

**COMMISSION
ON
OLD GROWTH
ALTERNATIVES FOR
WASHINGTON'S
FOREST TRUST LANDS**

Submitted To:

Brian Boyle,
Commissioner of Public Lands
Washington State

FINAL REPORT

June 1989

- ACKNOWLEDGMENTS -

**COMMISSION ON OLD GROWTH ALTERNATIVES
FOR WASHINGTON'S FOREST TRUST LANDS**

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I. SUMMARY



I. SUMMARY

The Commission on Old Growth Alternatives for Washington's Forest Trust Lands offers the following consensus package of recommendations for the state trust lands on the western Olympic Peninsula. These recommendations seek to balance the goals of providing trust revenue for education, protecting the biological diversity of the forest environment, and supporting the local timber-dependent economy.

The Commission on Old Growth Alternatives for Washington's Forest Trust Lands was created in June, 1988, by Commissioner of Public Lands, Brian Boyle. The Commission consisted of 32 citizens broadly representative of the timber industry, conservation and wildlife groups, school and other trust beneficiaries, Indian tribes, local Olympic Peninsula community leaders, as well as legislators, and financial, legal and forestry experts. It was created to advise Commissioner Boyle and the Department of Natural Resources on future management of old growth forests on state trust lands on the western Olympic Peninsula.

As a result of almost a year of thorough study of the issues and facts and sometimes difficult debate and compromise, the Commission arrived at the following recommendations.

Recommendations

To Meet the Trust Responsibility in All Commission Recommendations

The Commission acknowledges the special legal obligations of the state to the trust beneficiaries. Federal and state law and court decisions have established the principle of undivided loyalty as these lands are managed to provide a flow of income to both present and future beneficiaries. Sales of timber are the traditional source of revenue and are expected to continue as an important future source.

It is within this context that the Commission recommends that the legal obligations to trust beneficiaries be met in all of its recommendations. However, the Commission further recommends that the state provide additional sources of revenue for school and university construction.

To Create the Olympic Experimental State Forest

The Commission recommends the creation of the Olympic Experimental State Forest on western Olympic Peninsula state trust lands. The purpose of creating an experimental forest is to produce a level of timber harvest comparable with contemporary forest practices and simultaneously to provide for ecological values.

The intent is to recognize that the Department of Natural Resources lands are a commercial forest within which there is special opportunity to experiment with harvest techniques.

The Commission believes that the ecological values of old growth forests include but go beyond spotted owl habitat. Scientists are only just beginning to understand the complex ecosystem interrelationships in these forests, and the comparatively lower elevation mature forests remaining on state lands have particularly rich diversity. Forest scientists and managers are increasingly discussing the ability to sustain key elements of ecological diversity within managed commercial forests as an alternative to past approaches. The Commission sees a clear need for further research in this area and a great opportunity to conduct it on state-owned lands. The intent is to experiment with harvest and regeneration methods to enhance habitat characteristics and commodities production. The Commission believes this recommendation may lead to entirely new models of forestry including workable alternatives which balance production with ecology. The Commission also believes the experimental forest can be the catalyst for needed coordination among the various forest landowners in this area.

To Create the Olympic Natural Resources Center

The experimental forest will be a focus for long-term research to answer currently unresolved problems of forest management. To focus and coordinate this research, the Commission recommends creation of the Olympic Natural Resources Center to develop research and educational programs to support management of natural resources for both the production of commodities and the maintenance of ecological values. The only research center with this special mission, the Olympic Natural Resources Center would coordinate research activities of a broad array of federal, state, local, academic and private sector scientists and economists. Funding must be sought from federal, state, and private sources; the 1989 Washington State Legislature has already provided encouraging support.

To Create a Separate Sustained Yield Unit

The Commission recognizes that the decline in mature, natural forest areas on state trust lands on the western Olympic Peninsula is leading simultaneously to temporary but serious future reductions in local timber supply from these lands and to loss of habitat for wildlife species associated with old growth forests, including the northern spotted owl. Reductions in timber supply from state lands, combined with concurrent reductions from federal lands, jeopardize the economic stability of western Olympic communities. While most spotted owl habitat is found on federal lands, decline of spotted owl habitat on state lands nevertheless contributes to the concern about the future survival of this species. The Commission, therefore, recommends the creation of an independent sustained yield unit on the western Olympic Peninsula. This not only stabilizes the timber supply for the local economy and income for trust beneficiaries but also slows the loss of old growth habitat.

The Commission also recognizes that the western Olympic Peninsula is one of the best and most productive tree-growing regions of the world, with excellent markets, and that the timber industry of the region is a vital and valuable resource for the local communities and for the State of Washington as a whole.

To Defer Harvest for 15 Years on 15,000 acres

Given the special need for spotted owl habitat in this area and the opportunity for ecological and forestry research created by the Olympic Experimental State Forest and Olympic Natural Resources Center, the Commission arrived at a practical approach for addressing wildlife habitat concerns on state trust lands, including those of the spotted owl. The Commission recommends that 15,000 acres of mature, natural stands identified by wildlife biologists as most critical for spotted owls be deferred from harvest for fifteen years to allow experience to be gained from management and research that will lead to wise future decisions for these areas. The Commission intends both that research be aimed particularly at showing how future harvest in these deferred areas could occur simultaneously with retention of key ecological features, and that the evaluation of research results at fifteen years be fair and unbiased. Commission members have confidence, and are laying the groundwork to ensure, that future decision-makers will have improved information available to take advantage of the options which this recommendation would give them. Recognizing the short term revenue needs of trust beneficiaries, the Commission also recommends that the Department of Natural Resources take steps to ensure no individual trust is disproportionately affected by these harvest deferrals.

To Acquire up to 3000 Acres of Special Value Lands

Commission members believe the special ecological, aesthetic, and interpretive values of some limited areas of trust lands are unique and justify permanent protection. In this case, trust obligations require that full compensation be provided trust beneficiaries. The 1989 Legislature provided one source of funds for this acquisition. The Commission recommends that the state acquire up to 3000 acres of these special lands on the western Olympic Peninsula, to be permanently reserved from timber production. Up to 500 acres may be lands currently intended for harvest.

In order to assure the reliable timber supply needed by the local economy, the Commission intends that the balance of mature stands in the experimental forest which are not deferred or acquired will be harvested according to the stepped-down sustained yield plan and new harvest, silvicultural and landscape techniques.

To Undertake a Comprehensive Economic Study

In discussions with leaders of the western Olympic Peninsula community, Commission members concluded that new economic development strategies are needed if this area is to weather the current and projected reduction in timber

supply and to create a more sustainable and diverse economy in the future. Therefore, the Commission recommends the state undertake a comprehensive economic study and provide improved economic development resources for the western Olympic Peninsula. Some of these proposals have already been acted on by the State Legislature, but the Commission believes more must be done. The Commission is convinced there must be a substantial and long-term financial commitment by Washington State to community economic development in this area and that local citizens must be involved in the design and implementation of any studies undertaken. The Commission also recognizes that finding ways to increase domestic processing of timber consistent with legal trust obligations may have potential to benefit the Olympic Peninsula economy.

To Create an Advisory Committee

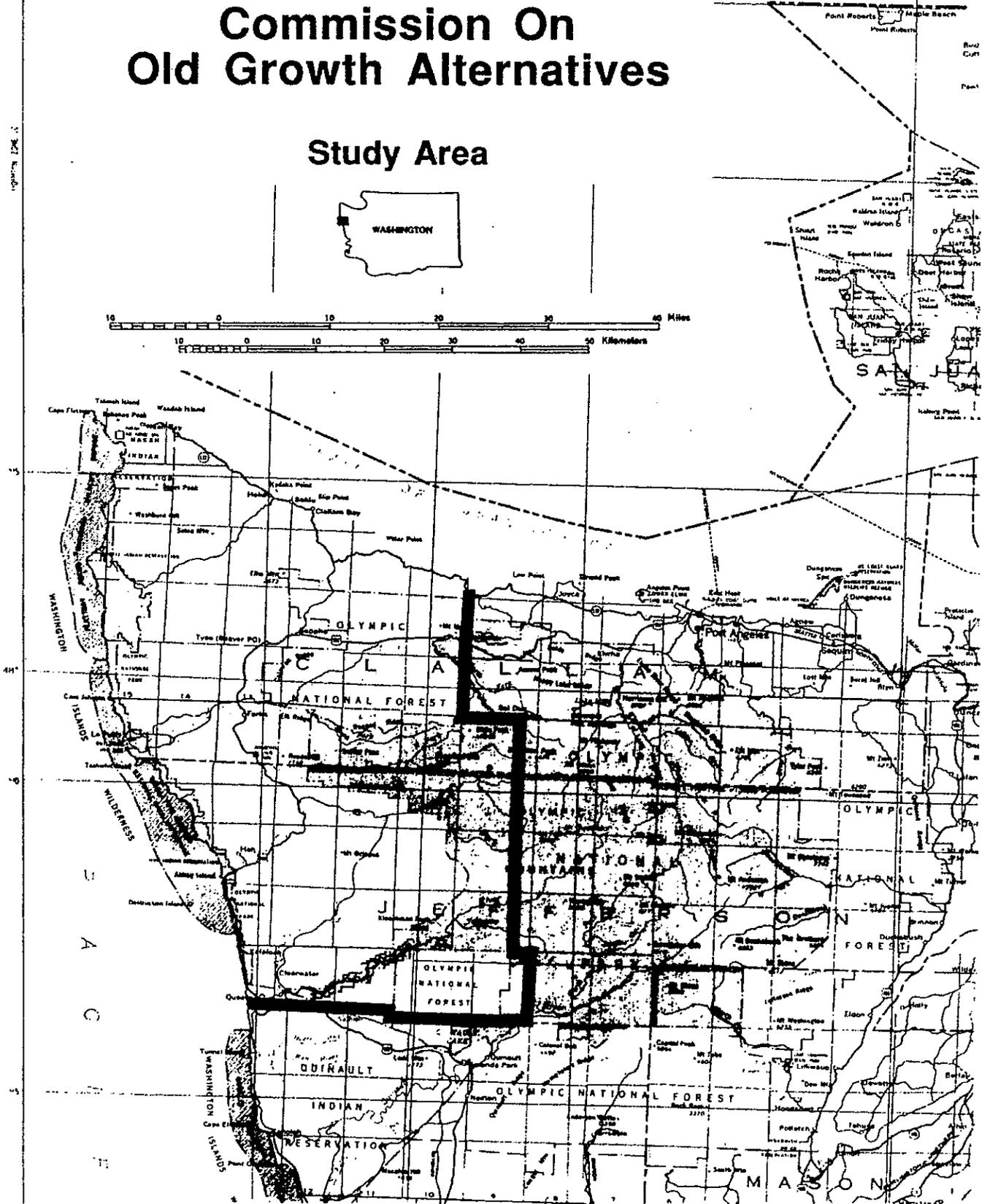
Commission members suggest continued involvement as these recommendations are adopted and implemented. Therefore, as a final recommendation, the Commission recommends that the Board of Natural Resources create an advisory committee, including the range of interests present on the Commission itself, to assist with initial development of specific tasks, to assess progress each year, and in fifteen years to evaluate the success of this entire agreement.

The Commission, in presenting its report to Commissioner Boyle and the Board of Natural Resources, urges prompt and serious attention be given to all these recommendations.

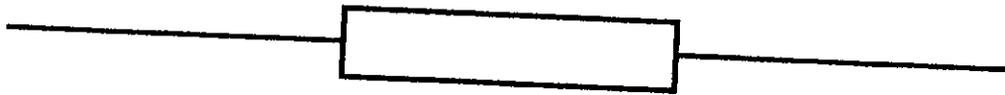
All the parties acknowledge that this agreement does not represent an optimal solution for any interest. It is a practical consensus agreement in the unique context of state-owned trust lands on the Olympic Peninsula. Commission members are satisfied this is a fair and promising package of recommendations. The Commission sincerely hopes the spirit of cooperation established here can spread to other discussions of the old growth issue.

Commission On Old Growth Alternatives

Study Area



II. COMMISSION CHARTER



II. COMMISSION CHARTER

In June, 1988, Commissioner of Public Lands Brian Boyle established the Commission on Old Growth Alternatives for Washington's Forest Trust Lands. The Commission was created to advise Commissioner Boyle and the Washington State Department of Natural Resources on future management of old growth forests on state lands on the western Olympic Peninsula.

Department of Natural Resources timber harvest projections on state-owned lands show that under current policies, within 15 years, most of the approximately 60,000 acres of mature, natural forests remaining on these state lands will have been cut. This fact has major implications

- o for trust beneficiaries, particularly common schools, counties and state universities that rely heavily on timber sales to support capital construction projects
- o for protection of ecological values associated with these natural stands, especially habitat for rare and endangered species and
- o for timber supply/jobs for the local communities.

An intense debate developed over whether and how much of the original forest stands should be harvested, at what rate, and whether and how much should be preserved. This debate intensified during the life of the Commission as lawsuits against federal agencies and agency decisions impacted timber sales and supplies.

The Commission brought together in a non-confrontational setting 32 representatives of the various interests: the timber industry, conservation and wildlife groups, school and other trust beneficiaries, Indian tribes, local Olympic Peninsula community leaders, as well as legislators and financial, legal and forestry experts.

Commission members were committed to developing balanced solutions to recommend to the Commissioner of Public Lands and the Board of Natural Resources concerning the following issues as described in the Charter:

- o The future revenue flows to trust beneficiaries
- o The future ecological diversity on state-owned lands on the western Olympic Peninsula
- o The availability of wildlife habitat on these lands, especially habitat for rare and endangered species
- o The possibility of preserving in perpetuity on state-owned lands some examples of original forest cover for aesthetic, recreational, and spiritual values

- o The future flow of timber from these lands to local industry and communities and to ultimate markets

The Commission's mandate, then, was to develop consensus recommendations on how best to manage the remaining old growth on state trust lands to meet the future needs of the various interests: education, the environment, and the economy.

III. BACKGROUND



III. BACKGROUND

A. Old Growth Forests Described

Despite efforts of numerous foresters to define what old growth is, there is as yet no one commonly-accepted definition. However, the existing uses of the term old growth can be broadly divided into two general categories: first, those that have been developed for purposes of timber inventory and, second, those that focus on ecological or biological features of natural stands.

Prior to the development of a more recent interest in ecological features of natural forest stands, foresters and managers were interested primarily in classifying trees for purposes of describing a forest inventory and projecting a timber harvest. For such inventory purposes, foresters traditionally described the timber by species, stand age, site and stocking.

The Department of Natural Resources definition of old growth for purposes of its sustained harvest computer model includes all trees over 100 years old. By contrast, the US Department of Agriculture Forest Service (US Forest Service) defines old growth as trees that are 160 years old or older and are 21" in diameter at breast height.

Ecological definitions of old growth focus on the structure, composition and functions of the forest stands. The basic characteristics of old growth from an ecological standpoint are the presence of large trees, standing snags, dead and down material, less density with some openings in the canopy, layers of vegetation, and several tree species at a range of ages. In order for these stands to provide appropriate habitat for various plant and animal species, there must be blocks of sufficient size to create interior habitat spaces. Research has not determined what amount of contiguous old growth is required to meet this need.

The forest types of mature, natural stands represented in the Department of Natural Resources managed lands in the western Olympic Peninsula include western hemlock, silver fir, western red cedar, and "21 Blow" stands of mixed type that grew up after wind storms of 1890 and 1921.

B. Importance of Old Growth

Commission members as a group agreed that old growth forests are important for the following reasons:

- o they provide revenue for construction of educational facilities in the State of Washington
- o they provide habitat for old growth-related plants and wildlife; they protect water quality, provide productive aquatic habitat, and promote high air and soil quality

- o they contribute to the economic health of communities on the western Olympic Peninsula
- o they provide opportunities for aesthetic enjoyment, recreation, education, and research, and they have significant traditional religious, cultural and spiritual values for tribal communities

While it is clear that old growth is important to the groups represented on the Commission, it is also clear that its many economic, social, recreational, educational and aesthetic qualities make it an important resource to many Washington residents who may be unaware of the role it plays in their lives.

C. Amount of Old Growth Forests on the Western Olympic Peninsula

Existing forest inventories on public lands on the western Olympic Peninsula were designed and established to describe forest stands and to predict harvest levels before there was significant interest in key ecological old growth characteristics. Consequently, these inventories do not include information about the structure, composition and functions of forest stands and have not proved to be satisfactory sources of information on the amount of ecologically-significant old growth that remains.

There are plans to revise inventories to incorporate ecological characteristics in future but, for the present, the amount of old growth that remains in different ownerships depends on the definition of old growth used in the inventories of each of the ownerships.

The Department of Natural Resources considers old growth to be trees 100 years old and older. For purposes of this Commission's work, younger harvestable stands of natural origin, such as '21 Blow stands, are also included. The US Forest Service considers old growth to be trees that are 160 years old or older and 21" diameter at breast height. Biologists at the Olympic National Park considers old growth to be trees that are 200 years old or older with no signs of harvest. The US Forest Service has developed an estimate of old growth for the Park based on suitable spotted owl habitat. (Please see Chart in the Appendix.)

The amount of old growth estimated to remain in the three major public ownerships on the western Olympic Peninsula is as follows. (Also see Chart in Appendix.)

DNR: West End Block	60,000 acres
Olympic National Forest	217,330 acres
Olympic National Park	200-325,000 acres

The figures above do not differentiate old growth forests by elevation, ecotype or degree of fragmentation.

D. Factors Affecting the Supply of, and Demand for, Old Growth Timber

1. Dedication to Other Purposes

a. Olympic National Park

In 1938 the Olympic National Park was created on the western Olympic Peninsula, permanently reserving for recreational, educational, habitat, and research purposes approximately 916,000 acres of land. These lands are located in four major timber producing counties -- Clallam, Jefferson, Grays Harbor and Mason. To date, no systematic inventory of Olympic National Park forests has been undertaken nor has a firm definition of old growth for such an inventory been established.

However, two estimates have been made which suggest a range of old growth that remains. The first, provided by research biologists and foresters at Olympic National Park, defines old growth as being 200 years of age or older with no signs of harvest. On this basis, they estimate that the Park contains approximately 200,000 acres of old growth. A second estimate, developed by the US Forest Service, is based on suitable spotted owl habitat in the Park; it suggests that there are approximately 325,000 acres of old growth.¹

b. Wilderness

The Washington Wilderness Act of 1984 (US CODE, 1984, Title 16, pp.1131-1132) established five new National Forest Wildernesses on the Olympic Peninsula in areas adjacent to the Olympic National Park. They included the Buckhorn, the Brothers, Mt. Skokomish, and Wonder Mountain roadless areas to the east of the Park, and the Colonel Bob roadless area to the south, near Lake Quinault. The Colonel Bob Wilderness area, which is closest to the Commission's study area, consists of 12,120 acres.²

These five wilderness areas encompass approximately 88,000 acres in Olympic National Forest as of this writing. Of this 88,000 acres, approximately 50-60% (44,000-52,800 acres) was suitable for commercial timber production.³ As a result of the 1984 Washington Wilderness Act, these 44,000-52,800 acres have been removed from the commercial timber base.

2. Agency and Court Actions

a. US Forest Service

In December, 1988, the Chief of the US Forest Service issued guidelines to national forests in Washington and Oregon, including the Olympic National Forest, directing

¹ Source: Vol. I, Draft Supplement Spotted Owl Guidelines and the Draft Forest Plan for the Olympic National Forest

² Wilderness, as defined in the 1964 Wilderness Act, is "an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain." (US CODE, 1982, Title 16, p. 1131) The Act mandates that these areas "shall be administered for the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness."

³ Source: John Vosburg, US Forest Service, Olympia, May 24, 1989.)

them to protect suitable spotted owl habitat. As a result, spotted owl habitat areas (SOHAs) will be created on National Forest lands and timber harvest in these SOHAs will be affected by this decision. The Supervisor of the Olympic National Forest estimated that as a result of the creation of SOHAs the harvest from the Olympic Forest for the period October 1, 1988, to September 30, 1989, would be reduced from 229 million board feet to 120 million board feet.

b. Department of Natural Resources

As a result of sales deferral requests by the Washington State Department of Wildlife (Department of Wildlife), by the Washington Environmental Council and by the Audubon Society, the Department of Natural Resources and the Board of Natural Resources have reduced planned sales in the Olympic Region Block for fiscal year 1988-1989 from 450 million board feet to 255 million board feet. Sales of mature timber, which includes old growth, have been reduced by almost half from a planned 9,600 acres to 5,000 acres.

c. Lawsuits

Conservation groups have brought three lawsuits challenging decisions of federal agencies which manage public forest lands and wildlife for violation of their legal duties to protect the spotted owl and other species from extinction. Two of these three cases were filed in Washington State.⁴

The first was filed in May 1988 when conservation groups challenged the US Fish and Wildlife Service's (USFWS) denial of petitions to list the northern spotted owl as threatened or endangered under the Endangered Species Act. On April 26, 1989, USFWS announced that it would propose that the spotted owl be listed as "threatened" throughout its range. This recommendation sets in motion a process that may take a year or longer before the owl is listed. While this process is underway, the US Forest Service and Bureau of Land Management will be meeting with USFWS to develop guidelines for permissible timber harvests on their lands that do not violate the intent of the listing process.

The second lawsuit was filed against the US Forest Service following the issuance in December of 1988 of guidelines for SOHAs on Forest Service lands. The suit charged that the guidelines were inadequate to assure the continued viability of the owl, as required by federal law. In March, 1989, a federal district court in Seattle issued a preliminary injunction stopping most timber sales in spotted owl habitat. The preliminary injunction covers about 165 timber sales and 23,000 acres of owl habitat, affecting about 1.1 billion board feet of timber.

3. Changes in the Timber Industry

The forest products industry of Washington State is undergoing long-term structural changes. According to several recent reports, these changes are underway partly

⁴ A third lawsuit was filed in Oregon against the Bureau of Land Management (Portland Audubon Society v. Lujan, No. CV 87-1160-FR, District of Oregon).

because of the inability of the Pacific Northwest's forest products industry (including Washington State) to maintain its competitive position relative to other US, Canadian and foreign suppliers.⁵

The Pacific Northwest is now considered the high cost producer in North America. Because forest products from the region have become less competitive in traditional domestic markets relative to forest products from Canada and the South, its domestic market share has declined. However, domestic markets still absorb approximately 72% of Washington's forest products.

At the same time, Washington State has increasingly sold forest products, usually in unprocessed form, on the international market, especially to Pacific Rim countries. In 1987, 27% of Washington's forest products, worth \$2.25 billion, were exported to Pacific Rim markets, primarily Japan, China and South Korea.

A major change in Washington's forest products industry has been a significant decline in the number of jobs in the forest products industry over the last decade: from 55,000 jobs in the 1970s to 39,300 in early 1988, or a loss of 15,700 jobs. While the number of jobs has declined, the volume of production as of this writing had largely recovered, in large part because of labor-saving technological changes and investments.

Other factors influencing the restructuring of the industry include:

- o uncertainty over the future supply of timber, in part as a result of agency actions and litigation related to the northern spotted owl, which might drive up stumpage prices, further increasing Washington's already high production costs
- o the transition from old growth forests to second growth, requiring greater volumes of timber to be cut and resulting in different products
- o the fact that some forest products firms have decided to liquidate their timber holdings partly due to the loss of a favorable capital gain tax rate that previously encouraged investments in timber growing. In the 8 years between 1978 and 1986, roughly 15% or 1.5 million acres of industrial timberlands were sold or offered for sale in the Pacific Northwest
- o changes in mill ownership, which are trending away from large, integrated firms toward small, non-integrated producers
- o closing of outdated mills near the logging areas with capital investment in new plant and equipment in new locations
- o a recognized need to become responsive to opportunities in international markets by developing new products to meet the needs of potential buyers

⁵ Sources: David Thorud, "Final Report. Policy Assessment: Washington State Forest Products Industry," prepared for the Washington State Economic Development Board, May 26, 1988, 37 pages; and Darius M. Adams, "The Future of the Northwest Forest Products Industry," Pacific Northwest Executive, October, 1986, pp. 15-18.

4. Log Exports

During the period 1980-1987 markets have changed for the Washington forest products industry. Traditional domestic markets have been purchasing a smaller percentage of Washington's forest products while foreign markets, particularly Pacific Rim markets, have greatly increased their purchases. In 1987, for example, Washington state exported over \$2.25 billion in forest products, with 92% going to Pacific Rim markets.

Logs harvested from US National Forests are prohibited by federal law from being exported. There is no such ban on timber cut on Department of Natural Resources lands and a significant percentage of timber harvested on state-owned lands is exported to foreign markets (approximately 70% or more).

The higher prices available on the export market for logs, particularly for old growth logs, have increased income to the trusts and benefitted the logging industry. However, local mills on the western Olympic Peninsula that process old growth have had difficulty competing with the export market for logs to keep their mills operating.

5. Past Cutting Rates

Prior to 1960, there was relatively little timber harvesting by the Department of Natural Resources in the Olympic Region. The 1962 Columbus Day storm blew down thousands of acres of timber on the Olympic Peninsula. In order to salvage this tremendous volume of timber and after completion of needed access roads, harvesting developed on a significant scale. This need to market the large volume of public timber accelerated exports.

During the decade of the 1970s, the volume of timber sold more than doubled, and timber sales reached 3.8 billion board feet. Then, as a result of a worldwide slump in timber prices in the early 1980s, Department of Natural Resources sales in the Olympic Region declined; for the decade as a whole, sales dropped by almost one billion board feet to approximately 2.8 billion board feet.⁶ It should be noted that the volume of timber sold is not always equal to the volume of timber harvested. This is especially true of the period of the early 1980s when there were many defaults on sales because of the low price of logs on the market.⁷

As a result of the high rate of cutting in the 1970s and 1980s and the fact that Department policy mandated that the oldest timber be harvested first, the amount of mature, natural stands of timber remaining on state lands on the western Olympic Peninsula as of June, 1989, is approximately 60,000 acres.

⁶ Source: Chart prepared by Department of Natural Resources, "Olympic Region Harvest Schedule vs Sold" 1960-2039

⁷ Source: Graph prepared by Department of Natural Resources, "Timber Sales Olympic Region. Volume Removed and Sold," 1970-1988

E. Unique trust responsibilities of the Department of Natural Resources: Beneficiaries of the western Olympic Peninsula trust lands and percentage of their total needs met by income from these trust lands

The Department of Natural Resources, under the direction of the Commissioner of Public Lands, manages forest resources on state-owned trust lands under a variety of laws and policies primarily intended to ensure a flow of revenue to designated public institutions from the harvest of timber. These state-owned trust lands were given by the federal government to Washington State at its statehood in 1889 with the specification that these land grants were for the benefit of identified public purposes--the common schools, state universities, normal schools, a state capitol building, etc. The Department of Natural Resources also manages State Forest Board lands, former County-owned tax delinquent lands which provide revenues to the counties.

On the western Olympic Peninsula, the Department of Natural Resources manages about 347,000 acres of forest land. They consist of federal granted lands, mostly common school lands (140,000 acres) with lesser amounts of University of Washington, Capitol grant, and normal school lands, along with scattered State Forest Board lands.

F. Department of Natural Resources Cutting Policies on the Western Olympic Peninsula

According to the Department of Natural Resources' current harvest schedule, there will be a sharp decline in harvest on the West End Block of the Olympic Peninsula beginning in 2000. Current harvest schedules would call for harvesting 2.3 billion board feet during the decade beginning in 1990. In the decades beginning in 2000 and 2010 there would be 0.8 billion board feet harvested. The volume would rise in the decade beginning in 2020 to 1.0 billion board feet harvested. In the decades from 2030 into the future there would be 2.0 billion board feet harvested.

The sharp decline in harvest levels projected for the period from 1990 through 2030 is a result of the Department of Natural Resources policy, as stated in the Forest Land Management Program, which requires the oldest stands to be harvested first. This results in the mature, natural stands being mostly harvested by 1990. Less timber of rotation (harvest) age would be available until the young stands begin to reach rotation age starting in 2030.

IV. COMMISSION PROCESS



IV. COMMISSION PROCESS

In June, 1988, the Commission on Old Growth Alternatives for Washington's Forest Trust Lands convened for an introductory meeting and in September held the first of a series of monthly day-long meetings with an independent facilitator.

Commission members established procedures, groundrules, and a schedule and identified topics for informational presentations to provide a common base of information. They included the trust responsibility, old growth ecology, economics, forest harvest methods and wildlife habitat. For each of the topics, Commission members identified key questions to be investigated. (Experts who provided information to the Commission are listed in the Appendix.)

In addition to these scheduled monthly meetings, the Commission went on a two-day field trip to the Olympic Peninsula in early October. Commission members saw firsthand a variety of mature, natural stands on Department of Natural Resources lands and in the Olympic National Park. They also had an opportunity to hear from the local community about the problems it faces in light of expected timber harvest reductions.

Commission members developed a set of values that would serve as a basis for interests that could be met in a Commission recommendations package, described above.

In mid-February, Commission members met in a two-day session to begin to generate alternatives that, as a package, would meet the collective needs of the various interests represented on the Commission. Work groups were created at this meeting to further develop alternatives that Commission members felt were promising.

During the one year life of the Commission, from June, 1988, through June, 1989, Commission members received both orally and in written form an extensive body of factual information, ideas, opinions, and recommendations. They worked together in all-day plenary sessions and in numerous smaller groups created to advance the Commission's work; the smaller groups reported their progress to the full Commission at regularly-scheduled monthly meetings. The time spent together enabled Commission members to come to understand one another's perspectives and values and together to seek balanced solutions to this dilemma.

V. FINDINGS



V. FINDINGS

Commission members were asked to make judgments in six areas. The following findings related to these six areas are based on presentations by experts and written information available to the Commission.

A. Trust Responsibility:

The nature of the trust responsibility in relation to natural stands of timber on the western Olympic Peninsula⁸

When Washington State was created in 1889, as a part of the Enabling Act of February 22, 1889, the federal government gave the new state specific amounts of land as economic grants-in-aid for the benefit of identified public purposes: the common schools, state universities, "normal schools," a state capitol building, etc.

Other states typically sold off the lands they received upon statehood, using the proceeds for these public purposes. By contrast, Washington retains much of these federal land grants and manages them for the benefit of the named beneficiaries. In 1957 the legislature established the Department of Natural Resources to administer the trust assets for the benefit of the beneficiaries.

The main beneficiaries of timber-bearing trust lands in the area designated in the Commission's Charter on the western Olympic Peninsula are the common schools, capitol construction, the regional universities (Central, Eastern and Western Washington Universities) and the University of Washington.

Timber sale revenues from common school trust lands go into a common school construction account which is used directly to fund K-12 school construction. Other income generated from trust lands goes into funds and all of the beneficiaries, with the exception of the University of Washington, draw on the interest that accrues in those funds. (For historical reasons, the University of Washington receives income from its trust lands directly rather than through the trust fund.) The Department of Natural Resources is entitled to retain up to 25% of timber sales receipts for administrative and management purposes.

The courts in Washington state and elsewhere in the nation have consistently held that the trustee of grant lands must show undivided loyalty to the trust beneficiaries and cannot take actions on behalf of a third party/ies at the expense of beneficiaries. The courts have held that the trust must be compensated whenever grant lands are put to uses other than generating a flow of revenue for present and future trust beneficiaries.

Neither the state constitution nor the Enabling Act defines how revenue from these trust lands should be generated. For example, cutting of timber on timber-bearing

⁸ These findings are from a panel discussion at the October 28, 1988, Commission Meeting. Panel members were John Hough, Ann Forest Burns and Martha Lester - and from "The History of the Grant Lands of the State of Washington," by Prof. Thomas R. Waggener, University of Washington, July 31, 1967.

lands is not mandated; however, generating a flow of revenue for present and future beneficiaries is required by laws and court decisions.

A specialist on Washington's state trust lands, Professor Thomas Waggener, has cautioned against the widespread public perception of these grant lands as properties that are publicly owned for "public use." Rather, they are endowment trust lands, dedicated to specific beneficiaries. This trust relationship cannot be tampered with without compensation to the beneficiaries.

B. Financial Value to the Trusts:

The financial value to trust beneficiaries of these natural forest stands now and in the future from timber and non-timber revenue sources, compared to total beneficiary funding needs.⁹

Value of Timber on Trust Lands on the Western Olympic Peninsula

The Department of Natural Resources estimates that the value of the mature, natural stands on trust lands on the western Olympic Peninsula is \$777 million, in 1988 dollars. This estimate is based on the availability of all timber with no set asides as a result of injunction or other action.

Common Schools: While the Washington State Supreme Court has mandated that the state legislature provide for basic education, there has been no court ruling defining the state's role in the "capital" side of support for school construction.

Currently, Washington is unique among the states in having a significant amount of non-tax revenues to supply funds for school construction needs. These revenues come from incomes generated by trust lands that were set aside for the benefit of schools when Washington became a state in 1889. Local school districts match state contributions for school construction.

Over the past 20 years trust funds have provided approximately half of the cost of building schools. More recently, however, funds from the trust have not been adequate to meet construction needs: as of 1988, a backlog of \$350 million in approved projects had accumulated which the state has not been able to meet from timber sales income.

Enrollment projections up to the year 2000 estimate a large increase in the number of students in Washington State schools: from 730,000 students in 1984 to almost 1 million in 2000. This increase will necessitate significant new construction as well as remodeling of the existing schools, one-half of which will be forty years old or older by the year 2000.

⁹ This information is taken from presentations by Michael Roberts of the Washington State Office of the Superintendent of Public Instruction and from materials supplied by that office. Information on the value of trust lands on the western Olympic Peninsula was provided by Phillip Aust of the Department of Natural Resources. Robert Thompson, Vice-Provost for Finance and Budgeting at the University of Washington, provided information about the University's construction needs and the income it expects from the trust lands.

Excluding the \$350 million of approved projects that have not yet been funded, the state will need an average of \$135 million per year to provide its share to accommodate growth, modernization and program needs up to the year 2000. Projected income from the forest trust lands under the current plan with no set asides will generate approximately \$80 million per year during that same period -- or 59% of the sum needed.¹⁰

University of Washington: The Department of Natural Resources manages 86,000 acres of timber on behalf of the University of Washington, one half of which is old growth timber. Most of the trust lands dedicated to the University are on the western Olympic Peninsula and since much of the old growth there had been scheduled to be harvested by the turn of the century, the income from trust lands to the University is expected to decline sharply.

The University of Washington has very substantial construction needs: \$1.6 billion for construction and renovation costs over the next 6 years. To have a physical plant that will meet the future needs of the University for teaching and high quality research, the University needs to replace one third of the existing structures and to conduct major renovation of another third. This capital construction should begin right away.

The budget for the 1989-1991 biennium submitted by the Governor and approved by the State Legislature includes \$129.4 million for capital construction costs at the University, of which \$26 million is scheduled to come from timber related income. This figure is somewhat higher than the average annual income levels in the past, which have ranged between \$5 and \$13 million a year since 1981.

Regional Universities: The three regional universities are the beneficiaries of the normal school grants. Their needs are similar to those of the other educational trusts.

The projected income from the trust to the University of Washington and the regional universities from statewide timber sales for this biennium (1989-1991) totals \$52.5 million. This is based on planned cutting with no set asides.

¹⁰ In 1989 the Washington State Legislature allocated \$71.5 million from the state's General Fund to benefit school construction needs. This money would be used in two different ways. A portion of it would be used to buy the cutting rights to trees on certain state trust lands. The proceeds from buying these cutting rights would go to the school construction fund. The remaining portion would be used to buy new lands to replace those where timber rights had been purchased; in the future, these new lands would generate revenue from timber sales for school construction. Source: Michael Roberts, Office of Public Instruction, May 30, 1989.

C. Ecological Diversity:

The role of natural stands on these lands in providing ecological diversity, in concert with other ownerships.¹¹

Many of the mature natural and old growth stands on Department of Natural Resources lands are very stable and have changed relatively little over hundreds of years. Others, such as the '21 Blow stands, are relatively young from an ecological standpoint.

The basic characteristics of old growth -- large trees, standing snags, dead and down material, less density with some openings, layers of vegetation -- provide niches for many different plant and animal species which have evolved to occupy these different niches. For example, some 67 species of wildlife depend upon snags for their basic needs. Some 165 species of vertebrates and invertebrates are estimated to make their homes in these stands. A complex system of interdependence has also evolved among the plant species, with certain fungi and bacteria playing crucial roles in the growth and health of larger plants and trees.

Low elevation natural stands, such as those on portions of Department of Natural Resources ownership on the Peninsula, are relatively rare and are richer in genetic diversity than higher elevation stands. The presence of these stands in the overall landscape is important in providing appropriate kinds of habitat.

Old growth stands are increasingly viewed as important sources of information. Biologists are interested in studying the ecological systems and relationships that exist in these stands. Foresters are interested in learning if characteristics of these stands are important to long-term timber productivity and if such characteristics can be retained in managed stands. Scientists have become increasingly interested in investigating the variety of plant species found in old growth stands for potential medical and chemical products to benefit humankind.

D. Wildlife Habitat Needs:

The role of state lands on the western Olympic Peninsula, in concert with other ownerships, in providing for wildlife habitat needs, especially for rare and endangered species.¹²

Old growth forests provide habitat for a variety of wildlife species.

¹¹ Information from Deborah Lindley's presentation on the tour of the Olympic Peninsula (October 7, 1988); a phone conversation with Don Jackson, Supervisor, Olympic National Park on December 29, 1988; and presentations by Professor Jerry Franklin, College of Forest Resources, University of Washington.

¹² Information from a panel consisting of Eric Forsman (US Forest Service), Harriet Allen and Chris Drivdahl (Washington State Department of Wildlife) and Larry Irwin (National Council for Air and Stream Improvement) at the December 16, 1988, Meeting of the Commission.

For most of the year large mammals prefer to live in managed stands for the abundance of forage and cover they provide. However, they rely on old growth for shelter and habitat in winter when there are heavy snowfalls; the multi-storied canopies found in old growth stands intercept much of the snow, leaving forage accessible to these large animals. Where there is adequate acreage, a moderate microclimate exists inside old growth stands that protects the deer, elk and other large mammals from severe weather.

For lack of a better management approach, the concept of "indicator species" has been adopted. According to this approach, biologists try to assess the needs of a single species, provide for its needs, and hope that these provisions meet the needs of the many other species that live in the same habitat. While many wildlife biologists are critical of this management approach and fear that it ignores the needs of the many other species that have not yet come under study, it has not yet been replaced by a broader ecological approach.

To date, the northern spotted owl has been the most thoroughly studied of old-growth related species. There has not been adequate funding to study numerous other animal species whose habitat is old growth forests.

Recent findings show that on the western Olympic Peninsula spotted owls occur up to 2500 ft. elevations, rarely at higher levels, in conifer forests, primarily old growth stands. (On the east side of the Park, spotted owls have been found at elevations up to 4000'.) Characteristics of the owl's preferred habitat are large, old trees, dead and down material, and multi-storied canopies which provide protection from predators and an adequate prey base.

Research indicates that spotted owls are strongly associated with old growth stands. Owls also utilize habitat in unmanaged younger stands such as the '21 Blow that have some old growth characteristics. Evidence to date does not suggest that spotted owls are adaptable to other kinds of habitat, although individual owls may occasionally be found in other habitats. Biologists expect the spotted owl to become extinct if its old growth habitat greatly declines. However, more research is needed on minimum population sizes for viable spotted owl populations and on precise habitat requirements.

Old growth forests are estimated to have declined by 70-80% from historical levels. Biologists believe that much of the remaining habitat is severely fragmented, which results in isolation of owl pairs; continued reduction and fragmentation of old growth forests will force owls to use less suitable habitat and will result in larger home ranges, as is now happening on the Olympic Peninsula. Traveling greater distances for prey requires greater energy expenditure and may adversely affect owl reproduction.

The best data on the space needs of the spotted owl are from telemetry data. Recent research by the Department of Wildlife indicates that spotted owls on the Olympic Peninsula have an average home range of 3800 acres of mature old growth. US Forest Service research indicates a range of 5,000 - 10,000 acres are used by the owls over the course of a year, including both old growth and younger stands.

Most remaining old growth stands managed by the Department of Natural Resources in the Olympic Region are believed to be suitable habitat for the spotted owl. They also are important as a bridge between US Forest Service and Olympic National Park stands of old growth.

Studies done over the past two years in the Hoh-Clearwater Block indicate there are approximately eight spotted owl pairs and one "half-pair" (single owl with an inferred mate) as well as several single owls. They face a combination of negative factors, including isolation, low numbers of pairs, low reproductive rates, high juvenile mortality and a highly-fragmented habitat -- which taken together convince many biologists that each pair is critical and difficult if not impossible to replace if they are lost.¹³

In the Olympic National Park, which has been less intensively surveyed for the spotted owl than other ownerships, it is estimated that about 40 pairs of spotted owls live at the lower reaches of the river drainages around the Park's periphery. Biologists say that while the Park does provide habitat for the spotted owl, the quality of the habitat is generally poorer than at lower elevations. Much of the Park is at the upper limits of the elevation range for the species and adverse weather can have a greater impact on spotted owls than if the habitat were at lower elevations.

The Olympic National Forest also contains spotted owl habitat. On the Peninsula as a whole, Department of Wildlife biologists estimate there are approximately 100-200 pairs, most on US Forest Service lands; statewide, there are estimated to be about 600 pairs.

E. Preservation of Original Forest Cover:

The desirability and opportunity for preserves of original forest cover on state trust lands in this area.¹⁴

Inventories of Department of Natural Resources lands on the western Olympic Peninsula date back to the 1960s, to a time when there was relatively little ecological interest in old growth. As a result, the kinds of data gathered have proved to be valuable as a timber harvest planning tool but not for providing ecological information about old growth stands.

The Department's current inventory indicates that there are 60,000 acres of trees in mature, natural stands in the West End Block (described on pp. 24-25). Of these 60,000 acres, approximately 50,000 acres are in the Hoh-Clearwater area south of Forks. Most of these stands are more than 100 years old and thus meet the

¹³ The U.S. Fish and Wildlife Service in April, 1989, announced that it will propose that the spotted owl be listed as "threatened" under the federal Endangered Species Act. This indicates the agency's judgment that the owl could become endangered in the future if present patterns continue.

¹⁴ Information about acreages of old growth on Department of Natural Resources lands was provided at the October 28, 1988, Commission meeting by Jerry Kammenga, Department of Natural Resources, and by Malcolm North, a summer aide hired by the Department to conduct the seral stage deferral study; he is currently a Ph.D. candidate at the University of Washington's College of Forest Resources.

Department's definition of old growth. This definition has no minimum stand size requirement.

A study conducted for the Department of Natural Resources as part of its seral stage deferral program¹⁵ applied criteria to stands in the Olympic Region which approach an ecological definition of old growth. These Department requirements were that stands contain at least five trees 160 years old or older; be at least 80 contiguous acres in size, show no signs of logging practices, include 15 trees per acre that are 32" in diameter, include 6 snags per acre that are 21' in diameter and include 19 dead and down logs that are greater than 22" in diameter and 36' long.

Based on interpretation of aerial photographs and an analysis of timber sales for this area, this study concluded that there are 17,411 acres of old growth in the Olympic Region. If the 80-acre requirement were reduced, then the study would have shown considerably more acres of old growth.

F. Timber Supplies to Local Communities:

The role of these stands in providing present and future timber supplies to the local and statewide industry, in concert with other ownerships, considering the effects on local communities and on the long-term value of trust assets.¹⁶

TIMBER HARVEST PROJECTIONS

The Department of Natural Resources current harvest schedule projects a decline in harvest in the West End Block from 2.3 billion board feet in the decade beginning in 1990 to .8 billion in the decade beginning in the year 2000. This figure would remain steady in the decade beginning 2010; it would rise somewhat in the decade beginning 2020, to 1.0 billion. By the decade beginning 2030, the harvest would rise to 2.0 billion board feet, a level that is projected to remain stable in the decades beyond.

However, if a stepped-down conversion to a separate, non-declining, sustained harvest schedule were to replace the current schedule, then the harvest in the West End Block would be 1.66 billion board feet for the decade of the 1990s and then remain stable at 1.43 billion board feet for the decades between 2000 and 2030.

¹⁵ According to the Forest Land Management Program, p. 54, the Department will remove certain old growth stands in western Washington from the harvest to enable research on old growth ecological relationships which may have application to intensive timber management.

¹⁶ Information about the harvest projections was provided by the Department of Natural Resources at the November 29, 1988, Commission meeting. The Clallam County Economic Development Council and Professor Robert Lee of the University of Washington's College of Forest Resources provided information concerning community impacts.

COMMUNITY IMPACTS

The Clallam County Economic Development Council estimates that as of 1988 22% of the county's labor force is directly employed in wood products and related transportation and support jobs. Two of the top eight employers in the County are timber companies.

While County-wide the timber, pulp and paper industry is a significant employer, the timber industry plays a much greater role in the economy of Clallam County's west end. In Forks (population estimated at 2,860) 43% of the jobs and 41% of the salaries are directly timber or mill related. Considering support and related jobs, virtually all of the jobs in Forks are directly or indirectly related to income from the timber industry. 75% of the jobs of the labor force of the west end are timber dependent. These timber-related jobs are among the higher-paying jobs in the County.

As a result of sales deferrals which have already occurred, unemployment in the Forks areas has jumped. Approximately 13 mills in the Forks area are specialized to process old growth timber, so a reduction in the volume of old growth logs for processing has caused shut-downs and lay-offs.

How many jobs may be impacted by reductions in the timber harvest? The Olympic National Forest estimates fourteen jobs will be lost per one million board feet of timber removed from the harvest.¹⁷ The Forest Service's estimate reflects the timber situation on the Olympic Peninsula as a whole and therefore would be an approximate figure for harvest reductions on Department of Natural Resources lands even though a majority of logs harvested on their lands are exported.

The loss of income and jobs, reductions in harvest levels in timbered counties, including Clallam County, will entail significant social costs. Along with unemployment will come a rise in the demand for social services. Persistent unemployment results in higher rates of divorce, alcohol and drug abuse, interpersonal violence, and mental health problems. Moreover, many people who lose a job will choose to maintain their residence and community attachments even though there are few opportunities for job retraining and alternative employment.

The Department of Natural Resources estimates that, as of May, 1989, it is about 200 million board feet behind intended sales levels as a result of deferrals for northern spotted owls. Given current prices, this amounts to about \$60 million.

¹⁷ Source: Ward Hoffman, US Forest Service, Olympic National Forest, May 31, 1989

VI. RECOMMENDATIONS



VI. RECOMMENDATIONS

These consensus recommendations address three critical elements: the educational trusts, the environment, and the economy on the western Olympic Peninsula. It should be recognized that individual components were developed in the context of the overall package of recommendations and it is the Commission's intent that the recommendations be accepted as a package.

The goal of these recommendations is to forge a new forest management approach and relationship that results in both the production of commodities and maintenance of ecological values. We believe that these joint goals are attainable with the knowledge presently available. We have recommended specific measures to accomplish these goals.

A. Trust Responsibility

The Commission recommends that the legal obligations to trust beneficiaries be met in all of its recommendations, that the state provide additional sources of revenue for school construction and that the Department take steps to ensure no individual trust is disproportionately affected by the recommended harvest deferrals.

All the other recommendations assume the legal trust obligation, and the Commission has carefully considered trust ramifications in making these recommendations. For example, implementation of the Olympic Experimental State Forest will entail both potential costs and potential benefits to the trust, both short and long term. While the nature of these effects will become clearer after the Department completes its management plan for the Experimental Forest, the Commission believes careful use of trust management funds for research coordinated by the Olympic Forest Resource Center should be allowed to the extent that clear benefits to the trusts will result.

Creation of a separate sustained yield unit for the Olympic Experimental State Forest will shift trust income from early to later years. The Commission believes such a moderate rearrangement of income over time is within the state's management discretion and that such a policy for the Olympic Peninsula has advantages for the trusts. The Commission recognizes that, for each beneficiary, trust land income is received on a statewide basis and short-term income deferrals attributed to slower harvests on the Olympic Peninsula may or may not be significant in the context of state revenue totals. However, the Commission does not think that over time this recommendation will result in lost income to any trust.

Timber harvest deferral on 15,000 acres will cause a further deferral of trust income in addition to the greater effect caused by creation of a sustained yield area. While the Commission believes this further transfer of income from present to future decades also does not violate trust principles, the Commission is aware that deferral of specific areas can differentially affect various trusts, some of which have serious short-term cash flow needs dependent on these lands. The Commission is

recommending steps be taken to provide equity in these effects. The Commission has also stated its intention that trust obligations be fully met in making future decisions about timber harvest on the deferred 15,000 acres.

The Commission is recommending certain limited areas for permanent protection. The Commission believes permanent protection for non-income-producing purposes requires compensation to the trusts. Funds for compensation must be found before acquisition can occur. The Commission believes the Washington State Legislature has made a source of such funds available through Section 316 of the 1989-91 Operating Budget, and the Board of Natural Resources is encouraged to allocate a portion of those funds to acquisitions identified by the Commission.

Finally, the Commission believes additional funding sources must be found to supplement timber sales revenue, especially to meet the state's obligation for school and university construction. For the schools, state trust land timber sales are expected to provide only \$80 million of the projected \$135 million annual requirement. The State Legislature has begun a process to search for other funding methods, and the Commission encourages these efforts to continue. The Commissioner of Public Lands should continue to be involved in these efforts.

B. Olympic Experimental State Forest

The Commission recommends the establishment of an Olympic Experimental State Forest on Department of Natural Resources trust lands on the west side of the Olympic Peninsula.

Purpose: The purpose of creating an experimental forest on Department of Natural Resources trust lands in the Olympic Region is to produce a level of timber harvest comparable with contemporary forest practices and simultaneously to provide for ecological values. The intent of this recommendation is to recognize that the Department of Natural Resources lands are a commercial forest within which there is special opportunity to experiment with harvest techniques. These techniques are intended to enhance habitat characteristics and commodities production and to provide opportunities for research into forest harvest and habitat management.

This would be accomplished by applying non-traditional silvicultural practices, testing new concepts, measuring outputs and revising forest practices to optimize both commodity production and ecological values.

The result would be to develop long-term solutions to forest management issues while simultaneously researching long-term financial implications of various management techniques to the trusts.

Location: The Experimental Forest will be located on state trust lands on the western Olympic Peninsula. These lands are bounded on the North by the Strait of Juan de Fuca and on the West by the Pacific Ocean. They are bounded on the East by the range line between Townships 9 and 10, just west of Lake Crescent and

proceeding south along the range line to the intersection with US Forest Service lands. To the South, the lands are bounded by the Queets River.

Management: The Olympic Experimental State Forest would be managed by the Department of Natural Resources' Olympic Regional Manager.

Issues for research in the Experimental Forest can be generated both from within the Department of Natural Resources and by researchers outside the Department who are investigating natural resource topics, including silvicultural, landscape and harvest practices, and ecological systems.

Additional management features include:

- o Management of the Olympic Experimental State Forest will be consistent with the overall management goals of the Department of Natural Resources Forest Land Management Program, adopted in 1984.
 1. The Department will conserve and enhance the natural resources of state forest land.
 2. The Department will provide financial support that balances the level and flow of revenue to the trusts.
 3. The Department will provide social and economic benefits.
- o Management will not be constrained by the current implementation policies.
- o Comprehensive, new implementation policies will be adopted for the Experimental Forest that are consistent with the Experimental Forest concept.
- o Annual harvest levels will be adopted at the outset to ensure a predictable commodity production level from the Experimental Forest.

Management Plan

As soon as possible, and no later than twelve months from the acceptance of the Commission's report by the Board, the Department of Natural Resources shall develop a detailed management plan for the Experimental Forest. The management plan shall include:

- o Goals and objectives
- o Harvest methods and silvicultural practices designed to accomplish the objectives, and criteria to guide the application of those methods and practices. For example, harvest methods will include leaving a range of numbers of standing live and dead trees sufficient to evaluate success in meeting the objectives
- o A program of increased commercial thinning based on stand characteristics and market conditions, which might provide harvest volume in addition to sustained yield calculations

C. Olympic Natural Resources Center

The Commission recommends the establishment of an Olympic Natural Resources Center to develop research and educational programs in support of the management of the natural resources of the Olympic Peninsula for both the production of commodities and maintenance of ecological values. There is no other forestry resource center with a similar mission.

Purpose: The Center's broad objective is the development of concepts and systems for management of forests and related resources -- at the stand, drainage, and regional scales -- which retain ecological values while generating commodities.

Specific objectives of the center include:

- o Provision of a facility available to all scientists, educators and economists working on the Olympic Peninsula
- o Development of research and education programs on natural resources (both terrestrial and aquatic) and their social and economic implications
- o Provision of a structure for long-term cooperation between the various land managing agencies and owners and resource interest groups
- o Provision for assistance in the resolution of conflicts over research and data related to old growth forests and associated species

Although the concept of the research center is developed in the context of the Olympic Peninsula, the concepts and mission outlined are applicable to other forestlands in the State of Washington, including the Cascade Range, and could be developed and applied there as well.

The Olympic Natural Resources Center will be both a facility and a program. As a facility it will be open to use by all natural and social scientists and economists regardless of their funding source, provided their aims are consistent with those of the Center. As a program, it will develop and implement research and educational programs supportive of the specific objectives.

The initial Center agenda will include, among others, research and educational programs on:

- o development of alternative forest stand and landscape management systems for public lands committed to commodity production with special emphasis on research to support innovative management initiatives of the Department of Natural Resources and other land managers
- o analyses of alternative economic and social bases for sustainable, healthy, resource-based human societies

- o The location of corridors and other areas where attention to wildlife habitat and other ecological values are especially important
- o Road closures and other management techniques which can have habitat values for species such as elk
- o A general harvest schedule for non-deferred and non-acquired acres during the first fifteen years
- o Methods of coordination with the program of the Olympic Natural Resources Center and/or other applicable research activities
- o Methods of coordination with other major forest landowners

A description of possible features and practices of an Experimental Forest in the Olympic Region can be found in Appendix 1. in this report -- Olympic Experimental State Forest: A Forest Managed for Commodities and Ecological Functions. These practices include managing a forest for natural functions with new methods of harvesting, site preparation, reforestation, tree spacing, fertilization, forest protection, and road system management.

The management plan will be developed in consultation with the Advisory Committee and with such groups as the Resource Management Plan Group under the auspices of Timber, Fish and Wildlife.

Impacts to the Trusts

In the short term there will be some costs to the trusts. For example, there will undoubtedly be start-up costs to get the experimental forest program underway.

In addition, some income will be foregone. For example, if merchantable trees are left standing for ecological reasons, this would reduce the income to the trust. If operational constraints were placed on loggers and other operators to achieve ecological goals, some income would be foregone.

Some savings can be achieved in traditional forest management costs. For example, if slash burning were nearly eliminated or if natural regeneration were adopted whenever possible, capital expenditures would be reduced compared to traditional forest management techniques.

It is likely that the Olympic Region can manage this forest within the 25% currently allocated for Department of Natural Resources management costs.

In the long run, there could be significant benefits to the trusts. Long-term forest productivity should be significantly enhanced as a result of the research conducted in the Experimental Forest. Certainty of production levels would also save money for the trust.

- o effectiveness of reserved areas, such as National Parks and Wilderness, U.S. Forest Service Spotted Owl Management Areas, in maintenance of regional biological diversity, including the northern spotted owl

Interdisciplinary research to build the knowledge base for making compatible commodity production and retention of ecological values is of high priority and will be done in collaboration with Department of Natural Resources and other forest management organizations. Research and development on such silvicultural techniques will have to proceed simultaneously, requiring extensive interaction between scientific and management groups. Designation of Department of Natural Resources lands as an experimental forest and the establishment of the Olympic Natural Resources Center should greatly aid in this process.

It is expected that the Center's program will draw support and participation from research efforts already in place or proposed for the Olympic Peninsula and other western Washington forestlands, including silvicultural and wildlife research by the US Forest Service's Pacific Northwest Research Station, ecological research by the National Park Service, and stream research by the University of Washington's Center for Streamside Studies.

Social science research is expected to focus upon human concerns, such as economic viability of communities and environmental quality, as well as the potential for development of additional forest products and markets.

The Biosphere Reserve concept may be explored for its value in integrating the concerns of various landowners and user groups on the Olympic Peninsula. This concept was developed as a part of the United Nation's Man and Biosphere Program and emphasizes cooperative planning for utilization of natural resources while maintaining regional biological diversity.

Operation of the Center

The Olympic Natural Resource Center's activities will be governed by a small (nine member) governing board that reflects the spectrum of major landowners/land managers, funding agencies and interest groups. The University of Washington will organize and operate the center under the supervision of this board. Examples of potential landowner/land manager board members include US Forest Service, industrial forestland owners, US Department of Interior National Park Service (National Park Service), Department of Natural Resources, and Indian tribes. Legal but landless entities include agencies and organizations concerned with timber, fish, wildlife, and recreation.

The governing board controls the Center's budget, sets Center policies and hires an executive director. The Advisory Committee described above (pp. 36-37) will review the Center's operation at least annually.

All individuals and agencies participating in the Olympic Forest Center's program would retain FULL control of their own lands and independently-funded research programs. This includes Department of Natural Resources lands. Department of

Natural Resources designation of the West End Block as an experimental forest will, however, provide a major site for the Center's research program. Programs at the Center are to be based upon voluntary collaboration of participants and on funding provided directly to Center activities. It is critical, as stated earlier, that the facility be open to all scientists, regardless of funding source or philosophy, in order that it be an effective forum for open exchange of ideas and information.

A scientific and economic advisory board will be created to provide the scientific direction and quality control for research and educational programs sponsored by the Center. This board will be drawn from agency, university, and industrial research sectors and from the National Science Foundation. A representative from the scientific and economic board would also sit on the governing board. One of the key roles for this board will be to ensure that the research balances the interests and operates fairly. The advisory board could assist in resolution of disputes.

The Center would be mandated to keep interested parties, such as the conservation community, the Chambers of Commerce, local communities, industrial associations, etc., informed of its goals and activities. The Center would maintain a mailing list of all such interested groups and individuals for this purpose. In addition, the Center would publish an annual report and offer at least an annual opportunity for interested parties to visit the Center and learn of activities firsthand.

The Center will consider hosting annual conferences designed to advance compatible management of natural resources. One specific proposal is a conference which brings together citizen, scientific, and managerial leaders to identify and assess future trends and issues in forest management. A second proposal is an annual interdisciplinary scientific conference to exchange information and ideas on compatible management of forest resources.

Financial Aspects of the Center

Funds for the establishment and operation of the Olympic Forest Center should be sought from a variety of sources, including federal, state, and private. This is appropriate since the center's mission -- the development of concepts for production of commodities with retention of ecological values -- is unique and of broad interest to many segments of society. These concepts are not being systematically developed and applied on forestlands anywhere else in the United States.

Estimated costs for construction and start-up of the Olympic Natural Resources Center are approximately \$2.5 million. Federal funding is proposed. The facility should be located in close proximity to field research sites to provide maximum support of the scientific programs.

Provision for annual operating costs, estimated at about \$250,000 annually, is critical since field stations of this type typically have great difficulty obtaining funds needed to "keep the doors open." Operational costs include salaries for a director and support staff, maintenance of the physical plant, utilities, operation of station vehicles, and basic supplies. A highly desirable alternative to annual state and

federal appropriations would be the creation of an endowment of several million dollars to ensure that these costs would be covered.

The research and educational programs of the Center should receive major support from federal and state sources. The estimated funding level for the research and educational activities is \$1.5 million annually. Federal funding could be partially provided through the US Forest Service and National Park Service research budgets. State appropriations could be provided as a part of Department of Natural Resources and higher education budgets. A very important contribution to the Center's objectives and programs will come by entraining relevant research programs underway under other auspices including the US Forest Service (Pacific Northwest Research Station's silviculture, wildlife, and landscape projects), National Park Service, University of Washington (Center for Streamside Studies), Departments of Natural Resources and of Wildlife, and National Science Foundation. It should be emphasized that funding of the Center should not be at the expense of existing programs.

Two staff positions at the Center might be supported by contributions from conservation and industrial groups, respectively. Alternatively, scientists could be "loaned" to the Center on either a permanent or rotating basis.

D. Separate Sustained Yield Unit

The Commission recommends that Department of Natural Resources lands on the western Olympic Peninsula be treated as an independent sustained yield unit after a stepped-down conversion period of 10-years. This will also slow the rate of harvest of old growth.

The goal of the recommendation is to provide a predictable and steady supply of timber to the community over the long term. This proposal recommends that the Department of Natural Resources lengthen out the period of time during which the timber will be harvested in order to soften the transition to the non-declining harvest level. The result of this proposal will be to provide timber for old-growth processing mills over a longer period of time and to facilitate sound long-term wildlife management.

E. Deferral of Harvest on a Portion of State Trust Lands on the Western Olympic Peninsula

The Commission recommends that 15,000 acres of mature, natural stands identified by wildlife biologists as most critical for spotted owls be deferred from harvest for fifteen years to allow experience to be gained from management and research that will lead to wise future decisions for these areas.

As part of the establishment of a separate, stepped-down sustained yield unit for the Olympic Experimental State Forest, harvest of 15,000 acres of mature, natural stands will be deferred for fifteen years. Areas deferred will be those with most critical spotted owl habitat value as described below. It is unknown whether these

areas will be adequate for the survival of species traditionally found in mature, natural stands. However, the purpose of the deferral is to permit enough time for research to take place, on the entire Experimental Forest and elsewhere, on habitat needs and innovative harvest and silvicultural techniques, so that research results can be applied to future decisions concerning harvest of these 15,000 acres, as discussed below. The fifteen-year period will begin with the adoption by the Board of Natural Resources of the Olympic Experimental State Forest.

The principal areas to be deferred are three large, mostly contiguous blocks of mature, natural stands constituting habitat occupied by spotted owls and adjacent to similar habitat in Olympic National Park and Olympic National Forest, identified as Kloochman (approximately 6,500+ acres); Willoughby Ridge (approximately 2,900 acres); Bear Creek (approximately 2,500 acres); and a fourth area of low elevation, occupied habitat which provides a linkage between the Bear Creek area and the National Park coastal strip, and identified as Goodman Creek (approximately 2,200 acres). (See map in the Appendix.)

The Commission intends that sufficient acreage of "21-Blow" stands be included in these deferred areas to permit specific application of research conclusions applicable to such stands.

The remainder of the 15,000 acres will be allocated by the Department within six months, after consultation with wildlife biologists, in the areas identified above or other areas, in order to incorporate the most up-to-date research and inventory information concerning spotted owls. In addition, after final allocation of the entire 15,000 acres, the Department may reallocate up to ten per cent of the acreage to take account of new research findings or natural occurrences such as windfall and fire, provided the total deferred acreage remains at 15,000 acres.

The 15,000 acres on which harvest is to be deferred will be included in the Department's sustained yield calculations based on an assumption that harvest will take place during years 16 through 25 (see discussion below on the decision at fifteen years). Harvest will not occur in these areas during the fifteen-year period except for salvage harvest.

At fifteen years, the Advisory Committee will review the research findings and harvest management experience from the Experimental Forest and elsewhere and make recommendations to the Board of Natural Resources concerning harvest of the deferred 15,000 acres. The following general criterion shall guide this review:

- o The demonstrated ability to both harvest substantial commercial timber volume and maintain in managed stands the structural diversity necessary to provide habitat for species traditionally found in mature, natural stands such as the spotted owl.

The Commission intends both that the western Olympic area be assured of a relatively stable flow of timber from the West End Block state lands as reflected in the sustained yield harvest schedule and that the evaluation of research results and management experience be unbiased. The Commission also intends that Department of Natural Resources' trust responsibility be recognized.

During the deferral period, if within the 15,000 acres there is windthrow, fire or other events which normally lead to salvage harvesting, the Department of Natural Resources will seek replacement habitat in locations of comparable habitat value for deferral. If replacement habitat can be found, salvage will be permitted in the original deferral area. If replacement habitat cannot be found, salvage will be permitted to the extent it does not significantly detract from remaining habitat characteristics. Salvage volume shall be included in calculating the annual sales level for the West End Block in the year it is sold. If the area of salvage harvesting continues to be deferred, the salvage volume shall be subtracted from the future sustainable volume attributable to the deferred acres.

The ultimate disposition of the 15,000 acres is not predetermined by its inclusion in the allowable cut calculation. However, should the Advisory Committee recommend that any portion of the deferred acres continue to be deferred permanently or indefinitely, it will also recommend acquisition, trade, or other means to obtain feasible sources of timber supply of comparable volume to that deferred, so that the sustained yield schedule can be substantially maintained and in such a way as to avoid both a significant reduction in the available public and private commercial forest base and a loss of state trust revenue.

With the assistance of the Advisory Committee, the Department of Natural Resources will, within one year of acceptance of the Commission's report by the Board, develop objective, measurable evaluation criteria based on the general evaluation criterion above.

Deferral of harvest in the specified areas will have a differential impact on the statewide revenue flow over time to different trust beneficiaries. This is because these areas represent differing proportions of each trusts' statewide harvestable timber. Specifically, these areas are a larger proportion of the statewide harvestable timber of the "Normal School" trust (regional universities) and the University of Washington trust than of the Common School trust which has much more timber elsewhere in the state. Therefore, the Normal School and University of Washington trusts will experience more significant deferral of income from these areas than will the Common School trust. The Commission recommends the Department use available means to more equitably distribute the effects of these harvest deferrals among the various trusts. Such methods might include exchanges of land between trusts or exchanges of cutting rights between trusts.

Those areas of mature, natural stands in the experimental forest which are not deferred and which are presently intended for harvest shall be scheduled for harvest. Out of 60,000 acres of mature, natural stands, 5000 acres are not presently intended for harvest. With deferral of timber harvest on an additional 15,000 acres, 40,000 acres, including stands over 100 years old and "21-Blow" stands, will be harvested. The Commission intends that these areas be harvested over the next fifteen years according to the stepped-down sustained yield levels calculated for the experimental forest. (However, up to 500 acres currently planned for harvest and not deferred may be acquired.

F. Acquisition of Certain Special Value Parcels of Land

The Commission recommends that up to 3,000 acres within the Olympic Experimental State Forest be identified for acquisition by the Board of Natural Resources. Of these, up to 500 acres may be land currently intended for harvest.

Within the limits specified above, the Commission encourages the Board to authorize the acquisition of certain, special value parcels of forest land within the Olympic Experimental State Forest. Significant criteria to be used in identifying the recommended parcels follow. These criteria are not in priority order nor do they all have to be met.

- o Expansion of existing natural area preserves
- o Areas with high interpretive and educational values
- o Corridors adjacent to riparian zones that provide critical habitat for anadromous fish or special species
- o Critical wintering range
- o Parcels that have high value for species associated with mature, natural stands

The Commission has identified by consensus the following first priority parcels for acquisition:

- o **Clearwater Bogs Natural Area Preserve Buffer:** An expansion of these two preserved bog areas by 60 acres will establish a more suitable buffer of the unique ecological systems protected. Sixty acres of this forest type would be valued at approximately \$1 million.
- o **Goodman Creek Corridor:** Wide bands of timber adjacent to the riparian zones along Goodman Creek would provide lowland old growth corridors along this major stream. Two hundred acres of this type would be valued at approximately \$3 million.
- o **Clearwater River Corridor:** Wide bands of timber adjacent to the riparian zones along the lower reaches of the Clearwater River system would provide old growth corridors. Approximately 300 to 400 acres would be valued at approximately \$5 million.

As second priority parcels for acquisition, the Commission recommends that up to 500 acres of land currently intended for harvest but which are regarded for having special values for other purposes be considered. While the other 2,500 acres are not currently intended for harvest, they are in that status, because of management and operational decisions at this time.

Within three months of submission of the Report to the Land Commissioner, the parcels of land should be identified and recommended to the Board of Natural Resources. Identification of the sites will be under the direction of the Department of Natural Resources, following the same procedure used in identifying sites listed above. Presentation and ranking according to the criteria will be made by four

members of the Old Growth Commission, representing the interests of the trust, the environment, community stability and the tribes.

The authority for acquisition would be the funds made available through Section 316 for the Fiscal Year 1989-1990 Operating Budget. The Commission recommends that the Department make inter-grant land exchanges, if necessary, so that sites identified for acquisition may be acquired using these funds. Other sources of funding should be explored for those parcels recommended for acquisition which are not acquired with the Section 316 funds listed above.

G. Economic Development

1. The Commission recommends that the State of Washington undertake a comprehensive economic study of the needs of the western Olympic Peninsula; involve the Partnership for Rural Improvement program at Washington State University Extension Service, the Northwest Policy Center at the University of Washington, the Washington State Department of Community Development, the Department of Trade and Economic Development, and the private sector, using as a framework Engrossed Substitute Senate Bill, "State Timber Sales," 5911, Section 6.

- investigate what has "worked" in other economically distressed areas
- involve local people in developing and doing the study
- investigate and develop new market niches; create new, innovative products
- be responsive to markets for non-standard products

The Commission reviewed a variety of studies that have been done to see what information the studies could provide that would be helpful in devising economic development strategies for western Olympic Peninsula communities. In addition, the Commission investigated a range of programs available at the state level that could benefit Forks and similar resource-dependent communities as they face this major reduction in the timber supply. These programs included the State of Washington Program for Community Revitalization Teams in the Department of Community Development, the Developmental Loan Fund administered by the Department of Community Development, the Washington Marketplace Program from the Department of Trade and Economic Development which matches rural suppliers with urban contractors. Programs to the community should be focused and sustained over a number of years.

2. The Commission also recommends that the State of Washington investigate the following measures to promote community economic development on the western Olympic Peninsula

- o Provide improved economic development resources for timber-dependent communities on the western Olympic Peninsula
 - tap and coordinate federal and state sources and programs

- provide opportunity for four-year degree programs at existing educational facilities on the western Olympic Peninsula; make job-retraining available at these educational facilities
- identify and utilize additional tax incentives, loans, other help for local businesses
- develop forest-product specialties, such as furniture or other commodities, with a priority on products with the most value and higher multipliers
- investigate developing aquaculture and tourism on the western Olympic Peninsula
- consider mill and logging equipment buy-outs (as was done in fishing industry)

The Commission also investigated the US Forest Service concept of a sustained yield unit and "working circles," the goals of which are to ensure that timber will be processed within a specific geographic area and thus promote community stability. Such units were created in the Olympic National Forest by the enabling federal legislation of 1946 that established the Gray's Harbor Sustained Yield Unit and the Shelton Sustained Yield Unit. While the Commission has concluded that similar federal legislation for the western Olympic Peninsula is unlikely, the Commission does recommend the following concept for cooperative planning and information sharing as a way to develop reliable information on the timber supply for the local community.

3. Promote joint planning and sharing of information on the western Olympic Peninsula among the Department of Natural Resources, Department of Wildlife, US Forest Service, National Park Service, private landowners, tribes, and conservation groups. This cooperative relationship could be arranged via a formal mechanism, such as a memorandum of understanding, that gives participants scheduled opportunities to meet and supply common information. Issues with highest priority would be providing steady timber supply to support the local economy and coordinating management of wildlife habitat. Other topics for shared information could include tourism, environmental education, and transportation.

While the Commission recognizes that imposing a requirement for local processing of timber is very complex, it recommends that this issue receive thorough investigation for its potential to aid the local economies on the western Olympic peninsula. The Commission acknowledges that legal requirements including the state's obligation to trust beneficiaries must be met in the resolution of this issue.

4. Explore increasing local processing of logs while being mindful of the complexity of this issue and of legal requirements

In presenting its recommendations to benefit the local communities on the western Olympic Peninsula, the Commission would like to emphasize its conviction that community economic development in this area will require a substantial and long-term financial commitment by Washington State. The Commission is convinced that the most productive approach to achieve economic development for the region is a community-based approach that involves local citizens in the design and implementation of any studies and brings together a

variety of state resources and programs to focus on the problem over a long period of time.

The Commission has also become acutely aware of the complexities of the economic issues facing communities on the western Olympic Peninsula. Opportunities for economic diversification in the area appear to be very limited. For example, the development of tourism in the area is severely restricted because all of the lands on the coast are owned by Olympic National Park and Indian tribes, and the development of manufacturing of new products, such as furniture, is hindered by an inadequate transportation system on the Peninsula. With both the local timber industry and the larger Washington State economy in a state of transition, simple solutions to complex problems have been elusive.

At the same time, the Commission recognizes that the western Olympic Peninsula is one of the best and most productive tree-growing regions of the world with excellent markets and that the timber industry of the region is a vital and valuable resource for the local communities and for the State of Washington as a whole.

H. Advisory Committee

The Commission recommends that an Advisory Committee representative of the interests of the Old Growth Commission be established by the Department of Natural Resources.

The Committee's role will be to assist the Department with the ongoing research effort. Its purpose will not be to renegotiate the harvest levels or the levels of habitat protection.

The Committee will be composed of seven members nominated by interest groups representing the school, university and county trusts, conservation organizations, timber industry, Indian tribes, and Olympic Peninsula communities. The Committee will meet at least annually or as needed.

The Advisory Committee shall have four primary responsibilities:

- o To help guide the Department of Natural Resources in developing a management plan for the Olympic Experimental State Forest
- o To advise the governing board of the Olympic Natural Resources Center based on a regular review of the activities of the Center
- o To make a recommendation to the Board of Natural Resources at fifteen years regarding the deferred acres
- o To assist in expanding cooperation with the US Forest Service, the Olympic National Park, the Indian tribes and private interests to implement the recommendations of this report

RECOMMENDATIONS

The Advisory Committee will meet at least annually or as needed to review the general progress of actions implementing this agreement.

The Advisory Committee is not authorized to renegotiate provisions of these consensus recommendations and shall make determinations and recommendations within the provisions and spirit of these recommendations.

VII. IMPLEMENTATION ACTIONS



VII. ACTIONS NEEDED TO IMPLEMENT COMMISSION RECOMMENDATIONS

The Commission has made a series of recommendations to fulfill the charge it was given over a year ago. Some of these recommendations go beyond the jurisdiction of the Department and Board of Natural Resources and are therefore recommendations to a broader range of authorities. However, the Commission members feel that this full package of recommendations is necessary in order to deal realistically with the entire problem.

The Commission urges the Commissioner of Public Lands and the Board of Natural Resources to give prompt and serious attention to the recommendations within their jurisdiction. Specifically, the Commission anticipates the Board will adopt these recommendations as a "preferred alternative" within an amendment to the ten-year Forest Land Management Program and that a supplemental environmental impact statement will be prepared. The Commission hopes these documents can be developed for public review without delay. Some of the Commission recommendations can, we believe, be immediately implemented without changes in the Program, and we encourage the Department to proceed in these areas, such as development of the Experimental Forest.

Commission members would like continued involvement as these recommendations are adopted and implemented. Commission members commit to assisting the public review of this report and subsequent department documents. Additionally, prompt creation of the Advisory Committee will allow the interests and individuals on the Commission to continue to participate constructively as implementation proceeds. Commission members are committed to seeing their hard work translated into tangible, workable actions that will fulfill the promise of this agreement.

The following are the key recommendations of the Commission, along with a listing of actions needed and who should undertake those actions.

<u>Recommendation</u>	<u>Action Needed</u>	<u>Entity</u>
Meet the Trust Responsibility	Develop additional revenue sources for school and university construction	State legislature; Commissioner of Public Lands
	Ensure no individual trust is disproportionately affected by deferrals	Department of Natural Resources

IMPLEMENTATION ACTIONS

Establish Olympic Experimental State Forest	Establish Experimental Forest	Board of Natural Resources
	Develop management plan	Department of Natural Resources in consultation with Advisory Committee
	Amend Forest Land Management Plan and EIS	Department of Natural Resources
Establish Olympic Natural Resources Center	Fund design development	State legislature (done)
	Design Center	University of Washington
	Seek funding for operation	UW and others
	Fund operation	State legislature; Congress; private sector
	Establish governing board	Advisory Committee
	Carry out research program	Various parties
Create Independent Sustained Yield Unit	Create sustained yield for experimental forest	Board of Natural Resources
15,000 Acre Deferral for 15 Years	Defer harvest on identified areas totalling 15,000 acres	Department of Natural Resources
	Develop new sustained yield calculation (amend Forest Land Management Program as needed)	Department of Natural Resources
	Improve equity in short-term trust revenue effects	Board of Natural Resources

IMPLEMENTATION ACTIONS

	Carry out timber sales program	Department of Natural Resources
	Develop evaluation criteria aimed at 15-year decision	Department of Natural Resources with Advisory Committee
	Review situation at 15 years and make recommendations	Advisory Committee
Acquisition	Identify potential areas for acquisition	Commission representatives with the Department of Natural Resources and others
	Carry out acquisition with funds from 1989 Operating Budget Section 316	Board of Natural Resources
Improve Economic Development	Perform comprehensive economic study of western Olympic Peninsula	State economic development agencies and others (already funded)
	Provide improved economic development Resources	State legislature and state economic development agencies
	Encourage joint planning among forest landowners	DNR/USFS/NPS/ others
	Explore potential for increased domestic processing	State agencies; state legislature
Establish Advisory Committee	Establish committee with all interests; determine tasks and roles	Board of Natural Resources

APPENDICES



The following is a rough draft presented by John Calhoun, Olympic Region Manager, for the Commission to review. A consensus was not reached on the content and it has not been formally adopted by the Commission.

OLYMPIC EXPERIMENTAL STATE FOREST:
A FOREST MANAGED FOR COMMODITIES AND ECOLOGICAL FUNCTIONS

An option exists to manage the Olympic Experimental State Forest in a non-traditional way that results simultaneously in the production of commodities and the maintenance of ecological values. provides income from this commercial forest while giving equal value to ecological considerations.

This concept is (must be) wholly consistent with Trust management requirements. Harvesting, and subsequent management activities, is carried out in a way to give maximum value to natural ecological functions and processes.

This concept of forest management for natural functions can be applied to the experimental forest as a backdrop to any other decisions made to deal with the old growth issue. It can serve as the major thrust of the proposed research program. The long term interest of the Trusts will be served by investigating the financial and ecological implications of the various management techniques.

A forest managed for natural functions might include some of the following features.

HARVESTING

Harvesting contracts should be designed to result in minimum impact on the natural environment or to enhance it.

- o logging systems will be required to minimize impacts on soil, residual trees and other plants.
- o allow/require removal of only certain specific forest products with protection of all other forest features.
- o allow/require cull logs and other harvesting debris to remain on the site.
- o allow/require snags and green trees to be left on site
- o allow/require trees and other plants that do not meet specific forest product to be left on the site and protected. This might include naturally occurring young trees (whips and reproduction).
- o some partial cutting or selective harvesting should be undertaken at various stand ages.

- o commercially viable systems for enhancing desirable habitat features will be undertaken
- o size and configuration of harvest units will be designed to enhance natural forest functions.

SITE PREPARATION

Slash burning, mechanical wind-rowing or other unnatural systems designed to clear land for reforestation should be avoided. There should be no reason to burn slash or artificially prepare the site in a forest managed for natural functions.

REFORESTATION

Natural regeneration should be the objective. In most cases, logging practices should result in leaving/protecting many natural trees already on the site. While standards will have to be met to ensure that the forest will remain commercially productive, this should be achieved with natural regeneration as a first priority. Supplemental planting with naturally occurring species from local genetic stock will be used to meet reforestation standards.

Hardwoods, and other naturally occurring species may become a part of newly regenerated stands. Hardwood rotations, as part of the natural cycle of forest renewal will be considered.

USE OF HERBICIDES

Use of herbicides will be a last resort. Only in cases of expected long term reduction of forest productivity or the threat of long term forest conversion will herbicide use be considered.

Hand slashing or other mechanical means will be used to remove unwanted or unnatural species. This type of activity should be rarely needed.

TREE SPACING (PRE COMMERCIAL THINNING)

Tree spacing will occur if needed to release trees. Natural regeneration often results in patch stands of trees which is desirable. However, some spacing will be needed to ensure a commercially viable forest.

Special treatment of the tree spacing debris may be desirable from a wildlife prospective. Care will be taken to avoid creating barriers to movement for big game. Debris will be left on the forest floor to naturally decompose.

Small openings may be created during the tree spacing operation to reduce the uniformity of the stands. This, coupled with residual trees, snags and other natural features will ensure a more natural functioning stand.

FOREST FERTILIZATION

Forest fertilization should not be necessary, especially in the coastal hemlock zone. Soils are naturally rich in nitrogen. Proper management practices do not significantly reduce the long term productivity of the soils.

FOREST PROTECTION

Protection from fire, insects and disease can be somewhat non-traditional in a forest managed for natural functions.

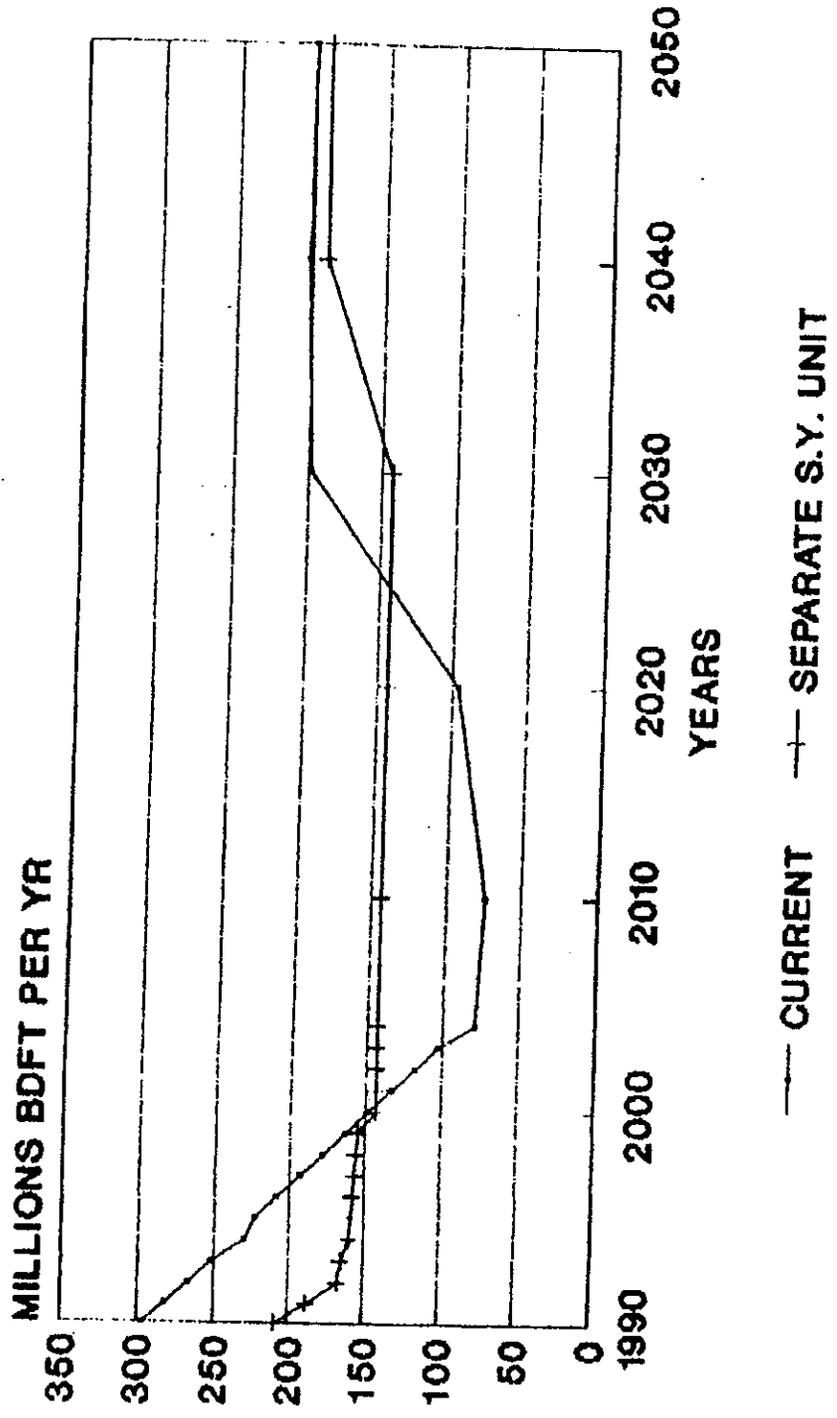
Integrated pest management will be employed. Application of insecticide should not be required in this forest. This forest may contain a higher percentage of decaying wood.

Fire protection may be more complicated. Lack of slash burning results in a longer buildup of fuels but also reduces the risk of wild fires started as a result of slash burning. Special use restrictions may be appropriate during high fire danger to prevent fires from starting. Natural fires must be managed to ensure commercial forests investments are not lost. Some tolerance for fire is appropriate. Coastal forests do not have a severe natural fire history.

ROAD SYSTEM MANAGEMENT

The natural systems in a forest can be significantly impacted by establishment and use of a road system. A road management plan will be adopted to limit the amount of road constructed and to limit the use of the road system once it is established.

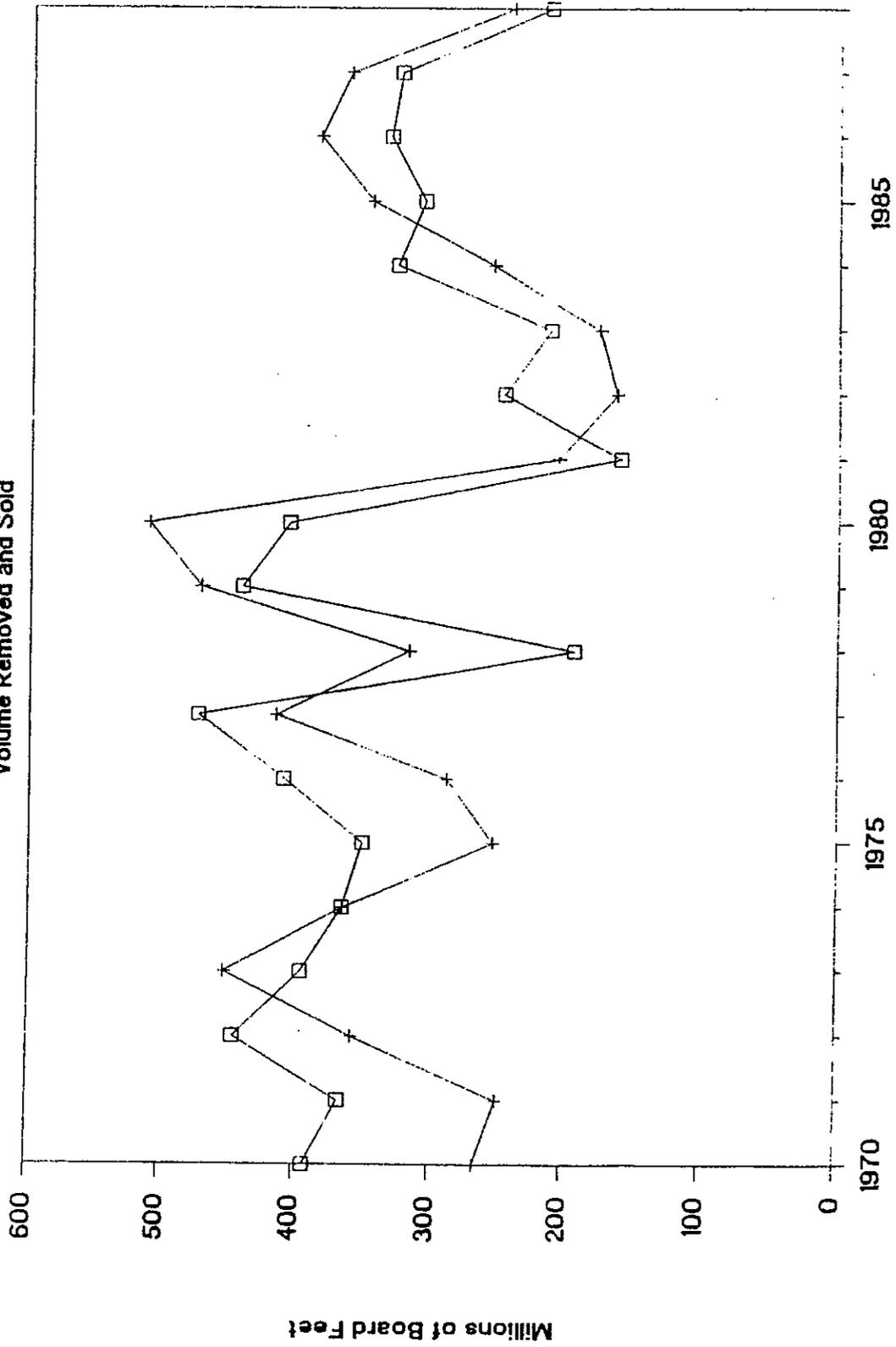
HARVEST PROJECTIONS: WEST END BLOCK CURRENT PLAN AND SEPARATE SUSTAINED YIELD UNIT



WEST END BLOCK CONSISTS OF 267000 ACRES

Timber Sales Olympic Region

Volume Removed and Sold



Fiscal Year + Removed

— Sold

Olympic Region Consists of 347,000 acres.

LIST OF EXPERTS WHO SPOKE AT COMMISSION MEETINGS

TWO-DAY TOUR ON OLYMPIC PENINSULA, OCTOBER 7-8, 1988

Technical Experts:

James Agee, Professor, College of Forest Resources, University of Washington

Eric Cummins, Washington State Dept. of Wildlife

Jeff Cedarholm, Washington State Dept. of Natural Resources

Jerry Franklin, College of Forest Resources, University of Washington

Douglas Houston, Research Biologist, Olympic National Park

David Hagiwara, Director of Marketing, Port of Port Angeles

Deborah Lindley, Washington State Dept. of Natural Resources

Janet Ohmann, Forest Inventory and Analysis, US Forest Service

Ed Schreiner, Research Biologist, Olympic National Park

Olympic Peninsula Community Spokesmen:

Bill Brager, Assistant Manager, Loth Lumber

Harvey Simpson, President, Forks Chamber of Commerce

Tim Spradlin, Owner, Timber-Related Companies, Olympic Peninsula

TRUST RESPONSIBILITY PANEL, OCTOBER 28, 1988

Ann Forest Burns, Attorney at Law

John Hough, Senior Assistant, Washington State Attorney General

Martha Lester, Attorney at Law

Thomas Waggener, Professor, College of Forest Resources, University of Washington (videotaped interview)

STATE FOREST LAND INVENTORY PANEL, OCTOBER 28, 1988

Candace Johnson-True, Washington State Dept. of Natural Resources

Jerry Kammenga, Washington State Dept. of Natural Resources

Malcolm North, College of Forest Resources, University of Washington

Al Vaughn, Washington State Dept. of Natural Resources

SUSTAINED YIELD PANEL, NOVEMBER 29, 1988

John Calhoun, Manager, Olympic Region, Washington State Dept. of Natural Resources

Chuck Chambers, Washington State Dept. of Natural Resources

Norman Johnson, Professor, Oregon State University

TRUST INCOME PANEL, NOVEMBER 29, 1988

Phil Aust, Washington State Dept. of Natural Resources
Michael Roberts, Supervisor of School Facilities, Office of Superintendent of
Public Instruction

ECONOMICS PANEL, NOVEMBER 29, 1988

John Beuter, Mason, Bruce and Girard, Inc., Portland
Randall O'Toole, Publisher of *Forest Watch*
John Walker, Vice-President, Land and Timber, Simpson Timber Company

PANEL ON HABITAT, DECEMBER 16, 1988

Harriet Allen, Washington State Dept. of Wildlife
Chris Drivdahl, Washington State Dept. of Wildlife
Eric Forsman, US Forest Service
Larry Irwin, National Council for Air and Stream Improvement

*OLD GROWTH CHARACTERISTICS AND SILVICULTURAL, HARVEST AND
LANDSCAPE TECHNIQUES, DECEMBER 13, 1988*

Jerry Franklin, College of Forest Resources, University of Washington
Steve Eubanks, US Forest Service
George Staebler, Retired Director of Forestry Research, Weyerhaeuser

CURRENT STATUS OF US FOREST SERVICE PLANS, JANUARY 13, 1989

Ted Stubblefield, Supervisor, Olympic National Forest, US Forest Service

TRUST INCOME TO THE UNIVERSITY OF WASHINGTON, JANUARY 13, 1989

Robert Thompson, Vice-Provost for Budget and Planning, University of
Washington

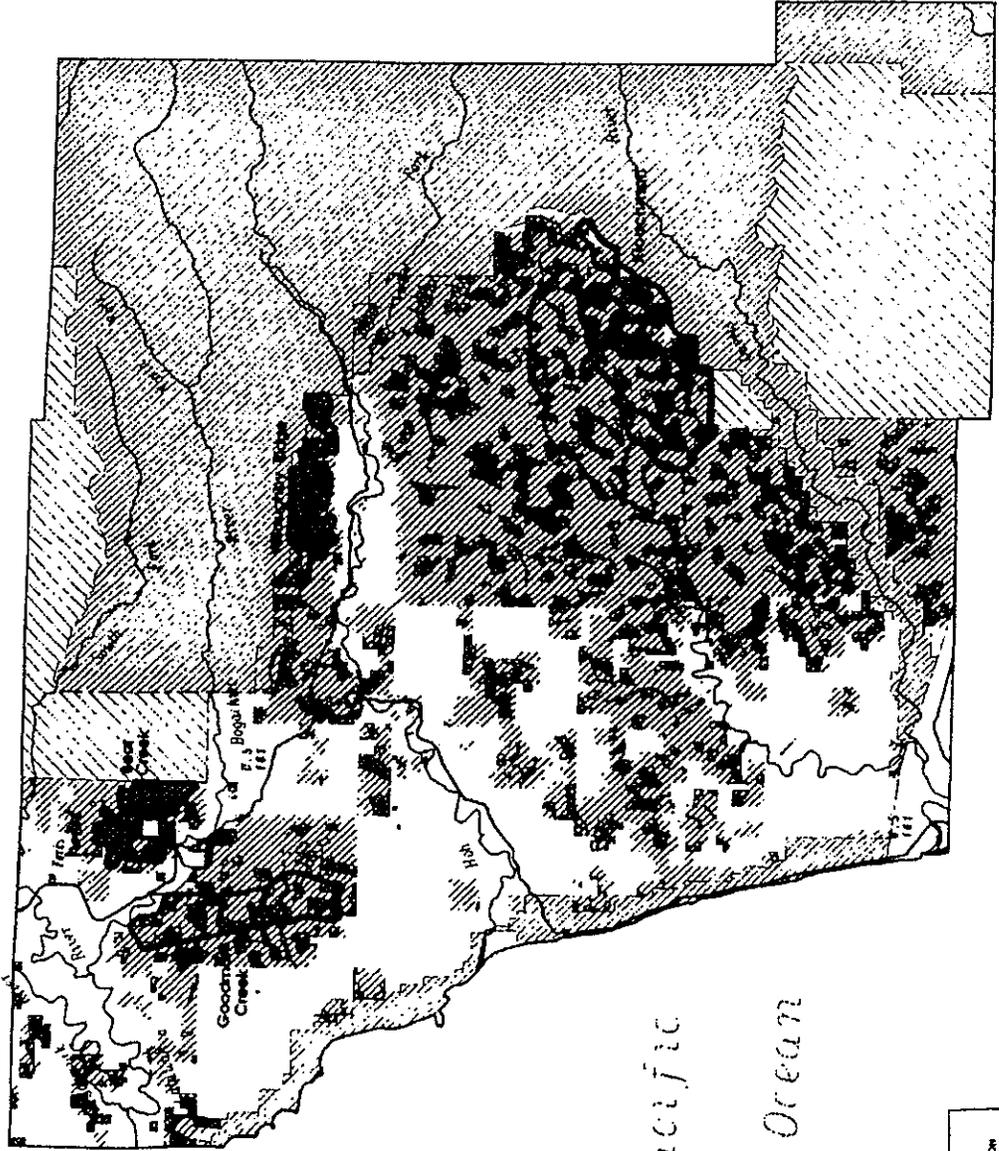
TIMBER SUPPLY AND COMMUNITY IMPACTS, JANUARY 13, 1989

David Hagiwara, Director of Marketing, Port of Port Angeles
Kurt Sandell, Director, Clallam County Economic Development Council

COMMISSION ON OLD GROWTH ALTERNATIVES

Study Area:

Hoh - Clearwater Portion



MAP LEGEND

-  Olympic National Park
-  Olympic National Forest
-  Private / Other
-  State Managed Trust Lands
-  Mature Natural Timber Stands
-  Major Paved Roads
-  Rivers and Streams
-  Deferred Areas



ESTIMATES OF OLD GROWTH ACREAGES ON WESTERN OLYMPIC PENINSULA

Management	Department of National Resources*	United States Forest Service Olympic National Forest	Olympic National Park West of Crest
Key Criteria for designation as "old growth"	100 + Years Old	21" diameter at breast height 160 + Years Old	200 + Years Old Never harvested
Total Acreages/Ownership	355,140	599,733	916,140
Estimated Old Growth Acreages/Ownership	60,000	217,330	200,000
Source	Jerry Kammenga, DNR	USFS**	James Agee, U.W.

* DEPARTMENT OF NATURAL RESOURCES SERAL STAGE DEFERRAL PROJECT Criteria for this project are similar to an ecological definition of old growth: 5 trees 160+ Years Old/acre; 80 Acres contiguous no signs of harvest 15 trees/ acre 32" diameter 6 snags/Acre 21" diameter; 19 dead/down logs per acre. According to the findings of Malcom North, Summer Aide to DNR, 1988, and doctoral candidate of the University of Washington's College of Forest Resources, there are 17,411 acres of forest that meet the Seral Stage Deferral Project criteria.

** OLYMPIC NATIONAL FOREST DRAFT LAND AND RESOURCE MANAGEMENT PLAN. However, a recent Wilderness Society study found a total of 106,000 acres of old growth. Peter H. Morrison, "Old Growth in the Pacific North West: A Status Report," Nov., 1988, p. 25.

May 3, 1988

COMMISSION ON OLD GROWTH ALTERNATIVES
for
WASHINGTON'S FOREST TRUST LANDS

COMMISSION CHARTER

Problem Statement

The Department of Natural Resources, under the direction of the Commissioner of Public Lands, manages forest resources on state-owned trust lands under a variety of laws and policies primarily intended to ensure a flow of revenue to designated public institutions from the sustained harvest of timber.

On the western Olympic Peninsula, DNR manages about 230,000 acres of forest land. This consists of Federal granted lands, mostly common school lands (140,000 acres) with lesser amounts of University of Washington, Capitol Grant, and Normal School lands, along with scattered State Forest Board lands. The annual harvest level from this area is expected to be about 230-275 million board feet between 1989 and 1995, about 30-36% of the total for all state-owned forest lands. Over the succeeding two decades, the average annual harvest from this area is projected to decline to less than 50 MMBF, then gradually increase to about 150-200 MMBF by the fifth decade, maintaining that level in the future. On all western Washington state-owned lands in this period, the sustainable harvest is projected to remain stable at about 697 MMBF.

The Federal granted lands came into state ownership with the original forest cover. Of the original forest in the western Olympic Peninsula, approximately 60,000 acres currently remain in stands over 100 years old, much of the remaining acreage being in young plantations. If past harvest trends were to continue, most of the remaining original forest stands would be harvested within the next 15 years as part of DNR's statewide sustainable harvest program. This would be accompanied by a gradual increase in harvest of second growth stands on the Peninsula and in lower elevation state-owned lands in other areas such as in the Puget Sound lowlands.

This continual decline in the original forest cover on state-owned lands in the western Olympic Peninsula, along with the projected temporary future decline in the harvest rate from these lands, suggests important effects for the following:

1. The ongoing future revenue flows to trust beneficiaries, particularly common schools.
2. The future ecological diversity on state-owned lands on the Peninsula.

3. The availability of wildlife habitat on these lands, especially habitat for rare and endangered species.
4. The possibility of preserving in perpetuity on state-owned lands some examples of original forest cover for aesthetic, recreational, and spiritual values.
5. The future flow of timber from these lands to local industry and communities and to ultimate markets.

These concerns are likely to become even more urgent in the immediate future, and any chance of finding ways to simultaneously resolve these issues may soon be lost. There is a need for serious attention to these problems now while some flexibility for proposing solutions still exists. Resource conditions, scientific information, laws, policies, and potential management strategies need to be re-examined, within the state's overall trust responsibility. Such a reevaluation could produce creative solutions successfully addressing the five issues listed above.

Commission Purpose

The commission will re-evaluate current policies for state-owned lands on the western Olympic Peninsula, make informed judgements about the desired legal, financial, and ecological situation for these lands, and recommend to the Commissioner of Public Lands and Board of Natural Resources specific preferred policies and management strategies leading to balanced solutions addressing the five concerns listed in the Problem Statement.

Commission Duties

The commission will be expected, as a minimum, to make a series of judgements and specific recommendations related to the following topics:

Judgements:

- . The nature of the trust responsibility in relation to natural stands of timber on the western Olympic Peninsula.
- . The financial value to trust beneficiaries of these natural forest stands now and in the future from timber and non-timber revenue sources, compared to total beneficiary funding needs.
- . The role of natural stands on these lands in providing ecological diversity, in concert with other ownerships.
- . The role of state lands on the western Olympic Peninsula, in concert with other ownerships, in providing for wildlife habitat needs, especially for rare and endangered species.
- . The desirability and opportunity for preserves of original forest cover on state trust lands in this area.

- . The role of these stands in providing present and future timber supplies to the local and statewide industry, in concert with other ownerships, considering the effects on local communities and on the long-term value of trust assets.

Specific Recommendations:

- . A preferred future pattern of forest age, species and stand characteristics on state lands.
- . The types of stands that may be appropriate for long-term preservation to help meet the preferred future pattern.
- . The rate of harvest of older stands not preserved, along with other harvestable timber.
- . The areas/types of stands needing new management strategies to attain the preferred future forest.
- . The specific management strategies likely to be successful in meeting objectives for various types of stands, including harvesting methods, rotation length, silvicultural techniques, commercial recreation uses, other leases, etc.
- . Special measures consistent with formal recovery plans for the spotted owl.
- . Specific policy amendments that should be made in the Forest Land Management Plan.
- . The need for appropriate trust compensation for long-term forest preservation or other measures requiring compensation, the conceptual basis for calculating compensation needs, and general realistic sources of revenue adequate for compensation.

Common Information Base for the Commission

The commission will be presented with information from DNR and other sources in the following areas to understand and discuss (no recommendations are expected)

- . General trust principles. The commission will be given the basic principles of trustee duties; what the enabling act and constitution have to say on the nature of the trust asset and its purposes and the results of applicable case law as a context for their discussion.
- . The relationship of state land revenue to total trust beneficiary funding needs
- . The relationship of natural stands to other assets of the trusts; trends in the portfolio

- . An overview of state and Federal environmental legal requirements applicable to trust lands
- . The amount and distribution of natural stands on state trust lands and other ownerships on the Olympic Peninsula as well as trends in that inventory. (including stand age and known ecological characteristics, levels of protection, ownership patterns, owner and agency management objectives, etc.)
- . An overview of silvicultural options, "island ecology", sustainable harvest concepts, forest economics, etc.
- . Applicable provisions of the 1984-93 Forest Land Management Program and the 1988 Strategic Plan
- . Current timber values of state old growth, in foreign and domestic markets
- . Volume of timber from Olympic Peninsula lands flowing to various markets by ownership class. Trends
- . History of recent key events relating to state old growth management
- . A staff paper on the relationship of task force effort to other related planning efforts

Commission Process and Deadlines

DNR will hire an independent consultant to design and facilitate the process the commission will use to accomplish its duties and purpose. The number, length, location, and format of commission meetings will be initially proposed by the consultant. Working meetings of the commission with the consultant are expected to begin in late summer.

An early organizational meeting of the commission will be convened in June by the Commissioner of Public Lands. The purposes of this meeting will be limited to commission member introductions, naming of a chairperson, general discussion of future meeting times, and initial distribution of background reading material developed by DNR and others. No other meetings will take place until a consultant is selected.

Initial commission meetings will emphasize presentation of background information by technical presentors identified by the commission and the consultant. The commission will be expected to have made substantial progress by January 1, 1989, including final recommendations on the amount of trust compensation needed for long-term forest preservation, so that this information can be considered during the 1989 legislative session. The commission will complete its work by May 31, 1989, and the final report will be completed by June 30, 1989 for presentation to the Commissioner of Public Lands and the Board of Natural Resources.