller. Figure I.7 depicts the uncut federal timber volume under contract for the most recent 15 years.

**Appendix I  
Inventory of Timberlands and Harvest  
Volumes in Washington, Oregon, and  
California**

**Figure I.7: Uncut Federal Timber Volume Under Contract From 1979 Through 1993**



The steep decline between 1985 and 1986 resulted from defaulted timber sale contracts or contracts repurchased under the 1984 Federal Timber Contract Payment Modification Act (16 U.S.C. 618). This reduction is significant because the Forest Service is studying the possibility of buying contracts back from those purchasers who have uncut timber volume in designated spotted owl habitat; the purpose of the buybacks is to prevent harvesting from those areas. This action could cause a further decline in the amount of uncut federal timber under contract.

# Forest Practices Acts for Washington, Oregon, and California

Since the 1970s, Washington, Oregon, and California have had state forest practices acts to govern timber operations on private lands and to promote the continued production of high-quality timber products while protecting other natural resources, such as water quality and wildlife habitat.

## Washington

Washington's Forest Practices Act, established in 1974, regulates operations on private and state lands to (1) protect, promote, and encourage timber growth and require reforestation of commercial tree species on forest lands; (2) protect forest soils and public resources; and (3) recognize both the public and private interest in the profitable growing and harvesting of timber. According to the legislation, "...it is in the public interest for public and private commercial forest lands to be managed consistent with sound policies of natural resource protection...."

## Notification

Washington's Forest Practices Act defines four types of forest practices that are subject to the regulations:

- Class I forest practices are operations with no direct potential for damaging a public resource, such as precommercial thinning or tree planting. Such actions do not require any prior notification, but owners must comply with all other forest practice regulations.
- Class II forest practices have been determined to have a "less than ordinary" potential to damage a public resource and include such operations as partial cutting of certain timber stands or small salvage harvests, provided that these operations do not take place within a riparian (streamside) management or wetlands area. The owner must notify the Department of Natural Resources of the proposed action and may begin work 5 calendar days after the notification is received.
- Class III forest practices are those that are not otherwise classified and include other harvest or salvage of timber, some road construction, and harvesting exceeding 19 acres in an area that has been designated as difficult to reforest. These practices require Department of Natural Resources approval within 30 calendar days of receipt of application.
- Class IV forest practices have been determined to have a potential for a substantial impact on the environment and include harvesting in critical habitat of threatened or endangered species. Applications for these practices require an environmental checklist and may require a detailed environmental impact statement. These applications must be acted on within 30 calendar days of receipt of the application, unless more time is required for the detailed environmental impact statement.



---

## Harvesting

The regulations state that timber harvesting should leave the land in a condition conducive to future timber production, except within riparian management zones or when lands are converted to other uses. In addition, the regulations encourage timber harvest practices that would protect wildlife habitat, provided that "such action shall not unreasonably restrict landowner's action without compensation." The timber harvesting regulations limit the size and spacing of clearcuts and include provisions for protecting streams, disposing of debris left after the harvest, and preparing the site for reforestation.

---

## Reforestation

Unless the harvest application indicates that the land will be converted to another use—such as agriculture or residential development—reforestation is required after any individual harvest or series of harvests where 50 percent or more of the timber volume is removed within any 5-year period, unless the Department of Natural Resources determines that the trees remaining will reasonably utilize the growing capacity of the soils.

Reforestation is not required when individual dead or dying trees are salvaged or when trees are removed for commercial thinning and the remaining stand meets acceptable stocking levels. These stocking levels require a minimum of 190 (150 for eastern Washington) well-distributed, vigorous, undamaged seedlings per acre of commercial tree species that have survived on the site for at least one growing season.

Satisfactory reforestation occurs if within 3 years of completion of the harvest, or within 10 years for natural regeneration, the site is restocked to at least the acceptable stocking levels. Natural regeneration may be approved if there are sufficient commercial tree species capable of seed production, the seed trees are well distributed throughout the site, and the competing vegetation is controlled to allow the establishment, survival, and growth of seedlings.

---

## Land Conversions

Converting timberlands within 3 years after completing the harvest to a specific active use incompatible with timber growing does not fall within the reforestation requirements. Such conversions to nonforest uses do not require approval of the Department of Natural Resources; however, if the conversion is not completed, the land must be reforested.

If the landowner does not indicate on the harvest application that the land will be converted to nonforest uses, the local government may refuse to accept or process any subsequent applications for zoning or use changes for 6 years after the date of application.

---

## Oregon

The Oregon Forest Practices Act, established in 1971, regulates forest operations on private and state lands. The associated rules encourage economically efficient forest practices that ensure "continuous tree growing and harvesting and are consistent with the sound management of soil, air, water, and fish and wildlife resources."

---

## Notification

The landowner must notify the State Forester at least 15 days before the harvest of forest tree species; construction, reconstruction, or improvement of roads; site preparation for reforestation involving clearing or heavy machinery; application of insecticides, herbicides, rodenticides, and fertilizers; clearing forest land for conversion to any nonforest use; disposal or treatment of slash or woody debris; precommercial thinning; cutting of firewood to be sold or traded; or surface mining.

Landowners must submit plans and obtain written approval for any proposed operations within 100 feet of a stream which is significant for domestic water or fish use or within 300 feet of a specific site involving threatened or endangered species.

For certain activities, the landowner is not required to notify the State Forester but must still comply with the applicable forest practice rules. These exceptions to the notification requirement are (1) cultivating and harvesting Christmas trees on land used solely for that purpose, (2) maintaining roads, (3) planting trees, (4) cutting firewood that will not be sold, and (5) harvesting or collecting minor forest products, such as tree boughs or cones.

---

## Harvesting

Harvesting rules establish minimum standards to maintain the productivity of the forest land, minimize soil and debris entering waters, and protect wildlife and fish habitat. The rules include protection of residual trees and soil, treatment of waste materials, and limits on the size and location of clearcut units.

---

Roads should minimize the risk of material entering waters and may not be located in riparian management zones without previous approval of the State Forester. Roads should be designed to minimize disturbances to existing drainages and damage to water quality.

---

## Reforestation

One purpose of the administrative rules is to define economic suitability as the basis for designating forest land subject to the reforestation requirements. Any lands whose primary use is growing and harvesting forest tree species and that can produce at least 20 cubic feet of timber per acre annually are subject to the reforestation requirements.

The basic reforestation rule is that whenever an operation results in a site that is stocked with less than 25 percent of forest trees, the landowner must establish a specified number of well-distributed seedlings or saplings per acre within a stated number of years after the reduction in the stocking level. The number of seedlings required varies by region of the state and ranges from 100 to 200 seedlings per acre; the seedlings must be established and "free to grow" within 6 years. The State Forester maintains a list of forest tree species that are acceptable for reforestation by region, usually those that are normally marketable.

For lands not subject to the reforestation requirement, such as those that do not meet the productivity standard of 20 cubic feet per acre, some form of vegetative cover must be planted within 1 year of harvesting sufficient to provide continuing soil productivity and stabilization.

---

## Land Conversions

Landowners must notify the State Forester when clearing forest land for conversion to any nonforest use and must accomplish the conversion within the time period specified for reforestation. Either the presence of improvements necessary for the use of the land for the intended nonforest use, or evidence of actual use of the land for the intended purpose, would be considered proof of conversion within the specified time period. If the land has not been converted by the end of that period, the reforestation rules apply. Although conversions of timberlands to other uses do not require approval of the State Forester, county and local land-use laws do apply.

---

## California

California's original Forest Practice Act was adopted in 1945 and was later replaced by the Z'berg-Nejedly Forest Practice Act of 1973, which

regulates timber harvesting and related practices on all private, state, and local government timberlands. The act's stated intent is to create and maintain an effective and comprehensive system of regulation and use of all timberlands to ensure that (1) where feasible, the productivity of timberlands is restored, enhanced, and maintained and (2) the goal of maximum sustained production of high-quality timber products is achieved while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries, regional economic vitality, employment, and aesthetic enjoyment. The State Board of Forestry has adopted rules to implement the goal of maximum sustained production by requiring all landowners to address long-term sustained yield on their lands.

## Notification

Before any commercial timber harvesting, a landowner must file a timber harvesting plan with the Department of Forestry; a new plan must be filed for each proposed operation. The timber harvesting plan must be prepared by a Registered Professional Forester, must undergo a thorough environmental review by an interagency review team, and is subject to public review and comment before approval. The minimum time for this review and approval is 35 days, and complicated plans may require a year for approval.

Certain operations having minimal impact—such as cutting Christmas trees, removing incidental vegetation or minor forest products, cutting or removing dead, dying, or diseased trees, or operations within 150 feet of an occupied structure for hazard reduction—are exempt from the filing and approval process but must still comply with the other forest practice rules.

In lieu of individual timber harvest plans, owners of private timberlands may file a nonindustrial timber management plan that outlines the long-term goals and management strategy for a parcel of land. The long-term management objective must be to establish a well-stocked stand of trees of various ages, which permits periodic harvests, while maintaining the stand to sustain future harvests. These plans must be prepared by a Registered Professional Forester and are subject to the same public review and comment process. However, once approved, no further approval is required for timber harvests as outlined in the overall plan.

---

## Harvesting

Timber operations must be conducted in accordance with the approved timber harvesting plan or the approved nonindustrial timber management plan. In addition, any landowner or contractor who conducts timber operations in California must be licensed by the state and attend a 2-day class on forest practice regulations and environmental protection before applying for the license.

The rules for harvest operations cover logging methods, road placement, protection of streams and wetlands, and restrictions on the size and spacing of clearcuts. In addition to the state's forest practice rules, the act allows the Board of Supervisors of any county to petition the Board of Forestry for rules that are stricter than those for the rest of the state. The Board of Forestry must adopt the requested rules if they are consistent with the intent of the act and if the county proves that they are necessary.

---

## Reforestation

Reforestation requirements are intended to ensure that a stand of commercial tree species, sufficient to utilize adequately the suitable and available growing space, is maintained or established after timber harvest. The forest practice rules define minimum acceptable stocking standards.

An area included in a timber harvesting plan will be considered acceptably stocked if, within 5 years after harvest, the area contains an average of 300 trees per acre or 150 per acre for lands with a lower productive capacity. To meet the stocking standard, the trees must (1) be in place at least two growing seasons, (2) be alive and healthy, and (3) be a commercial species from a local seed source.

---

## Land Conversions

A landowner wanting to convert timberlands to other uses must file an application with the Board of Forestry. These applications are approved only if (1) the conversion would be in the public interest; (2) the conversion would not have a substantial and unmitigated adverse effect on the continued timber-growing use or open-space use of other land zoned as timberland production and located within 1 mile of the proposed change; and (3) the soils, slopes, and watershed conditions would be suitable for the uses proposed.

According to the rules, an opportunity for an alternative use of the land is not sufficient reason for approval of the application. Conversion will be approved only if there is no suitable land nearby, other than timberland, that could be used for the alternative purpose.

---

**Appendix II**  
**Forest Practices Acts for Washington,**  
**Oregon, and California**

---

Approval of a conversion is conditioned upon obtaining required rezoning or use permits from other agencies. Once these are obtained, the owner must still file a timber harvesting plan before clearing the land, although the plan does not have to be prepared by a Registered Professional Forester.

# Factors Influencing Landowners' Decisions About Active Management of Private Timberlands

Many factors influence landowners' land-use decisions. These include the availability of incentive programs such as federal and state educational, technical, and financial assistance programs and state tax provisions.

## Educational, Technical, and Financial Assistance Programs

Numerous assistance programs are available for private landowners, including federal and state cost-share programs, as well as additional technical and educational assistance at the state level and from private sources.

## Federal Programs

The Cooperative Forestry Assistance Act of 1978 (16 U.S.C. 2101 et seq.) authorized the establishment of a coordinated and cooperative federal, state, and local forest stewardship program to encourage the production of timber on private lands while meeting the multiple-use objectives of landowners in an environmentally sensitive manner. The Forest Service, through its Cooperative Forestry organization, works with the state's forestry departments to provide technical and financial assistance to private landowners. The Forest Service funds these forest stewardship programs and coordinates them at the national level, while the states' forestry departments administer the local programs and work directly with the owners of private timberlands in all three states.

The federal assistance programs are generally limited to ownerships of 1,000 acres or less of private timberlands, and participation is limited by the amount of federal funding available each year. The federal programs include the following:

- The Forestry Incentives Program emphasizes increased timber production from private lands and is limited to the most productive timberland. This program covers preparing the land, tree planting, and subsequent timber stand improvement activities. Reimbursement is available for up to 65 percent of the cost of approved practices, with a maximum of \$10,000 per owner annually. This cost-share program may not be used for reforestation after a timber harvest.
- The Agricultural Conservation Program may be applied to lands that are capable of growing trees as a conservation measure, such as preventing soil erosion and water pollution. This program does not apply to practices that are primarily production oriented, but will cover site preparation, moisture conservation measures, tree planting, and subsequent timber

---

**Appendix III  
Factors Influencing Landowners' Decisions  
About Active Management of Private  
Timberlands**

---

stand improvement. Reimbursement of up to 75 percent of approved practices is available, with a maximum of \$3,500 per owner annually.

- The Stewardship Incentive Program, authorized in the Food, Agriculture, Conservation, and Trade Act of 1990 (16 U.S.C. 2101, et seq.), encourages the active management of all natural resources consistent with the objectives of the landowner. The intent of the program is to maintain the health and productivity of the land and resources. In order to qualify for reimbursement under this program, a landowner must have an approved stewardship plan, although preparation of this plan can also be cost-shared. Approved practices under this program include development of the stewardship plan, tree planting and timber stand improvement, and enhancement or improvement of other resources, such as wetland areas or fisheries and wildlife habitat. Reimbursement of up to 75 percent of approved practices is available to a maximum of \$10,000 per owner per year.
- The Forest Legacy Program, also authorized in the Food, Agriculture, Conservation, and Trade Act of 1990, was developed to promote the long-term integrity of forest lands. Under the Forest Legacy Program, private forest lands that are determined to be environmentally important and threatened by present or future conversion to nonforest uses, may be protected by federal purchase of a conservation easement. Landowner participation is strictly voluntary.

In addition to these federal cost-share programs, educational and technical assistance is provided through the Cooperative Forestry organization in the Forest Service and through the Department of Agriculture's Extension Service. Extension Service foresters are affiliated with state universities, such as Washington State University and Oregon State University, and sponsor educational programs and seminars for private landowners. The Extension Service foresters also work closely with the states' forestry departments and associations of private landowners to disseminate information.

---

## State Programs

State foresters with the states' departments of forestry not only administer the federal stewardship and cost-share programs but also are a source of technical assistance for private landowners. In addition, the state foresters review and approve stewardship management plans and verify that approved practices submitted for reimbursement under cost-share programs have been completed.



---

## Private Programs

The Tree Farm System was originally sponsored by the forest products industry. Tree farms are privately owned lands managed for growing and harvesting forest products as well as achieving the multiple-use benefits of watershed, recreation, and improved wildlife habitat. Landowners who participate in this program must have a plan that meets the landowner's goals and promotes forest stewardship. Approval of the resource management plan then certifies the land as a tree farm. This is a voluntary program, funded by landowners, industry, and others, in which the landowners receive technical assistance and recognition through the certification process.

Other sources of information and assistance are the national and state associations that represent owners of private timberlands, including the National Woodland Owners, the Oregon Small Woodlands Association, the Washington Farm Forestry Association, and the Forest Landowners of California. These membership organizations sponsor educational programs and promote nonindustrial forestry. The associations also coordinate with the Cooperative Forestry programs, state forestry departments, and the Extension Service to address the needs and concerns of private landowners.

Private landowners may also obtain technical advice and assistance through corporate stewardship programs. Individual forest industry corporations sponsor these programs and provide technical assistance to owners of private timberlands, usually in exchange for the right to bid on any future timber harvests from the private lands.

---

## State Tax Provisions

Washington, Oregon, and California all have tax provisions that affect private timberlands. These state tax structures are generally perceived as having a neutral effect on landowners' land and resource management decisions. Oregon also has a reforestation tax credit that was enacted to encourage the development of underproductive forest land.

---

## Property Taxes

Before the 1970s, Washington, Oregon, and California assessed all private land, including timberland, for property tax purposes at its "highest and best use"—the value of the land if sold on the open market. Since most timberland produces harvest income only after a 40- to 80-year growth period, landowners often found it difficult to pay property taxes every year on these higher assessed values.

---

**Appendix III  
Factors Influencing Landowners' Decisions  
About Active Management of Private  
Timberlands**

---

Recognizing the shortcomings of this method of taxing timberland and wanting to ensure that taxes would not destroy the economic incentives for growing timber on private lands, the states changed their tax laws. Under the revised tax structure, timberland is assessed at the value of the land for growing and harvesting timber rather than at the highest and best use. The assessed value depends on the productivity of the soils. For example, in the 1993 assessment year for Washington, assessed values ranged from \$14 to \$169 per acre, depending on the productivity of the land.

---

**Harvest or Yield Tax**

When the three states revised their property tax structure to provide uniform, predictable, and fair taxes for owners of private timberland, they also instituted a tax on the value of the timber when it is harvested. Combined with the preferential treatment for property taxes, the overall effect was meant to be neutral. In addition, the change would shift the tax burden on the standing timber to the time of harvest, when landowners would have the revenues available to pay the taxes.

For example, in Oregon after a landowner notifies the state forestry department of a planned timber harvest, the state forestry department in turn notifies the state department of revenue. The state department of revenue then mails tax reporting forms to the landowner with instructions for filing the forms and paying the yield tax. The tax rate varies by state and ranges from 3 to 6 percent of the value of the timber harvested. The timber harvest volumes reported by landowners to the taxing authorities are later summarized and reported to the states' forestry departments for tracking purposes.

---

**Tax Credits**

In order to encourage reforestation of underproductive commercial forest land, Oregon established an Underproductive Forest Land Conversion Tax Credit, which could be taken on both individual and corporate income tax returns or any other legal entity who may pay income taxes. To be eligible for this tax credit, a landowner or corporation must own at least 5 acres of commercial forest land in the state, must reforest underproductive forest land, and must have at least \$500 of eligible costs. Underproductive forest land includes land that is inadequately stocked with trees but that does not fall under the reforestation requirements of the forest practices act, either because there has been no timber harvest or the timber was harvested before the forest practices act went into effect.

---

**Appendix III**  
**Factors Influencing Landowners' Decisions**  
**About Active Management of Private**  
**Timberlands**

---

The landowner may claim a tax credit of up to 30 percent of the costs of preparing the site, purchasing and planting trees, removing competing vegetation, and other costs of establishing the stand of trees. Any reimbursements received under federal cost-share programs must be deducted from the incurred costs. When certified by a state forester that the completed planting meets the preliminary specifications, the landowner may claim 15 percent of the tax credit. The other 15 percent may be claimed once the state forester certifies that the trees have been established—that is, the planted trees have survived two growing seasons and meet the minimum stocking levels of 100 or 200 seedlings per acre.

# Federal Tax Treatment of Timber

Historically, the federal tax code has had three tax incentives<sup>1</sup> that specifically benefit owners of private timberlands. These federal income tax incentives, somewhat modified by the Tax Reform Act of 1986, include (1) capital gains treatment of timber income, (2) treatment of annual timber management costs as a current deduction, and (3) an investment tax credit for reforestation expenses. In addition, federal estate taxes may affect the long-term decisions of owners of private timberlands.

## Impact of the Tax Reform Act of 1986

Before the Tax Reform Act of 1986 (P.L. 99-514), tax incentives were more generous as well as available to more taxpayers. The Tax Reform Act directly changed two of the tax incentives specifically benefiting timber by eliminating the special lower tax rates on capital gains and limiting the current deduction or expensing of annual timber management costs. Because it placed limits on the amount of expenses a taxpayer could deduct without being "actively involved" in a business or investment, the Tax Reform Act greatly reduced the deductibility of annual expenses for many small timberland owners.

The Tax Reform Act retained the reforestation tax credit and accelerated the deduction of remaining reforestation expenses. This tax treatment of reforestation expenses mostly benefits small timberland owners, because of the relatively low maximum amounts that can be deducted annually (\$10,000 per taxpayer).

## Preferential Tax Rates on Capital Gains Income

The change to the tax code in 1986 that most affected owners of private timberlands was the elimination of the capital gains preference, i.e., all income was to be taxed at the same rate. This change affected all capital gains income, not just that from timber. By raising the maximum statutory tax rate on individual capital gains (from 20 percent to 28 percent in 1987) to the same rate as for ordinary income, the Tax Reform Act removed the major benefit of the special capital gains treatment for timber income. The Omnibus Budget Reconciliation Act of 1990 (P.L. 101-508) and the Revenue Reconciliation Act of 1993 (P.L. 103-66) partially restored the capital gains differential by raising the maximum statutory tax rates on an individual's ordinary income, but not for income from capital gains.

<sup>1</sup>Tax incentives are reductions in the total tax liability that result from preferential provisions in the tax code. Tax incentives are also referred to as tax preferences because those engaged in the affected activity, such as growing timber, receive preferred tax treatment. Tax incentives can influence the relative attractiveness of different types of investment and can be a factor in the decisions made by private landowners.

Since 1944, income from the sale of timber has generally qualified for capital gains treatment. In contrast, most other taxpayers have not been permitted to use capital gains treatment for the income from ordinary product sales. Before the Tax Reform Act, most long-term capital gains were taxed at significantly lower maximum rates (20 percent) than the highest individual marginal tax rate on ordinary income (50 percent). In part, this lower tax rate for capital gains was designed to offset the fact that capital gains were not indexed for inflation. It was thought unfair to tax not just real appreciation, but the inflationary component as well.

After the Tax Reform Act, capital gains were taxed at ordinary income rates (28 percent maximum). Efforts to adjust capital gains income for inflation have not succeeded. The effect of the 1986 act, absent any adjustment of capital gains for inflation, was to do away with the benefit of receiving capital gains treatment. In 1990, this relative benefit was partially restored when capital gains retained the maximum 28 percent tax rate, while the highest statutory individual marginal tax rate for ordinary income was raised to 31 percent. This trend continued in 1993 when the highest individual marginal rate on ordinary income was raised to 39.6 percent.

### Expensing of Annual Timber Management Costs

Another significant change to the tax code in 1986 for owners of private timberlands was the "passive loss" limitations. To curb tax shelter activity, the Tax Reform Act restricted the ability of many investors, including many owners of private timberlands, to deduct current-period expenses in calculating their taxable income. Before the Tax Reform Act, the ability to deduct current-period expenses lowered the effective tax rate on timber growing compared with investments for which such expensing was not permitted.

Before the Tax Reform Act, except for the costs of establishing a timber stand (site preparation and reforestation), which must be capitalized (added to the initial cost of the timber stand), all private timberland owners generally were permitted to deduct interim timber management costs (or annual expenses) in the year incurred. This meant that most of the ongoing costs of maintaining a timber stand after it was established—such as thinning and fertilizing—could be deducted immediately (expensed), rather than having to be capitalized. In most other industries, such costs must be capitalized and used to offset the income received when the asset is sold.

Because investors are subject to passive loss limitations, expensing is limited to those who participate “actively” in the investment—mainly larger landowners and corporations. Unless a taxpayer spends enough hours per year in a business to qualify as “active” (a taxpayer qualifies with 500 hours per year and may qualify in some cases with more than 100 hours per year), the participation is classified as “passive,” and any losses can only offset income from other passive investments. According to a representative of the Forest Industry Council on Taxation, owners of small parcels of timberland may not spend the minimum amount of time per year on their lands to qualify them as “active” investors.

## Reforestation Tax Credits

The third special federal timber tax provision is the reforestation tax credit and the special 7-year amortization for reforestation expenses. While the Tax Reform Act repealed the 10-percent investment tax credit for personal property in general, it retained the 10-percent tax credit and accelerated amortization of expenses for reforesting timberland.

Since 1980, all owners of private timberlands have been permitted to amortize (deduct), over a 7-year period, up to \$10,000 annually of qualifying reforestation expenses, such as site preparation, tree planting or seeding, and labor and tool costs. Without this tax incentive, these costs would have to be capitalized and recovered only when the timber is sold or through depletion allowances at the time the timber is cut. In addition, a 10-percent investment tax credit, up to \$10,000 annually, is allowed for these same costs. For example, if a landowner had \$10,000 of qualified reforestation expenses in a given year, an investment tax credit of 10 percent or \$1,000 could be used to offset the current tax liability. The remaining \$9,000 of qualified costs could then be deducted as an annual expense over the next 7 years.

These tax incentives enable landowners to recover the costs of reforestation more rapidly, thus helping to offset the costs of replanting.

## Federal Estate Taxes

Inheritances and gifts are not included in the federal income tax base but are subject to a unified transfer tax that is levied on estates and gifts. Federal estate taxes can affect the attractiveness of investments in timberland and other real property. Estate taxes may have an adverse effect on timber investment because all or a portion of a decedent’s timberland may have to be sold to pay the tax. The tax code contains special provisions intended to lessen the likelihood of this event.

---

**Appendix IV**  
**Federal Tax Treatment of Timber**

---

In computing the taxable base for the estate tax, a lifetime exemption of \$600,000 is permitted for each estate. Bequests of any size to qualifying spouses are not subject to any tax. Thus, only estates inherited by heirs other than qualifying spouses and exceeding \$600,000 in value are subject to federal estate tax. Estate tax rates effectively range from 37 to 55 percent on taxable values in excess of the \$600,000 exemption equivalent.

One aspect of estate taxation may pose particular problems for owners of timberlands and agricultural property. Timberland values have been rising rapidly in many parts of the country, often reflecting uses and values other than the value of the land for growing timber. Normal estate valuation rules require that, in calculating the basis of the estate tax, the land must be assessed at its highest-valued use, even if that use is not growing timber but involves conversion of the land to a nonforest use. This rule means that timberland heirs, particularly heirs of relatively small timber stands, might face estate taxes based on higher market-valued uses of the land than timber. The need to pay estate taxes could accelerate the conversion of small timberland holdings to commercially higher-valued uses, or could result in the premature harvest of timber in order to pay the taxes.

To mitigate the effect of estate taxes on relatively small land holdings, the code permits estate taxes on certain closely held businesses to be paid off over as long as 15 years, at favorable rates of interest. In addition, heirs receive a tax benefit because, if they sell an inherited asset, they do not pay tax on any increase in the asset's value that occurred between the time the decedent acquired the asset and when it was inherited.

---

# Major Contributors to This Report

---

Resources,  
Community, and  
Economic  
Development  
Division, Washington,  
D.C.

Linda L. Harmon  
John P. Murphy, Jr.

---

Seattle Regional  
Office

Carole J. Blackwell

---

General Government  
Division, Washington,  
D.C.

Anne O. Stevens



---

### Ordering Information

The first copy of each GAO report and testimony is free. Additional copies are \$2 each. Orders should be sent to the following address, accompanied by a check or money order made out to the Superintendent of Documents, when necessary. Orders for 100 or more copies to be mailed to a single address are discounted 25 percent.

#### Orders by mail:

U.S. General Accounting Office  
P.O. Box 3015  
Washington, MD 20004-0015

#### or visit:

Room 1108  
700 K St. NW (corner of 4th and E Sts. NW)  
U.S. General Accounting Office  
Washington, DC

Orders may also be placed by calling (301) 413-0000  
or by using fax number (301) 295-0900, or TDD (301) 413-0006.

Each day, GAO issues a list of newly available reports and testimony. To receive facsimile copies of the daily list or any list from the past 90 days, please call (301) 295-4037 using a touchtone phone. A recorded menu will provide information on how to obtain these lists.

**United States  
General Accounting Office  
Washington, D.C. 20548-0001**

**Bulk Mail  
Postage & Fees Paid  
GAO  
Permit No. G100**

**Official Business  
Penalty for Private Use \$300**

**Address Correction Requested**

