

Goal 4

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CLATSOP COUNTY
GOAL 4
COUNTY-WIDE ELEMENT

FOREST LANDS



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FOREST LANDS

Adopted September 10, 1980
by the Clatsop County Board of Commissioners

Amended Sept, 1983

Forest Lands in Clatsop County are (1) those lands composed of existing and potential forest lands which are suitable for commercial uses; (2) other forest lands needed for watershed protection, wildlife and fisheries habitat, and recreation; (3) lands where extreme conditions of climate, soil and topography require the maintenance of vegetative cover irrespective of use; and (4) other forested lands in urban and agricultural areas which provide urban buffers, wind breaks, wildlife and fisheries habitat, livestock habitat, scenic corridors and recreational use.

Forest lands contribute in a variety of ways to the quality of life in Clatsop County. The production of timber for utilization in the forest products industry is vital to the County's economy. The forest products industry is the largest dollar generator in Clatsop County. Substantial reductions in citizen's property taxes are realized through the benefits of forest management. Forest lands also contribute to the economy by providing recreational opportunities for out-of-county tourists, hunters and hikers. Forest lands yield non-economic benefits to county residents in the form of clean water, fish and wildlife habitat, outdoor recreational opportunities, and aesthetic resources.

General Findings

Forest lands cover about 90% of the County's land area. The forest land base of Clatsop County comprises a total of about 474,000 acres, of which about 265,000 is commercial timber land in industrial ownership, about 160,000 acres is state-owned timber land, and about 47,000 is in private non-industrial ownership. These lands are designated Conservation-Forest in the County's Comprehensive Plan.

The County's forest lands are highly productive: over 93% of the commercial forest lands consist of site class II and III lands (State Department of Revenue system of classification and State Department of Forestry classification).

Private non-industrial forest lands have received attention recently because of their potential for augmenting existing timber supplies. Educational programs are being utilized to increase understanding of silviculture and provide technical advice to small woodlot owners. Tax incentive programs, such as the Western Small Tract Optional Tax and the Western Oregon Forest Land and Severance Tax, are also available to encourage sound forest management practices. Despite these programs which encourage small woodlot management, many owners of small forest parcels purchased them for purposes other than silviculture: thus hundreds of acres of valuable timber land are not currently managed for timber production.

Concern is increasing over the effects of traditional forest management practices such as herbicide spraying, road building and harvesting on watersheds, recreational areas, fish and wildlife habitat and nearby residences. Forest owners are also concerned about these issues and the controversy surrounding them. The Oregon Forest Practices Act protects these forest resources, and many feel that the Act adequately controls the adverse impacts associated with commercial forestry. Other County residents believe the Act is too weak, and advocate greater controls over forest practices.

GOAL

To conserve forest lands for forest uses.

POLICIES

1. Forest lands shall be conserved for forest uses, including the production of trees and the processing of forest products, open space, buffers from noise, visual separation from conflicting uses, watershed protection, wildlife and fisheries habitat, soils protection from wind and water, maintenance of clean air and water, outdoor recreational activities compatible with these uses, and grazing land for livestock.
2. Forest Lands shall be designated Conservation-Forest in the County's Comprehensive Plan. When considering a zone change to a forest zone, the Planning Commission or other reviewing body shall review the proposal against the acreage, management, and other approval criteria in County-wide Forest Lands Policies #19, #20 and #21.*
3. Forest practices on lands designated Conservation-Forest shall conform to the Oregon Forest Practices Act and Oregon Forest Practice Rules, as revised.
4. Division of forest lands will be permitted only upon a finding that the proposed division meets the following criteria:
 - a. the proposed division will not diminish the potential for timber production, watershed protection and fish and wildlife habitat, and
 - b. the creation of new parcels will not materially alter the overall stability of the area's land use pattern.
5. The clustering of non-forest residences on forest lands may be permitted in the AF-20 and F-38 zones, subject to non-forest use siting standards. This non-forest development is permitted conditionally because, properly designed and sited, it does not result in the loss of forest lands nor does it diminish or interfere with forest uses.
6. The designation of new park and recreation areas (campgrounds, etc.) on forest lands shall require an assessment of public need for these facilities and their potential impact on adjacent forest lands. The productive capacity of the land shall be evaluated and considered when siting these developments. These developments, if allowed, shall be sited and designed so as not to preclude forest management wherever possible.
7. The County will do the following in order to minimize conflicts between the use of forest land for elk habitat and for commercial timber production.

*Amended 84-9, dated May 23, 1984.

a. Wildlife refuges:

* Existing wildlife refuges which are owned/leased and managed by the Oregon Department of Fish and Wildlife (ODFW) or by the United States Fish and Wildlife Service (USFWS) shall be designated Conservation-Other Resource and zoned Open Space, Parks and Recreation (OPR).

* Proposed wildlife management areas which are managed and either owned or leased by the Oregon Department of Fish and Wildlife (ODFW) located in areas designated Conservation Forest or in other lowland areas under any plan designation shall be reviewed by the County for compliance with the approval standards listed below. Such hearings shall be conducted according to a Type IV procedure at a time and place convenient to residents of the affected planning area. ODFW shall provide an evaluation of the economic, social, environmental and energy consequences of the proposal and** information sufficient to support findings with respect to the following approval criteria:

1. Identification of the need for the proposed new wildlife management area. "Need" means specific problems or conflicts that will be resolved or specific ODFW objectives that will be achieved by establishing the proposed area.
2. Alternative lands and management actions available to the ODFW, and an analysis of why those alternatives or management actions will not resolve identified problems or achieve objectives.

b. The State Fish and Wildlife Commission shall be officially requested to resolve the existing adverse impacts on forest land resulting from elk browse. The following measures are suggested:

- revision of hunting laws.
- reduce the elk population in Clatsop County to sustained management levels.
- compensate land owners for damage to forest crops resulting from elk.
- where appropriate, provide technical and financial assistance to forest land owners for the installation of fencing.

c. The County shall take the necessary action through the State Legislative Assembly to revise the laws governing the action of the State Fish and Wildlife Commission for the provision of acceptable methods of relief to property owners from damage due to elk.

10. Forestry activities within watersheds in areas designated Conservation-Forest in the Comprehensive Plan will be conducted in accordance with the Oregon Forest Practices Act and the Oregon Forest Practice Rules, as revised. Additional protective measures negotiated between forest landowners and water users are encouraged.

*Amended 84-9, dated May 23, 1984.

**Amended 84-10, dated June 27, 1984.

11. The productive capacity of the land will be considered before land designated Conservation-Forest is changed to another plan designation. The impact of the proposed new use on adjacent lands shall also be evaluated and considered before such a plan change is made.
12. Off-road vehicles (ORVs) shall be strictly confined to established rock roads in order to prevent erosion, stream degradation, damage to young trees and seedlings, and disturbance of wildlife and its habitat.
13. Existing utility right-of-ways shall be utilized to the maximum extent possible before new right-of-ways are created.
14. Roads in forest areas shall be limited to the minimum width necessary for traffic management and safety.
15. Forest land owners shall be encouraged to actively pursue methods of complete utilization of wood fiber left on the ground after harvesting.
16. Where forest lands of suitable management size occur in the interior of rural residential areas, or are completely surrounded by residential development, small woodland management and farming is encouraged. Over time these areas may be needed for housing and in future comprehensive plan updates shall be considered ideally situated for conversion to residential uses prior to conversion of other forest lands.
17. Expansion of existing non-forest developments and uses in forest zones may be permitted under a Type II procedure only when such expansion is substantially confined to the existing site.
18. Partitioning of forest lands under the provisions of Clatsop County's forest zones which serve to increase forest management efficiency by allowing one or more forest owners to consolidate their land holdings is encouraged.
19. Clatsop County will rely on the following acreage criteria when reviewing a proposed zone change to a forest zone:
 - AF-20: Lands in the AF-20 zone shall be comprised predominantly of ownerships smaller than 40 acres. Ownerships 40 acres and larger may also be placed in an AF-20 zone if they are generally surrounded by ownerships smaller than 40 acres.
 - F-38: Lands in the F-38 zone shall be comprised predominantly of ownerships smaller than 76 acres. Ownerships 76 acres and larger may also be placed in an F-38 zone if they are generally surrounded by ownerships smaller than 76 acres.
 - F-80: Lands in the F-80 zone shall be comprised predominantly of ownerships 76 acres and larger.*

*Amended 84-9, dated May 23, 1984.

20. Clatsop County will rely on the following management criteria when reviewing a proposed zone change to a forest zone:

AF-20 and F-38: lands in these forest zones are characterized by both agricultural and forest land uses. Management of these lands is often done on a low-intensity, part-time basis.

F-80: Forest lands in the F-80 zone include areas where timber production is the primary land use. These lands are often intensively managed by full time professional foresters.*

21. A zone change from the F-80 zone to any other zone, including the AF-20 or F-38 zone, shall require a plan amendment. The purpose for such a plan change is to assure that primary forest lands in the F-80 zone are not converted to mixed use forest lands in the F-38 or AF-20 zones, or to any other plan designation without appropriate review by the County.*
22. Partitioning of land in the AF-20 zone and F-38 zone shall be approved only upon a finding that such newly created parcels shall be used only for forest uses. This policy does not apply to the small lots resulting from a cluster partition.*
23. In land use changes involving a change from Conservation-Forest Lands or Rural Agricultural Lands to Rural Lands or Development designations an Exception to the Agricultural Lands or Forest Lands Goals must be taken.*

*Amended 84-9, dated May 23, 1984.

FOREST LANDS

BACKGROUND REPORT

May 1980

By

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Clatsop County Department of Planning and Development

Adopted September 10 1980
Revised September 30 1980

by the Clatsop County Board of Commissioners

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PREFACE

Clatsop County has been involved in the process of updating the County Comprehensive Plan in order to comply with the Statewide Goals and Guidelines, and to develop sound comprehensive planning in the best interests of the area. This task has been undertaken incrementally, resulting in several informative and technical background reports to be used as the basis for policy formulation. These background reports include the environmental plans for the various planning areas, Agricultural Lands, Forest Lands, Housing, Transportation, Public Facilities and Services, Economy, Energy Conservation, Estuarine Resources, Coastal Shorelands, Beaches and Dunes, Air, Water and Land Quality, Hazards, and Recreation.

The Planning staff has attempted to provide a clear, complete and accurate accounting of current circumstances in Clatsop County. Your comments are encouraged to assist in the maintenance and periodic update of the Clatsop County Comprehensive Plan.

INTRODUCTION

Clatsop County is located at the extreme northwestern corner of Oregon where the Columbia River joins the Pacific Ocean. The County has a total area of 820 square miles of land and 101 square miles of water for a total of 921 square miles.

Elevations in the County range from sea level to 3,000 feet or more at the crest of the Coast Range. The land is largely rough, broken mountainous terrain with low-lying level alluvial plains bordering the Columbia River Estuary, and rocky headlands, marine terraces, and an extensive coastal plain of partially stabilized sand dunes along the Pacific Coast.

The climate of the County is of the humid, marine temperate type characterized by cool summers and rainy winters with light to moderate snowfall on the higher elevations. Precipitation falls mostly from October through April and varies from 70 to 100 inches along the coast to over 120 inches at the crest of the Coast Range. Temperatures seldom rise above 85 degrees F. in the summer or below 20 degrees F. in the winter.

Timber, the major land use of the County, comprises roughly 90% (474,000 acres) of the total land area of the county (Clatsop County Plan Phase I). These forests are the source of raw materials for the County's lumber and wood products industry. Most streams of the County head in forest lands. Forest lands also provide wildlife habitat, and are utilized for several forms of outdoor recreation.

Clatsop County's environment is favorable for the growth of dense and productive forests. The effects of topography, proximity to the moist humid winds of the Pacific Ocean, and large amounts of precipitation in the County is reflected in the type of forest cover present.

Forests in Clatsop County fall into two major zones determined by the distribution of the principle species. The Sitka Spruce zone occurs generally in the western half of the County, and the Western Hemlock zone is found mostly in the eastern half. The major tree species in these zones include Sitka Spruce, Western Hemlock, Western Red Cedar and Douglas Fir. Other prominent species include Red Alder, Big Leaf Maple and some true firs (the Pacific Silver Fir and Noble Fir) at the higher elevations.

Six of the largest trees in the United States are located in Clatsop County. These trees, together with their locations, are listed in Table 1.

TABLE 1

OREGON NATIONAL TREE CHAMPIONS LOCATED IN CLATSOP COUNTY

| <u>NAME</u> | <u>LOCATION</u> |
|----------------------|--|
| 1. Hooker Willow | Warrenton |
| 2. Sitka Spruce | Klootchie Creek Park |
| 3. Sitke Alder | Saddle Mountain State Park |
| 4. Red Alder | About 15 miles SE of Astoria near Highway 202 |
| 5. Big Leaf Maple | Jewell |
| 6. Buckthorn Cascara | Near Hamlet |

The Nature Conservancy's Natural Area Study for Clatsop County and the Open Space, Scenic and Historic Areas and Natural Resources section of the Clatsop County Comprehensive Plan list other notable stands of timber.

FOREST CLASIFICATION AND INVENTORY

1. Classification.

Forest land means land for which a primary use is the growing and harvesting of trees. The Oregon Department of Land Conservation and Development defines forest lands as:

- (1) lands composed of existing and potential forest lands which are suitable for forest uses,
- (2) other forested lands needed for watershed protection, wildlife and fisheries habitat and recreation,
- (3) lands where extreme conditions of climate, topography and soil require the maintenance of vegetative cover irrespective of use, and
- (4) other forested lands in urban and agricultural areas which provide urban buffers, windbreaks, wildlife and fisheries habitat, livestock habitat, scenic corridors and recreational use.

Forest lands are classified according to their productivity through a forest site classification system. A site classification system is a measure of the land's potential for producing a quantity of timber over time. It is not a measure of the existing stock. The State Department of Revenue classifies all private forest land using the Forest Service's site classification system, sometimes called the King-Meyerhauser system. About 93% of County commercial forest lands are site class II and III under this system. These site class categories and ratings are shown in Table 2.

TABLE 2

COMPARISON OF SITE CLASS INDEX SYSTEMS

| <u>RATING</u> | <u>PRODUCTIVITY CLASS</u> | <u>CUBIC FOOT SITE CLASS</u> |
|---------------|---------------------------|------------------------------|
| Excellent | FA | II |
| Very Good | FB | II |
| Good | FC | III |
| Fair | FD | III |
| Poor | FE | III and IV |
| Very Poor | FF | IV and V |

Table 3 shows the acreages of forest land in Clatsop County by productivity class. This is also shown on Map 2.

State forest lands, however, are classified according to the State Forest Land Use Classification System. There are three general categories under this system: Production, Use and Conservancy. The overwhelming majority of State Forest lands (about 97%) are classified as Production. Minor portions are classified as Use (1.8%) and Conservancy (1.2%) and are not used for calculating the annual allowable cut by the State Department of Forestry.

Production lands are those on which timber production is a primary use. Production lands are subdivided into top production, regular production, scenic production and limited production classifications. Use lands are those on which special uses may preempt other uses. Such uses include watersheds, recreation, services, rangelands, transmission right-of-ways and quarry sites. Conservancy lands are those on which a special need for protection of exceptional scenic values or fragile sites preempts timber production.

2. Inventory

Clatsop County has mapped its forest lands utilizing the following systems:

- * The State of Oregon Department of Revenue system for all private forest lands as to production potential (not cubic foot site class).

- * The State Forest Land Use Classification system for all State Board of Forestry lands.

These maps are not included in this report due to their size, and are located in the Clatsop County Department of Planning and Development, the State Revenue Department and the Astoria office of the State Department of Forestry.

It should be noted that the Land Conservation and Development Commission has adopted a Forest Lands Policy requiring local jurisdictions to map forest lands according to cubic foot site class. Clatsop County has utilized the State Department of Revenue Classification which is not calculated into cubic foot site class at this time. Clatsop County will convert to the cubic foot site classification at a later date.

FOREST LAND OWNERSHIP

1. History

Forests in Clatsop County were once known for their large stands of Douglas Fir and other important softwood species. Most of the old growth Douglas Fir was harvested over a relatively short time.

Early hand, horse and ox team logging along the slopes above the Columbia River and other navigable waterways gave way to steam donkeys and railroads, which enabled logging to be extended back into much of the county by 1910 to 1925. In 1926, the peak production year, Clatsop County forest yielded 572 million board feet of timber.

Logging operations and sawmills in Clatsop County were among the first in Oregon. Lumber produced in large sawmills along the Columbia River was primarily from Douglas Fir. Mills in the County also produced cedar for boat building, posts, shakes and shingles, hemlock for pulp and trim lumber, spruce for pulp and airplanes, and alder for furniture.

Lumber production closely followed the trend in log production until about 1945, when sawmill demand exceeded log supply. Mills designed for old-growth logs were also finding it uneconomical to operate with smaller second growth logs. Large lumber mills were still operating in 1950 in Westport, Wauna, Bradwood and Warrenton. A plywood mill, two stud mills, and a pulp and paper mill were all that remained by 1968.

Forest ownership has changed dramatically over the few decades of timber harvesting. The Great Depression, on top of heavy investment in logging equipment and poor market conditions, caused widespread financial hardship which lead to the cut-and-run logging philosophy of the time. Also, the higher taxes of what had been a boom economy had encouraged owners of forest lands that could not be logged economically, as well as owners of logged-off forest lands, to let

thousands of acres default for taxes and revert to County ownership. The County had acquired over 100,000 acres of foreclosed lands by 1932.

About this time State forestry laws proved timely by facilitating purchase of land for management by the State Forestry Department, with 75% of the harvest value going to the County. An experimental area was started near Hamlet for this program and became the forerunner of the present program.

World War II brought new markets and value to second growth stands and additional areas became accessible with modern equipment. The pressure to sell County forest lands back to private loggers was back, but the County Commissioners were more interested in the future growth and tax base of forest lands than in short-term gain. As a result, the County had deeded over 90,000 acres to the State Forestry Department and the Department had purchased another 15,000 acres by 1945.

By this time, the Crown Zellerbach Corporation (formerly Crown-Willamette) was taking advantage of the opportunity to acquire sizeable acreages of hemlock and spruce stands along the coastal slopes as well as logged-off but potentially high-yielding properties for their sustained-yield tree farming operation. Areas near Cannon Beach and in the Youngs River valley were planted by their foresters in the 1920s and 1930s and are now visible evidence of their early forest management activities.

Ownership patterns for both private and public forest lands are shown on Map 2 and further described in Table 4.

TABLE 4

COUNTY FOREST LAND OWNERSHIP AND ACREAGE

| | <u>Acres</u> | <u>% of Forest Land</u> |
|------------------------|--------------|-------------------------|
| Private Industrial | 264,565 | 55.8 |
| Private Non-industrial | 46,887 | 9.9 |
| Public | 160,097 | 33.7 |
| TOTAL FOREST LANDS | 474,000 | 99.4 |

Total does not equal 100% due to rounding.

Source: Allan Shiller. Survey of The Natural Economy in District One. August 1973; State Department of Forestry Records; Clatsop County Assessor's Records.

2. Private Non-Industrial (Small Woodland Owners)

Private non-industrial forest land ownerships in Clatsop County are generally found on the fringes of the larger public and corporate holdings. These holdings promise to become increasingly important as a source of timber.

The North Coast region of the state has been identified as capable of continuing present annual harvest levels to the year 2000 (Timber for Oregon's Tomorrow, John Beuter, et al). The report also predicts up to a 20% increase in harvest levels over the next 10 years if small woodland owners could manage their resource more intensively. Non-industrial private landowners have a variety of reasons for owning or managing forest land. The most common appear to be residential purposes, recreation, aesthetics, grazing, or for eventual timber harvest.

The approximately 47,000 acres of private non-industrial forest land shown in Table 4 represent only 10% of the county's total forest land, and considerably less of a percentage of forest lands managed for timber production. Table 5 indicates the range and size of private non-industrial forest land holdings in Clatsop County. The ownership pattern strongly influences how these lands are utilized. Although a growing number of small woodlot owners are engaged in intensive forest management of their land, most of the acreage in small forest parcels is poorly managed or not managed at all. Generally, larger timber owners are engaged in more intensive forestry for the production of income while owners of smaller tracts (10 to 100 acres) have other objectives.

TABLE 5

NONINDUSTRIAL PRIVATE FOREST LAND OWNERSHIP

| <u>Size Class (Acres)</u> | <u>Acres</u> | <u>Number of Owners</u> |
|---------------------------|---------------|-------------------------|
| 10 - 100 | 24,733 | 602 |
| 100 - 500 | 20,103 | 106 |
| 500 + | 2,051 | 3 |
| | <u>46,887</u> | <u>711</u> |

Source: State Department of Forestry, 1977.

There is a great deal of help, both public and private, available to the small woodlot owner. There are programs designed to help bear the cost of management practices and to provide technical, financial and educational assistance. Many landowners, however, are either unaware of the kinds of services available or unaware of who offers them.

Technical assistance to the small woodlot owner in Clatsop County is provided by the following agencies: Oregon State University Extension Service, Oregon State Department of Forestry, the Soil Conservation Service and Clatsop Community College. The Extension Service offers assistance in explaining forest management techniques and sponsors periodic field trips to show actual practices. Larger timber companies will occasionally provide forester's services to manage small woodlots, often in exchange for first option on timber harvested. Clatsop Community College offers courses in forestry. There are also many forestry consultants available who specialize in various aspects of management and production.

The State Department of Forestry is the largest provider of assistance to the non-industrial private forest landowner. The Department's Service Forestry Program offers six services to woodland owners wishing to manage their forest properties. These services include designing management plans, acting as advisors for the federal cost share programs, providing technical advice, coordinating available services, and administering the Western Oregon Small Tract Optional Tax. Service foresters also assist landowners in forming cooperatives to secure nursery stock or perform project work, such as aerial fertilization or chemical brush control. The Department has published two catalogs: Woodlands Assistance In Oregon: A Catalog Of Technical, Financial And Educational Assistance and Woodlands Assistance In Oregon: A Directory Of Young Growth Management Contractors. The first catalog provides a summary of available services to woodland owners from a variety of sources. The second catalog lists contractors willing to help landowners carry out young growth management programs such as tree planting or site preparation. (DOF, March, 1978).

3. Private Industrial (Corporate)

The primary purpose of these large owners is the production of lumber and other wood products, the number one industry in the County. The economic impact of this industry is discussed in the background report on Economy.

As shown in Table 6, the largest corporate timber land owner in Clatsop County is the Crown Zellerbach Corporation. Close examination of Map 2 shows that their holdings are concentrated generally in the western half of the County. The Boise Cascade Corporation owns a large block in the northern half of the County plus substantial holdings along the Nehalem River in southern Clatsop County. Other forest products companies own land generally in the southeastern portion of Clatsop County.

TABLE 6

PRIVATE INDUSTRIAL HOLDINGS

| | <u>Acres</u> | <u>% of Forest Lands</u> |
|-----------------------|--------------|--------------------------|
| Crown Zellerbach | 169,000 | 35.7 |
| Boise Cascade | 49,845 | 10.5 |
| Publisher's Paper | 6,068 | 1.3 |
| International Paper | 15,282 | 3.2 |
| Longview Fibre | 5,100 | 1.1 |
| | <hr/> | <hr/> |
| TOTAL FOREST INDUSTRY | 264,565 | 55.8 |

source: Alan Shiller. Survey of the Natural Resource Economy in District One, Oregon. August 1973; State Department of Forestry Records; Clatsop County Assessor's Records.

Large firms, unlike small woodlot owners, are more likely to find that a relatively low rate of return on timber production does not greatly effect long-term overall productivity. The large firm is more capable of realizing its profits in the manufacturing stage of production because intensive forest management affords the protection of a permanent timber supply which in turn protects the heavy investment in plant and equipment.

4. Public Forest Lands

As shown in Table 7, public forest lands in Clatsop County are almost entirely owned and managed by the State Department of Forestry. Most of the State-owned timber land is in the east, southeast and southcentral portions of the County, including other large tract in and adjacent to Astoria and southeast of Olney along State Highway 202.

TABLE 7

PUBLIC FOREST LAND

| | Acres | % of Forest Lands |
|---------------------------|----------------|-------------------|
| State Lands | 154,998 | 32.7 |
| (DOF) | (145,158) | |
| (DSL) | (2,237) | |
| (State Parks) | (6,804) | |
| (Right-of-ways) | (242) | |
| (DFW) | (558) | |
| Federal Lands | 43 | 0.0 |
| County Lands | 722 | 0.1 |
| City Lands | 4,333 | 0.9 |
| TOTAL PUBLIC LANDS | 160,097 | 33.7 |

Source: Allan Shiller. Survey of the Natural Resource Economy in District One, Oregon. August 1973; State Department of Forestry Records; Clatsop County Assessor's Records.

About two-thirds of the proceeds from the sale of timber on State forest lands goes to the counties in which the timber is located. These proceeds reduce the property tax burden for County residents. Clatsop County recieved about 10 million dollars from the sale of timber on state forest lands located in the County during the 1981-1982 fiscal year. These funds are channeled back into the school and other districts in which the timber was cut. Every \$1,000 received amounts to an average of about a one cent tax reduction on a property owner's tax statement. State forests are managed for sustained-yield timber production, consistent with the financial resources available and the need to protect soils, streams, wildlife habitat, recreational opportunities and other environmental values.

One of the state's largest roles in terms of forest lands are in the areas of fire prevention and protection and administration of the Oregon Forest Practices Act. Professional forestry services are also provided by the state to the public in three areas: woodland assistance, forest practices and forest resource studies. Through woodland assistance owners are advised on reforestation, stand improvement, forest protection, marketing and other activities.

Clatsop County owns about 720 acres of forest land. These lands are actually part of the County park system and are not held by the County for timber production. They are not considered forest lands for purposes of this comprehensive plan, and are addressed in the Open Space, Scenic and Historic Resources and Natural Areas plan element.

The County through foreclosure proceedings also owns numerous parcels of potentially productive timber lands. Clatsop County has inventoried these lands and is trying to develop a "block" through trading. The State has approached the County about management of these lands but an agreement has not yet been reached.

FOREST MANAGEMENT PRACTICES

1. Forest Practices Act.

The Oregon Forest Practices Act (ORS 527.610 to 527.990) was the first of its kind in the United States to set forth procedures and methods to insure protection of a wide range of forest-related values including water quality, reforestation and wildlife protection. The Act has been in effect since 1972 and is administered and enforced by the Oregon Department of Forestry. A major aim of the Act is to ensure water quality.

Forest practices have many potential impacts on water quality. Turbidity is probably the most important water quality problem created by forest operations. Harvest methods which disturb or compact soils the most have the greatest potential for producing erosion and increasing turbidity in forest streams. Generally, tractors disturb and compact soils the most, followed by high-lead, skyline and balloon harvesting. Preventing sedimentation requires minimizing soil disturbance, planning harvest operations to protect streams and sensitive areas, and protecting stream channels during and after harvest.

There are seven categories of forest practices that relate to water quality protection. These include harvesting, road construction and maintenance, site preparation, application of chemicals, rock pits and surface mining, petroleum leakage and stream channel changes. The purpose of the harvesting rules is to "establish minimum standards for forest practices that will maintain the productivity of the forest land, and minimize soil and debris entering streams and protect fish and wildlife habitat". Stream protection requirements comprise a large portion of the harvesting rules, emphasis being given to the protection of stream beds and banks and preservation of streamside vegetation.

The purpose of the road construction and maintenance rules is to "establish minimum standards for forest practices that will provide the maximum protection to maintain forest productivity, water quality and fish and wildlife habitat during road construction and maintenance". The general objective of these rules is to design roads that fit the terrain, that minimize soil disturbance and that provide for adequate drainage.

Site preparation rules set out details for precautions to be taken during site preparation to ensure protection of water quality. Reforestation rules give further emphasis to soils protection and stabilization. Reforestation following harvest is required, ensuring that vegetation is returned to protect the soil.

The purpose of the rules regarding application of chemicals is "to regulate the handling, storage and application of chemicals in such a way that the public health and aquatic habitat will not be endangered by contamination of the waters of the State." Included are sections requiring maintenance of equipment in leakproof condition, protection of water quality during mixing of chemicals, protection of open water when spraying, location of mixing and landing areas away from water bodies, and monitoring streams by landowners using chemicals.

The purpose of the rockpit mining rules is to insure protection of water quality and soil stability and to provide for safety during and after mining operations. Quarry sites are required to be kept out of streambeds and to be stabilized to prevent erosion or mass movement. The rules on petroleum leakage require the operator to "take adequate precautions to prevent leakage or accidental spillage of any petroleum products in such a location that they will enter any stream course or area of open water." The stream channel change rules state that "changes shall not be made in any natural fish bearing stream course either by crowding (filling along one bank) or by relocation of the channel, except by written approval of the State Forester."

The Oregon Forest Practices Act has been helpful in reducing the impact of forest practices on water quality. This is the consensus of a select group of specialists in forestry, water quality, fisheries and soils which recently prepared an evaluation for the State Department of Forestry. Dr. George Brown, head of the Oregon State University Department of Forest Engineering, served as chairman of the work group. This group recommended improvement in the following areas:

1. Additional training of forest practice officers and industry personnel concerning soils, road construction and timber harvesting systems.
2. Improved supervision of forest operations at all levels.
3. More uniform enforcement procedures and recommendations to timber operators throughout each operating region to avoid confusion on the requirements for water quality protection.
4. Developing a better knowledge base through research concerning the effects of some forest practices on water quality.

The Oregon Forest Practices Act requires operators to notify the State Department of Forestry at least 15 days prior to beginning an operation. This advance notice is required to give Oregon Forest Practice officers a chance to make an inspection of the site where there is a risk of environmental damage.

Some citizens are voicing their concerns (at this writing) over the adequacy of the Forest Practice Rules and lack of notification procedures to affected citizens. The outcry appears to stem from a nationwide concern over herbicide spraying and other environmental issues.

VEGETATION MANAGEMENT

Forest resource production and protection often requires vegetation control or manipulation directed toward plant species which interfere or compete with the growth of desired tree species. A major forest management objective is regeneration of desired timber species. This can be difficult because many species grow very slowly during their juvenile state. Other undesired plant species grow rapidly and are better able to compete for available moisture, light and nutrients. This competition can retard or prevent the growth of the desired species. Vegetation management is used at different times to retard other species and permit the establishment of desired seedlings. Major competitive plant species in Clatsop County include Salmonberry and Red Alder.

Fire has been used for centuries to manipulate vegetation. As other techniques such as herbicides and mechanical treatment become limited, fire becomes a more viable option. The Department of Forestry has administered a smoke management program since the mid 1970s which utilizes weather forecasting and pre-burn planning to minimize smoke pollution problems in designated population centers.

The use of mechanical devices such as bulldozers, plowing, brush cutters, etc. also reduces unwanted vegetation. Reforestation can be immediately undertaken. Mechanical operations, however, often disturb the topsoil, increasing chances for soil erosion, stream sedimentation and loss of site productivity.

Manual control methods are often used in areas requiring selective treatment. This type of vegetation control can also be used near water courses, critical boundaries and recreation sites. Labor costs are generally higher than for spraying and it may not be as effective as chemical treatment.

The most widely utilized method of removing undesirable vegetation is the use of herbicides. The future role of herbicides in forestry is currently clouded: recent legal action in the Federal Courts has caused the temporary suspension of herbicide use in some National Forests, pending further investigation into the possible health effects of herbicides on humans. Although this litigation does not directly affect herbicide use in Clatsop County, it is an indication of the larger controversy surrounding herbicides.

TIMBER TAXATION

Timber harvesting and processing support the economy of many communities and even the County as a whole. Public investments are made in schools and other facilities and services where forest

industries locate. Individuals build homes and establish businesses. The people and the local economy benefit if the forest resource is managed to provide a relatively stable timber supply.

Since timber tax payments are a relatively substantial cost factor in the holding or harvesting of timber, timber taxes tend to influence the forest management practices of private forest land owners. The laws which provide for taxation of privately owned timber and timber lands are an example of an attempt to link taxation and land use policy. The laws are designed to encourage good timber conservation practices during harvesting, to prevent the rapid depletion of our forests, and to encourage sustained yield management.

In 1951 the State of Oregon embarked on an ambitious program to reappraise all property in the state subject to ad-valorem taxation, and reappraisal of timber land was an important part of that program. In conjunction with that program, responsibility for timber evaluation was centralized as a function of the Oregon State Tax Commission. In 1961 the State Legislative Assembly enacted a new valuation for Western Oregon timber, placing it at 25% or 30% of its immediate harvest value. Timber smaller than 12 inches diameter at breast height was exempted from the taxation.

The 1977 session of the Oregon State Legislature adopted a new form of timber taxation in an effort to simplify the complex tax system that was in effect west of the Cascades. Under the old ad-valorem system, taxes were paid only on the land and not on the trees until the trees grew large enough to be commercially valuable. Once the trees were 12 inches dbh, they were taxed. If the trees were harvested prior to that point, the timber owner paid an ad-valorem tax on its harvest value for the single year of the harvest. Some owners were cutting trees before they were large enough to tax, consequently hurting timber production.

TABLE 8

True Cash Value Of Forest Land
As Of January 1983

| Land Class | Land Value Zones | | |
|------------|------------------|-------|-------|
| | A | B | C |
| FA | \$393 | \$349 | \$337 |
| FB | 324 | 282 | 247 |
| FC | 267 | 223 | 195 |
| FD | 232 | 185 | 161 |
| FE | 168 | 132 | 108 |
| FF | 115 | 88 | 73 |
| FG | 57 | 43 | 43 |
| FX | 33 | 33 | 33 |

Source: Clatsop County Assessor's Office.

The Forest Fee and Yield Tax had been applied to cut-over timberland. This was a special tax available to owners as an option to the ad-valorem system, designed to keep on the tax rolls land that would otherwise be allowed to revert to the County for non-payment of taxes after the timber had been harvested. Upon application by the owner and concurrence of the State Forester, such lands could be classified as "reforestation lands". Once lands were classified for this tax they were subject to an annual tax of ten cents per acre. The owner paid a yield tax of 12.5 % of the stumpage value immediately after harvesting.

The Western Oregon Severance Tax (1977 House Bill 3274) changed these systems of taxation to one that taxes timber after it is cut. This new tax, effective January 1978, is 6.5% of the value of the timber and applies to all timber cut on privately-owned forest land in Western Oregon. The land on which the timber is grown will be taxed annually using base values determined by the State Department of Revenue. The base values for 1983 are shown in Table 8. This tax yielded about 2.7 million dollars in revenue for Clatsop County in FY81-82. Both the ad-valorem tax system and the Forest Fee and Yield Tax will be phased out over a 20 year period until the 6.5% severance tax rate is reached.

Requirements for the new tax law are:

1. Timber owners must pay a 6.5% severance tax on all timber cut after December 31, 1977 on privately owned land in Western Oregon. Excepted from this requirement is privately owned land subject to the Western Oregon Small Tract Optional Tax. Reforestation land is subject to a 12.5% tax in 1978. This percentage will be gradually reduced to 6.5% in the year 2002.
2. All timber owners who receive notification of harvest from the Oregon Department of Forestry must file a tax return, even if no harvest was made. Owners owing less than ten dollars in taxes do not have to pay them. Timber taxes are paid quarterly to the Oregon Department of Revenue.
3. Timber owners must keep careful records of how much timber they cut and what species and grades they cut in order to calculate their taxes. Small owners who qualify for an option, which is explained below, must also keep records of how much money they received from the sale of their timber.
4. Small owners have an option. A small owner is one who owns less than 2000 acres of forest land and who owns less than 10% of a timber processing business. Instead of using timber values set by the Department to calculate their taxes, small owners may use the actual sale price they receive for their timber.

Conditions to which the Western Oregon Severance Tax does not apply:

1. Christmas trees grown on cultivated land where other vegetation is continuously eliminated.
2. Timber on land already exempt from property taxes, such as federal land.
3. Timber on land classified under the Small Tract Optional Tax program.
4. Timber and land assessed under the utilities section of the State Department of Revenue.

The new law provides that severance tax revenue collection in 19 Western Oregon counties will be returned to various taxing districts according to a distribution formula. Revenue will be sent to each district according to the 1977 assessed value of the timber in the district and the district's 1977-1978 tax rate. The effect of this formula was to return revenue to each district according to the amount of tax that would have been paid by timber owners had the property remained on tax rolls during 1977-1978.

Large timber companies with old growth timber ready to harvest paid heavily at the beginning under the new tax law. Companies with immature timber will profit as they no longer have to pay a tax each year, but only at harvest, about 50 years after tree planting. Taxes can be paid from harvest profits, thus encouraging further production.

The Western Oregon Small Tract Optional Tax exempts those who qualify from the new severance tax. This tax is based on the ability of forest land to produce an income from the sale of timber. Only the land is taxed: trees are exempt, whether harvested or not. The Small Tract Optional Tax law allows owners with at least 10 acres but not more than 2,000 acres of forest land primarily in timber production and with trees averaging less than 60 years old to pay taxes based on a flat rate per acre based on the timber-growing quality of the land. Upon application, the tract is classified in one of five site classes according to the capability of the land to grow trees. The property's assessed value is then fixed at per acre values (as of January 1979, 80% of true cash value) of \$16, \$85, \$194, \$291 or \$468 according to its site classification. The optional tax is designed as an incentive for good management. The forest land owner is taxed only at a flat rate per acre. Additional production is not taxed. About 2,800 acres of timberland in Clatsop County is in the Small Tract Optional program as of January 1983.

Land that had been classified as Reforestation Land automatically became Designated Forest Land as of January 1978. Designated Forest Land is valued and taxed at its true cash value as forest land rather than its potential market value. Owners of Reforestation Land in Western Oregon previously paid a fee of ten cents per acre

each year, plus a 12.5% yield tax when timber was harvested. Under the new law, they will pay a severance tax on timber in 1978 at the rate of 12.5%. This rate will be reduced each year until it reaches 6.5% in the year 2002. Owners also will pay property taxes on their land in 1978 at 5% of its true cash value. This rate will increase 5% each year until the land is taxed at 100% of its true cash value.

Forest landowners who do not classify their land as forest land with the County Assessor's Office will not come under any of these tax systems and will most likely pay a higher tax based on true market value.

Estate taxes are often mentioned by forest landowners as a problem, especially on family tree farms. Oregon recognized this problem in 1975 when it raised the deductible ceiling from \$75,000 per individual to \$300,000 for the surviving spouse and minor or incompetent children. Most landowners still consider this amount too restrictive. Unless a landowner's circumstances fit these narrow owner and dollar constraints, he or she may decide not to grow timber as a business when transfer of property to heirs is imminent. This land might then become a less-intensively managed part of the forest base. The federal estate tax deductible allowance on net estate values is \$250,000. It does not take much of a tract of timber to exceed this value. Many landowners feel compelled to convert their timber to liquid assets that enjoy more shelter from taxation for inheritance purposes. At any rate, the combination of tax liabilities facing the forest landowner is not always conducive to holding the timber to maturity or increasing the value of the tract through intensive management.

OTHER FOREST USES - BENEFITS AND IMPACTS

The forest lands of Clatsop County, relied upon for a diversity of uses, are important to the people of the County and the State. The forested slopes of the Coast Range are the source of much of the water consumed within the County. Fish and wildlife are integral parts of the forest environment and are basic resources upon which much of the recreational value of the forest depends.

1. Watersheds

The cities of Clatsop County rely upon designated watersheds for their domestic water supply. The Forest Practices Act is designed to protect water quality from the potentially adverse impacts of forest management. Watersheds are further discussed in the Open Space, Scenic and Historic Areas and Natural Resources plan element.

2. Recreation

Forest lands are a source of recreational enjoyment. The mountain peaks and valleys, lakes and streams in forest lands provide for such activities as hiking, hunting, fishing, picnicking and camping.

Timber haul roads provide access to forest land. Relatively few miles of Clatsop County's forest lands are inaccessible. Unsurfaced

roads, temporary spurs and fire lines which are impassable to most vehicles are utilized by off-road vehicles (ORVs). The use of ORVs for recreational use in forest lands has become an increasing concern for both forest landowners and other users of the forest. When used off of the road, ORVs cause damage to tree plantings, wildlife, waterways and unstable slopes. Efforts should be made to limit the use of ORVs to designated recreational areas where their use can be controlled.

Forest practices may conflict with recreational uses, alter stream flow or affect the production of fish in mountain streams. Logging practices, such as burning, spraying and clearcutting may also infringe upon the amenities of living and recreating in the forest.

The forest landowner is also concerned about increased recreational use of these lands and the controversy arising over logging practices. The county can minimize these conflicts through close cooperation with forest managers and controls on the location of other uses. Additional information on recreation lands can be found in the Recreational Needs plan element.

3. Fish and Wildlife

Forest lands comprise an important segment of the land needed to provide a suitable environment for fish and wildlife populations. (See the Oregon Fish and Wildlife Habitat Protection Plan).

The basic habitat for big game animals is found in and adjacent to the forested areas of the County where logging has created mixed stands of mature forests, brushlands and clearcuts. These resultant open forest areas produce abundant wildlife food in the form of berries, forbs, shrubs and grasses.

Big game animals, primarily Elk, also feed on tree seedlings. In some areas of the County, especially near the refuge areas, they have caused considerable damage to planting efforts. Forest managers have tried to reduce losses by protecting seedlings with mesh screens or similar deterrents. Replanting is often necessary to increase chances for survival. The problem becomes more intense as the Elk herds increase at a rapid rate.

Many of the County's forest lands are habitat for plant and animal species facing extinction. The 1973 Endangered Species Act, The Bald Eagle Act and various state laws regarding endangered or threatened species discourage activities which may threaten the survival of these species.

Considerable research has been done on the bald eagle and the U.S. Fish and Wildlife Service has drafted guidelines for their protection. These guidelines can be applied in some detail when an eagle nest or roost site is encountered in the forest.

Most streams in the County's forest lands have some species of anadromous fish. Anadromous fish are those that start life in freshwater, rear in the ocean and, when mature, return to freshwater

for spawning. Anadromous fish hatcheries within forest lands are located on Big Creek, Gnat Creek and the North Fork of the Nehalem River.

Poor logging practices and streamside road construction have had a detrimental effect on spawning fish and their food supply. Logging across and through streams can eliminate the shade, create excessive silt and reduce the available oxygen necessary for good egg survival. The Oregon Forest Practices Act is intended to reduce the adverse impacts on stream quality and fish habitat. Additional discussion of fish and wildlife habitat may be found in the Open Spaces, Scenic and Historic Areas, and Natural Resources plan element.

4. Fire Protection

An important part of timber management is the protection of existing forest resources. Losses from fire can impact the current and future timber supply and destroy other forest benefits such as recreation, fish and wildlife habitat soils, water and air quality.

Oregon's forest fire protection system is recognized as one of the most efficient in the United States despite difficult protection problems. These problems are due to a combination of forest types, topography, local weather, environmental sensitivity and protection standards. Fire protection for the County's forest land is provided through contracts with the State Department of Forestry. The Department does not handle structural fires. Fire protection assessments are administered through the County Assessor's office at a rate of approximately 40 to 50 cents per acre per year. When negligence on the part of the owner is a factor, however, the costs for fire suppression are billed separately. The controlled use of fire is a useful tool for forest management.

The local district of the State Forestry Department is well equipped to handle most forest fires. About 10 - 12 fire fighters are on duty during the dry season and many others can be called in case of an emergency. Advanced technology and equipment have made rapid, efficient initial attack and suppression possible. Fire prevention also plays an important role. As operations and activities in the forest increase, however, more unwanted fires are likely to start.

As the population and recreational use of forest lands increases, so does the potential for unwanted fire. The number and density of residential structures allowed in and adjacent to forested areas may also increase the potential for forest fires unless preventive measures are enforced.

Very little consideration for fire protection has been given so far in the land use planning process. One major concern is density provisions. Homes too close together on steep slopes are nearly impossible to protect from fire. Additional fire safety provisions for land use planning can be found in Fire Safety Considerations for Developments in Forested Areas prepared by the Oregon Department of Forestry.

5. Scenic Preservation

Scenic preservation is one of the benefits of forest management. It is also a major source of controversy at harvest time. Scenic resources in forested areas are covered in the Open Spaces, Scenic and Historic Areas, and Natural Resources plan element.

5. Energy

Forest land is a source of fuel to heat many residences in the County. The forests are expected to become an important source of fuel in the future. Waste wood after harvesting can be converted to electric energy or liquid fuels. Additional information on energy can be obtained in the Energy Conservation Element of this Comprehensive Plan.

6. Livestock Grazing.

Livestock grazing is a common use of forest lands which have not been replanted. Grazing is seldom permitted on land owned by the State or large corporate owners. The use of forest land for livestock grazing purposes is a relatively good way to preserve forest land resources and generally does not conflict with forest management practices on adjacent forest lands. Such conflicts do arise when elk frequent the area, however. Elk may reduce livestock production by competing for forage. Proper numbers and management of both types of animals can minimize these problems.

DESIGNATION

Clatsop County's inventory of forest lands utilized the State Department of Revenue Classification system for all private land and the State Forest Land Use Class system for public lands. Because the system utilized by the State Department of Revenue is on a 40 acre grid, lands already committed to non-forest uses may be included in the mapping. Clatsop County used the "built upon or committed" criteria in OAR 660-04-025(3) to determine which forest areas were committed to non-forest uses. Also excluded from the Conservation-Forest plan designation are:

1. Forest products manufacturing sites, given Development plan designation and industrial zoning.
2. Lands which meet Agricultural criteria and are zoned for Exclusive Farm Use.
3. Areas determined to be natural, given a Natural plan designation.

Clatsop County has inventoried and mapped its forest lands and is zoning these lands for forest uses. The Forest 80 acre zone is intended to conserve large, generally contiguous areas of forest land and to encourage forestry and other forest uses as the primary uses of such lands. Uses of land and water not compatible with

forestry shall be prohibited. For the purposes of this zone, uses compatible with forestry include uses which promote a sustained yield of forest products, uses which provide grazing for domestic livestock and habitat for wildlife, uses which promote the protection of forest cover, soils and watersheds, and uses which promote the preservation of recreational and scenic opportunities. The remaining areas designated Conservation-Forest on the Comprehensive Plan map are zoned F-38 or AF-20, depending on parcel sizes and location.

The F-38 and AF-20 zones are intended to provide for small scale forest management and mixed farm/forest management.*

Clustering of non-forest residences on small lots (1 - 2 acres) along improved roads in the AF-20 and F-38 zones will not only allow forest management to occur on larger tracts but will also assist the forest landowner in obtaining the capital needed to undertake forest management activities.

IMPLEMENTATION

The primary instrument for implementing Clatsop County's forest lands policies and state-wide planning goal 4 is the County's Land and Water Development and Use Ordinance (LWDUO). Lands designated Conservation-Forest have been placed in one of three forest zones. These three forest zones, the uses allowed and their minimum parcel sizes are discussed in the this section.

1. Application

The Agriculture-Forestry-20 acre zone (AF-20) is intended to provide for and encourage small-scale forest management either as the principle land use or in conjunction with agricultural land uses. Accordingly, the AF-20 zone is used in areas where forest and agricultural land uses are generally intermingled, and where parcel sizes are predominantly smaller than 40 acres.*

The Forest-38 acre zone (F-38) is designed for forest areas that can support small scale silvaculture. The F-38 zone is used in forest areas where parcel sizes are generally in the 40 to 80 acre range.

The Forest-80 acre zone (F-80) is intended for use on forest lands where commercial/industrial forest management techniques can be used effectively and efficiently to produce forest products. The F-80 zone is applied in forest areas where parcel sizes are generally larger than 80 acres.

2. Uses

A. Primary Forest Uses. The following forest uses are permitted under a Type I procedure in all three of the County's forest zones.

* Amended 84-9 dated May 23, 1984

- (1) Forestry. Ordinance 80-14 of the LWDUO defines forestry as:

"Activities needed to grow, manage and harvest trees and minor forest products and to transport them to processing and manufacturing locations. Such activities include, but are not limited to planting, fertilizing, pre-commercial thinning, use of herbicides, timber harvesting, reforestation, logging, site or stand improvement and disposal of unused portions of trees by such practices as burning slash, and operating temporary portable chippers that are necessary for processing forest products at the harvest site enabling shipment to processing or manufacturing locations."

A development permit is not required for forestry under section 1.062(b) of the LWDUO. Clatsop County relies entirely on strict enforcement of the Oregon Forest Practices Act to assure that the practice of forestry does not result in the loss of forest land.

- (2) Office, maintenance and storage facilities necessary for the management and protection of forest land. These facilities are occasionally needed on forest lands to accomplish the goal 4 objective of conserving forest lands for forest uses. Storage facilities are needed to protect equipment used during forest management operations from vandalism and the effects of adverse weather. Forestry equipment would either be left unprotected on the site, or would need to be stored in an off-site storage facility in a General Commercial or Industrial zone if storage facilities were not permitted on the forest site. On-site storage of forest equipment also allows for a rapid response to emergency situations such as fires, slides and road wash-outs. Maintenance facilities are closely tied to storage facilities: operating efficiency would be sacrificed if these facilities were not allowed on-site. Offices need to coordinate forest management activities will sometimes be located off-site, but an on-site location will in many cases make for more efficient and effective forest management. These developments are only permitted when necessary for the maintenance and protection of forest lands. Non-forest offices, storage and maintenance facilities are not permitted on forest lands.

- (3) Forest Processing. Forest processing is defined by Ordinance 80-14 of the LWDUO as:

"those activities, occurring at places other than timber harvest locations, which prepare forest products for shipment to manufacturing locations. Such activities include, but are not limited to dry log sorting, rafting, temporary storage, bucking and chipping. Excluded are activities included in the definition of 'forestry' which occur at the timber harvest site."

- (4) Surface and Subsurface mining when at least 75% of mined materials are for use on forest lands in forest zones. Logging roads in forest areas must be well made and properly surfaced to prevent loss of soil and damage to streams. The use of on-site materials for forest road construction is preferred when such material is available because of the high cost of transporting materials from an off-site location. Permitting forest land owners to use on-site material for road building helps minimize the cost of constructing and maintaining these roads. Logging roads are more likely to be kept in good repair if the use of on-site material is permitted.
- (5) Oil and Gas exploration, subject to Section S4.311 and S4.312. Oil and gas exploration is a temporary use which does not result in the loss of any forest land. Degredation or loss of forest land is minimal or temporary when properly conducted under the exploration standards cited above and applicable DEQ and DOG&I regulations.
- (6) Low Intensity Recreation. This use is defined in Ordinance 80-14 of the LWDUO as:
- "Recreation that does not require developed facilities and can be acommodated without change to the area or resource except for small improvements involving relatively minimal capital investment and no structures over 500 square feet in size. Examples of the types of small-scale facilities involved are trails, picnic tables or shelters, restrooms and viewing platforms."
- (7) Utilities in conjunction with a permitted development. This use is exempt from the requirement of a development permit under Section 1.062(10) of the LWDUO. Permitted developments could not effectively function without utilities.
- (8) Maintenance of Clean Air and Water. This is a forest use under goal 4. Maintenance of clean air and water is defined by Ordinance _____ of the LWDUO as :
- "Uses and activities which (1) aid in the prevention of groundwater or surface water pollution, (2) aid in the growth and maintenance of healthy trees, shrubs, grasses and other vegetation contributing to air or water quality, or (3) aid in the prevention and suppression of uncontrolled fires."
- (9) Watershed Manacement. This use or activity is the same as "watershed protection", which is a permitted forest use under goal 4. Although not defined in the County's LWDUO, watershed management means the manipulation and control of vegetation types and densities, human activity, and other

activity influencing water quality and quantity, with the goal of maintaining or improving the quantity or quality of water from a watershed.

- (10) Fisheries and wildlife habitat management, including aquaculture not involving the development and use of buildings, tanks or other permanent artificial structures. This activity is a permitted forest use under goal 4. This use is not defined by the County's LWDUO, but includes the manipulation and control of vegetation types and densities, animal species and populations, human activity and other factors influencing fish and wildlife habitat.

- (11) Home Occupation. Home occupation is defined by the County's LWDUO as:

"Any lawful activity commonly carried on within a dwelling by a member or members of a family, no employee or other person being engaged and in which said activity is secondary to the use of the dwelling for living purposes, provided that the home occupation:

- a. Be operated in its entirety within the principle dwelling;
- b. Not have a separate entrance from outside the building;
- c. Not involve alteration or construction not customarily found in dwellings;
- d. Not using any mechanical equipment except that which is used normally for purely domestic or household purposes;
- e. Not using more than 25% of the total actual floor area of the dwelling;
- f. Not display or create outside the structure any external evidence of the operation of a home occupation except for one unanimated, non-illuminated wall sign having an area of not more than one (1) square foot."

A home occupation can only be conducted in an existing residence or approved forest residence. Because of this requirement home occupations will not result in the loss of any forest land beyond that already occupied by the residence.

A home occupation can be an important adjunct to a forest residence, particularly on smaller forest parcels, as forest management tasks will generally not require the owner's full-time attention. A home occupation would allow a forest landowner the opportunity to pursue a non-forest occupation at home during those times when forestry does not demand his or her full time attention, while at

the same allowing the forest landowner to be present to guard against vandalism, theft and fire.

B. Other Forest Uses. The following forest uses are permitted in one or more of the County's forest zones.

- (1) Farm Use. Ordinance 80-14 of the LWDUO describes farm use in substantially the same language as ORS 215.213(2)(a). Farm use is permitted in the AF-20 and F-38 zones subject to a Type I procedure. "Farming" is exempt from the requirement of a development permit under LWDUO Section 1.062(5). Forest and farm uses are generally compatible with each other. Forest land is sometimes converted to farm land. Much of the County's farm land is adjacent to forest lands in the AF-20 and F-38 zones. Any expansion of these farms is likely to occur onto these small and medium sized forest parcels. The predominant farm use in Clatsop County — grazing of livestock — is a permitted forest use under goal 4.
- (2) Grazing of Livestock. This use is permitted in the F-80 zone under a Type I procedure. It is exempt from the requirement of a development permit under LWDUO Section 1.062(5). "Grazing land for livestock" is a permitted forest use under goal 4. Grazing is also permitted in the AF-20 and F-38 zones under "farm use".
- (3) Production of Christmas Trees. This use, defined by ORS 215.203(5), is permitted in the F-80 zone subject to a Type I procedure. It is exempt from the requirement of a development permit under LWDUO Section 1.062(5 and 6). Production of Christmas trees is also permitted in the AF-20 and F-38 zones under "farm use".
- (4) Roadside stand for farm products grown on premises. This use is permitted subject to a Type I procedure in the AF-20 zone. It is not permitted in the F-38 or F-80 zones. The AF-20 zone includes a number of parcels capable of yielding farm products suitable for roadside sale. These stands are small, often temporary structures which do not result in the loss of forest land or detract from forest uses.
- (5) The Boarding of Horses for Profit, Including a Riding Stable. This use is permitted conditionally in the AF-20 and F-38 zones subject to a Type II procedure. Horseback riding is a popular recreational activity in forest areas. This is a permitted forest use under goal 4: "outdoor recreational activities and related support services..." (emphasis added).

C. Residences. Residences may be permitted in forest zones under the following provisions.

- (1) Forest Residence. A forest residence may be permitted under a Type II procedure as a review use in the F-80 and F-38 zones and as a conditional use in the AF-20 zone. Forest residences are subject to the approval standards in Section S3.512 and S3.514. These standards assure that the forest residence is needed for the forest use of the parcel. The burden of proof is on the applicant. These standards further assure that various goal 5 resources found on forest lands are protected. A more thorough discussion of these standards is found later in this background report.
- (2) Farm Residence. A farm residence may be permitted conditionally in the AF-20 zone and as a review use in the F-38 zone under a Type II procedure subject to the standards in Section S3.508 and S3.512. These standards assure that the proposed residence is necessary for the farm use of the parcel, and that the residence is sited in a manner consistent with the protection of forest resources and various goal 5 resources.
- (3) Temporary mobile home for a period not to exceed one year used during the construction of a residence for which a building permit has been issued, and when located at the construction site. This use is permitted only in conjunction with the approval of a permanent residence. No additional forest land would be lost beyond that required for the construction of the residence itself, since this use is permitted only at the construction site. A temporary mobile home is often necessary to prevent vandalism and theft of construction materials and equipment which would otherwise be left unprotected in a remote area. This use may be permitted conditionally subject to a Type II procedure in the AF-20 zone, and as a review use subject to a Type II procedure in the F-38 and F-80 zones.
- (4) Substandard Parcels. Construction of a single family (non-farm, non-forest) residence may be permitted in all three of the County's forest zones on a legally created substandard lot subject to a Type II procedure and the non-forest use standards in Section S3.510. The owner of a forest parcel which is substandard in terms of lot size would be able to apply for a development permit for construction of a single family residence under this provision. The owner of a substandard lot smaller than, say, 3 or 4 acres would have to proceed under this provision, as it would be difficult to show that a residence is necessary for the management of such a small parcel. The owner of a substandard parcel large enough to be managed for timber production -- say a 40 acre parcel

could apply for a residence under either the forest dwelling or the lot of record provision. Since the non-forest residence provision is generally more difficult than the forest residence provision, only very small parcels would fall under the non-forest, non-farm residence clause.

- (5) Clustering of non-farm, non-forest residences, subject to Section S3.154. This development may be permitted conditionally in the AF-20 and F-38 zones. Because these non-forest residences are permitted at an overall density equivalent to the zone's minimum lot size, there is no loss of forest land other than would occur under "normal" development of the forest parcel.

Clustering benefits the forest landowner in several important ways. It allows him or her to raise working capital by selling a small homesite, as opposed to partitioning off a larger 20 or 40 acre parcel. The parent forest parcel is thus left intact, providing for more efficient forest management.

Clustering also provides more effective conservation of forest lands. An example is appropriate here. Given a 40 acre parcel in the AF-20 zone, the forest landowner would have two options for raising cash by selling land. One option would be to partition off a 20 acre parcel, thus raising a considerable amount of cash but diminishing the size of the remaining forest parcel by 50%. Under a clustering provision the owner of such a parcel could raise cash by selling a one acre homesite and only diminish the size of the parent parcel by 3%. Actually, the effective forest potential of the parent parcel is not reduced at all, because of the "generally unsuitable" criterion in the clustering standards.

Clatsop County wishes to leave both of these options open to the small woodlot owner. This allows her or him greater flexibility in managing the forest parcel, particularly with regard to raising the cash necessary to undertake forest management operations.

D. Non-Forest Uses. The following non-forest uses may be permitted conditionally in one or more of the County's forest zones subject to a Type II procedure and applicable criteria, development standards and site plan review.

- (1) Cottage Industry subject to the standards in Section S3.450, and when located within 500 feet of an existing residence, and when such cottage industry is not located within the Coastal Shorelands Boundary. A cottage industry is defined by Ordinance 80-14 of the LMDUO as:

" A small scale business activity which may involve the provision of services or the manufacture or sale of

products; is carried on by a member of the family living on the premises and persons employed by the family member; and is not detrimental to the overall character of the neighborhood."

The standards for cottage industries in Section S3.450 of the LWDUO assure that the cottage industry has no adverse impacts on surrounding properties and does not become a full-scale commercial or industrial operation. These standards also assure that the cottage industry does not result in the loss of forest land. The standards in S3.450 restrict a cottage industry to existing or approved residences, so there is no additional impact on the forest resource beyond that of the existing residence. This use may be permitted conditionally subject to a Type II procedure in all three of the County's forest zones.

- (2) Portable concrete, ready-mix or asphalt batching plant accessory to and on the same site as an existing or approved surface or subsurface mining operation, and subject to the Standards in Section 3.448(3) of the Light Industry (LI) zone. These temporary developments are typically used in conjunction with the quarrying operations discussed above. The standards cited refer to air quality, noise, storage, fencing, buffer areas, vibration, heat and glare, and lighting. Because these activities occur at quarry sites, the combined impact of the quarry and this development on forest resources is no greater than the impact of the quarry alone. This use may be permitted conditionally in all three of the County's forest zones subject to a Type II procedure.

D. Other Non-Forest Uses. The following non-forest uses may be permitted in one or more of the County's forest zones under either the non-forest use standards in Section S3.510 or under an exception to the forest lands goal.

- (1) Utilities necessary for public service. This use may be permitted in all three of the County's forest zones and is defined by Ordinance 80-14 of the LWDUO as:
" A major structure owned or operated by a public, private or cooperative electric, fuel, communication, sewage or water company for the treatment, storage, transmission, distribution or processing of its products, including sewage treatment plants, solid waste disposal sites and transfer stations, dams and reservoirs for community water systems, water treatment plants, sanitary landfill or utility substation."
- (2) Solid waste disposal site approved by the Oregon Department of Environmental Quality. This use may be permitted in all three of the County's forest zones. It results in a temporary loss of forest land. DEQ regulations require that the site be restored when full.

- (3) Kennel. This use, which may be permitted in the AF-20 and F-38 zones, is defined by the County's LWDUO as "any lot or premises on which four(4) or more dogs (more than four (4) months of age) or ten (10) or more cats are kept for breeding, training or sales."
- (4) Veterinary Clinic. This development may be permitted in the AF-20 and F-38 zones, and is defined by Ordinance 80-14 of the County's LWDUO as "any building or portion thereof designed or used for the care, observation or treatment of animals".
- (5) Surface or subsurface mining when less than 75% of mined materials are for use on forest lands in forest zones. This use may be permitted in all three of the County's forest zones. A 500 foot setback from residences and from adjacent residential lands is required. This setback is adequate to minimize the adverse impacts which this activity typically generates.
- (6) Aquaculture involving the development and use of buildings, tanks or other artificial and permanent structures, subject to the standards in S4.206. Aquaculture is defined as "the raising, feeding, planting and harvesting of fish and shellfish, including associated facilities necessary to engage in the use". All three of the County's forest zones may permit this activity. The standards cited are designed to minimize or prevent damage to estuarine, riparian and coastal shoreland resources. Aquaculture is a resource use which contributes to the area's economy and generally occurs on forest lands.
- (7) Schools, churches and community centers necessary for local public service. These non-forest developments may be permitted in the AF-20 and F-38 zones. They are often necessary in small rural settlements of the County to serve the local population. These are not regional facilities. Their use is generally restricted to certain hours of the day or days of the week, thus minimizing conflicts between adjacent forest uses and these non-forest developments.

3. Minimum Lot Sizes.

The minimum lot sizes for division of land in Conservation-Forest areas are 20, 38 and 80 acres in the AF-20, F-38 and F-80 zones respectively. These minimum lot sizes are an important component of Clatsop County's approach to conserving forest lands for forest uses. But they are not the sole component. Minimum parcel sizes, development and use standards and decision-making criteria all work together to conserve forest lands for forest uses.

The agriculture-forest 20 acre zone is applied to parcels in forest areas where the predominant parcel size is generally smaller than 40 acres. Table 9 summarizes data for data for all parcels in the AF-20 zone. The average parcel size in the AF-20 zone County-wide is about 21 acres. This average parcel size is about the same in each of the six planning areas except for the Clatsop Plains. The average parcel size is somewhat lower in the Clatsop Plains due to wetlands zoning on portions of several parcels which would otherwise be entirely in the AF-20 zone.

Another summary measure of lot size is the median lot size. Median lot sizes range from about 12 acres in the Clatsop Plains planning area to about 19 acres in the Northeast planning area. A weighted average of the median lot size for all six planning areas yields a "pseudo-median" of about 18 acres.

The conclusion that well over half of the parcels in the AF-20 zone are substandard in terms of lot size is inescapable. Table 9 shows that, County-wide, 424 out of 756 AF-20 parcels (56%) are smaller than 20 acres.

As was mentioned previously, the AF-20 zone is applied to forest parcels in areas where the predominant parcel size is generally smaller than 40 acres. This criterion resulted in the inclusion of a few parcels larger than 40 acres in the AF-20 zone. A total of 95 parcels larger than 40 acres are included in the AF-20 zone. These parcels range in size up to about 119 acres. The average size of these oversized parcels County-wide is about 56 acres.

The 20 acre minimum lot size in the AF-20 zone is large enough to conserve forest lands for forest uses in those areas where it is applied. Most of the land in the AF-20 zone, as in all forest zones, is highly productive site class II and III land. For example, a 19 acre site class III parcel (20 acres minus one acre homesite) fully stocked with Douglas Fir could potentially yield 104,500 board feet of timber every ten years (harvest 4.75 acres of 40 year old trees every ten years, trees 7" dbh and larger). The potential yield under this sort of management schedule on site class II land would be higher: about 165,775 board feet every ten years. This is only one example of how a 20 acre forest parcel might be managed: many other management schedules are possible. Several contract logging operators are willing to take on jobs as small as 4.75 acres.

The small woodlot owner has a number of advantages over larger industrial forest owners in terms of management flexibility. Because harvest operations on small forest parcels can be accomplished relatively quickly, small woodlot owners are able to take advantage of ephemeral conditions in the timber market. Because most AF-20 parcels have a great deal of road frontage relative to their total area, extensive logging road construction prior to harvest operations is often unnecessary. Overall, the

owner of a twenty-acre forest parcel has a great deal of flexibility with respect to management alternatives. By exercising this inherent flexibility, the small woodlot owner is able to enjoy a relatively high net per acre return from his or her management efforts.

Although it is clear that a 20 acre parcel is potentially manageable for the growing or harvesting of trees, it can not be shown that all or even a large portion of the AF-20 zone is currently managed for the production of forest products. It is difficult to assess the extent of management on 20 acre forest parcels county-wide. Some are intensively managed: of the 32 parcels in Clatsop County under the Western Small Tract Optional Taxprogram, nine are 20 acres and smaller. The requirements of this tax program are such that only actively managed forest parcels benefit from the program. On the other hand, a significant number of forest landowners purchased their property with no intention or interest in forest management.

It is difficult to generalize about the level of forest management on 20 acre forest parcels county-wide. Varying levels are found, from total neglect through intensive, innovative forest management. Clatsop County can not use Goal 4 to enforce forest management on a reluctant landowner. Goal 4 requires that the County's forest zones and plan policies conserve forest lands for forest uses. The County relies on the Oregon Forest Practices Act to assure that forest practices do not result in the loss of forest land. The 20 acre minimum lot size in the AF-20 zone assures that partitioning does not result in the loss of forest land because it assures that any new lots created in this zone are adequately-sized management units. The minimum lot size does not guarantee that management will occur, only that it can occur. Further, about 66% of the land in the AF-20 zone can not be further divided anyway, because it is in parcels smaller than 20 acres. In summary, the 20 acre minimum lot size in the AF-20 zone, together with development and use standards in this ordinance and the forest management rules in OAR 629-24-101 Et. Seq. assure that forest lands in this zone are conserved for forest uses and are not converted to non-forest uses.

F-38

The F-38 zone is applied to parcels in forest areas where the predominant parcel sizes are generally between 40 and 80 acres. Table 10 summarizes data for parcels in the F-38 zone. The average parcel size County-wide in this zone is about 59 acres. The median parcel size ranges from about 33 acres in the Clatsop Plains planning area to 80 acres in the Seaside Rural planning area. The median lot size for all F-38 parcels is 51 acres. The minimum lot size of 38 acres in this zone prevents forest parcels smaller than 76 acres from being divided. Thus well over half of all parcels in the F-38 zone can not be further partitioned, because they are smaller than 76 acres. In terms of acreage, about half of all land in the F-38 zone can not be further divided because it is currently in lots smaller than 80 acres.

About 1/3 of all parcels in the F-38 zone are substandard in terms of the minimum lot size. Further discussion of how these substandard parcels are treated follows in a later section.

The F-38 zone is applied to forest parcels where the predominant parcel size is between 40 and 80 acres, generally. This criterion resulted in the inclusion of a few parcels larger than 80 acres in the F-38 zone. A total of 36 "oversized" parcels are included in the F-38 zone. These parcels range in size from 80 up to 227 acres. The average size of these oversized parcels is about 115 acres. They are located in areas where the predominant parcel size is generally between 40 and 80 acres. These oversized parcels contain about half of the land in the F-38 zone. Full partitioning of these lands could potentially reduce the parcel size in this zone.

The 38 acre minimum lot size is large enough to conserve forest lands for forest uses in this zone. Much of the land in this zone is highly productive site class II and III forest land. For example, a 40 acre site class III forest parcel fully stocked with Douglas Fir could be managed to yield 148,400 board feet of timber every five years (harvest 4 acres every five years, trees 7" dbh and larger, fifty years old at harvest). A 40 acre site class II parcel could yield 220,000 board feet of timber every five years under this sort of management regimen.

As was mentioned previously, the small woodlot owner enjoys substantial flexibility in terms of management options as compared to the owner of a large forest parcel. The ability to take advantage of favorable short term market conditions, for example, allows a small woodlot owner a relatively high rate of return on his or her investment.

Nothing in the F-38 zone text requires that a forest landowner manage his or her land for the production or harvest of trees. The 38 acre minimum lot size for creation of new forest parcels in this zone assures that forest land is not partitioned into parcels too small for forest management, or too small in comparison to adjacent forest parcels. Various use standards, discussed in a later section, assure that the development and use of the parcel does not result in the loss of that parcel from the forest land base of Clatsop County or interfere with forest uses on adjacent parcels.

In summary, the 38 acre minimum lot size assures that new forest parcels created by partitioning in this zone are large enough to be manageable forest units. Because of the way the zone is applied, nearly half of the land in the F-38 zone is in parcels that can not be further divided. The 38 acre minimum lot size, in conjunction with the development and use standards and the forest practice rules under the Oregon Forest Practices Act assure that forest land in the F-38 zone is conserved for forest uses.

The Forest 80 acre zone is applied to forest parcels in areas where the predominant parcel size is generally 80 acres and larger. Well over 3/4 of the land in Clatsop County is in the F-80 zone. The bulk of this land is in very large parcels owned and managed by various forest products companies or the State Board of Forestry. A small portion of the land in the F-80 zone is managed by individual landowners under various various small woodlot management schedules.

Most of the land in the F-80 zone is in parcels larger than 160 acres, and therefore is available for partitioning. Much of the F-80 zone is in a few very large parcels. Clatsop County's partitioning ordinance permits the creation of no more than three new lots every three years from a single parent parcel. Extensive partitioning activity in the F-80 zone would thus take several years to occur. Many of the sales and exchanges of land in the F-80 zone are executed to consolidate a timber owner's holdings. Clatsop County encourages this practice because it increases management efficiency and minimizes the need to build redundant logging road networks.

Although there are several examples of 80 acre forest parcels in the County which are essentially unmanaged, 80 acres of forest land is potentially manageable on a sustained yield basis. Eighty acres of fully stocked site class III forest land could be managed to yield 296,800 board feet of Douglas Fir every 5 years (cut at 50 years old 8 acres of trees 7" dbh and larger). Eighty acres of site class II land could be managed in a similar fashion to yield 440,000 board feet every five years.

4. Development And Use Standards

- a. Farm Residences in Forest Zones. Section S3.508 of the Standards Document includes approval criteria for farm residences in forest zones. The criteria are designed to assure that the farm residence is needed for the farm use of the parcel. The burden of proof is on the applicant. Generally this burden increases as the size of the parcel decreases. These criteria are similar to those required for a farm residence in the EFU zone.

An applicant for a farm residence in a forest zone is required to show that the residence is necessary for conducting the farm use, that it will not conflict with adjacent farm or forest uses, and that the residence is sited so as to minimize any loss of productive farm or forest land. An applicant for a farm residence in a forest zone must also meet the siting standards in Section S3.512.

- b. Forest Land Cluster Development Standards. Section S3.154 applies to clustered lots in forest zones. Partitioning of small lots (one or two acres) may be permitted conditionally in the AF-20 and F-38 zones subject to these standards. These

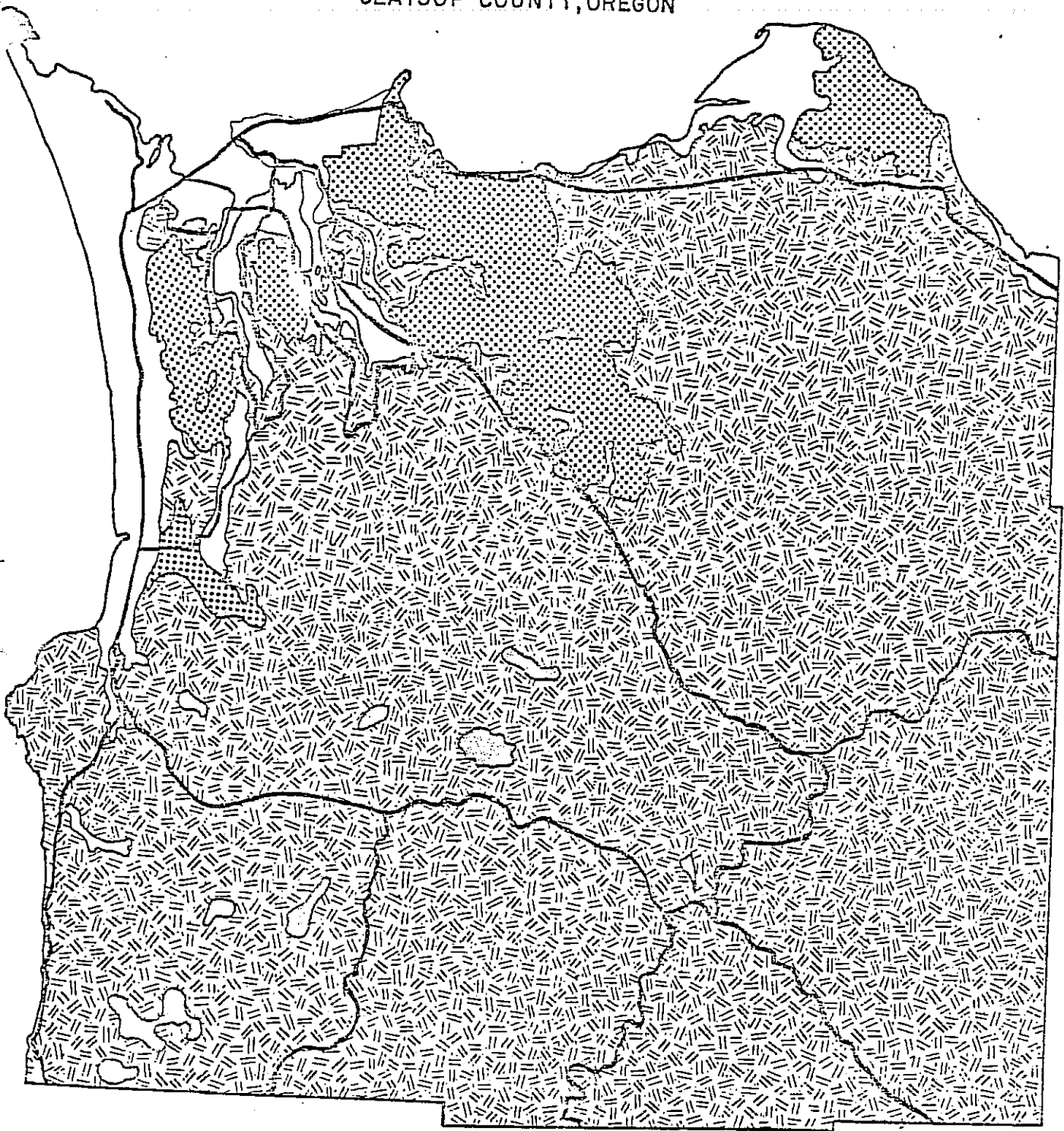
development standards assure that the clustered residences do not conflict or interfere with forest operations on adjacent forest lands (1, 3, 6, 7), do not result in the loss of productive forest lands (2), and do not impact Major or Peripheral Big Game Range (11).

- c. Non-Forest Development And Use Standards. Section S3.510 assures that non-forest uses do not result in the loss of forest land. Standards a., b., c. and e. deal primarily with issues of compatibility. Standard d. assures that the non-forest development is sited on land that is generally unsuitable for forest production. A determination of unsuitability for production and harvest of forest products is based on consideration of the following factors:
- | | |
|-----------------------|---------------------------------------|
| terrain | soil type |
| geological conditions | drainage |
| competing vegetation | access to public facilities |
| parcel size | feasibility of building logging roads |

These eight factors are to be considered independently and equally in determining suitability for the production and harvest of forest products. No single factor is more important than any other factor.

- d. Residence Siting Standards for Forest Zones. Section S3.512 assures that new residences in forest zones are sited so as to protect fish and wildlife habitat, productive farm and forest land, the area's overall land use pattern, and existing public investment in infrastructure.
- e. Forest Residence Approval Standards. Section S3.514 provides approval standards to determine whether or not a proposed residence is needed for the forest use of the parcel. This does not necessarily require a forest management plan, though such a plan may be considered in an evaluation of the forest parcel's use and the need for a residence. An applicant must demonstrate that a residence is needed to pursue a forest use on the parcel, or to intensify an existing forest uses.

MAP 2
CUBIC SITE CLASS DATA
CLATSOP COUNTY, OREGON



SCALE IN MILES
5 0 5 10



MAP KEY



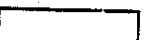
CUBIC FOOT SITE CLASS II



CUBIC FOOT SITE CLASS III



CUBIC FOOT SITE CLASS IV



NOT SUITABLE FOR CLASS I