A FOREST LAND USE POLICY
FOR NORTHWESTERN OREGON

by

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A Thesis

Presented to the Faculty

of the

School of Forestry

Oregon State College

In Partial Fulfillment

of the Requirements for the Degree

Bachelor of Science

May 1939

Approved:

[redacted]

Professor of Forestry

TABLE OF CONTENTS

INTRODUCTION

The four most northwestern counties of Oregon, namely Clatsop County, Columbia County, Tillamook County, and Washington County, are faced today with some very serious problems arising from the unregulated use of their forest land. Approximately 78 percent of the land in the counties is forest land, and at present about 84 percent of this forest land is in private ownership. This privately owned timber comprises the bulk of the most highly productive forest lands, and the larger volume of saw timber which has immediate commercial value.

These immense areas of timber were placed under private ownership through ill-advised land policies. At present there is no restriction on the cutting of this timber, and it is being liquidated as fast as possible, and about as wastefully as possible. For the most part, the timber is being clear-cut without any provision being made for restocking the cutover area, and is then allowed to go tax delinquent, and finally falls into the unwilling hands of the counties. This in spite of the fact that penalty charges and some of the interest charges were cancelled, lenient terms for the payment of delinquent taxes were granted, and tax foreclosures were postponed from time to time in a strenuous endeavor to stop the flow of reversion, and that easy installment contracts were offered, and other extra efforts were made to sell county lands to private purchasers.

There are various reasons for this private timber being liquidated so rapidly. In the first place, the timber became subject to speculation and in many cases it has been given a capital value far above the actual possibilities of return. Even under the most favorable circumstances of corporate financing, there is a limit to the length of time in which a large block of mature timber can be carried. Taxes and other carrying costs usually cause the investment in stumpage to just about double in ten years' time. If stumpage values are increasing meanwhile, this may be quite tolerable, but with stationary or decreasing stumpage value the private timber owner has little choice but to liquidate his holdings as soon as possible, even though at a loss.[8]

The effect of these economic pressures is to increase the sawmill capacity and the rate of cut far above the sustained yield possibilities of the counties. This excessive sawmill capacity is not only a menace to sustained yield; it tends to keep the entire industry in a feverish economic condition. Given slightly favorable market conditions, accelerated lumber production immediately upsets price structure. Unless the intense pressure to liquidate private timber is substantially alleviated, it is unlikely that the timber industry will be able to enjoy the stability which it should have as Oregon's major manufacturing industry. As long as these conditions endure, the counties cannot have any chance of initiating sustained yield and insuring a stable tax base for the following generations.

The present condition often leads to excessive waste. In periods of depressed lumber prices, the mills are tempted to make good their position by taking out of the woods only the most profitable logs. This leaves a great deal of waste material, often as much as 20 percent of what is taken to the mill. The amount left per acre is often greater than the original stands on an acre in other parts of the United States. Debris thus left behind constitutes a serious fire hazard for many years, and in many cases the recurring slash fires have not only destroyed the young trees but have also consumed the humus from the soil and seriously injured its capacity to produce trees in the future.

The most critical immediate problem now being recognized by individuals and county governments is the determination of the best plan of managing the increasing area of logged over land, much of which is not restocking, and most of which is being forfeited to the county governments in lieu of taxes.

This problem of what to do in the way of managing the cutover lands is very important to the county governments in that they represent a large portion of the counties' past tax base, which is rapidly declining as these lands increase. In fact, due to the reversion of the denuded lands to the counties, evaluations have shrunk greatly. Assessed valuation in Clatsop County has fallen about fifty percent in ten years; Tillamook County about sixty-four percent, partly the result of the extensive Tillamook fir in

1933. Losses in other counties have amounted to less, although they are just as important to them.

Individuals as well as the counties are being hit by the problem. Homesteaders on many isolated areas, and on non-productive lands who were once able to make a living by supplementary work in logging camps and sawmills are being thrown on relief. Farmers back in these areas who were once able to find a market for their produce are living off the county because the logging camps have vanished after cutting the area clear. In a number of sections, residents are literally stranded in remnants of sawmill centers and logging camps. Many of the ranchers of the sections are complaining that the land is all growing up to brush, and their once excellent grazing land is practically useless. They are firmly convinced that if they were allowed to burn over the area as they wish, they could rid the range of the brush species, and allow the grass to come back onto the area.

In February, 1936, a committee of Clatsop County farmers at the County Agriculture Outlook Conference made the suggestion that, the Clatsop County Court set aside an area of county owned logged off land and obtain the services of the Oregon Agricultural Experiment Station to investigate and determine suitable pasture grasses and mixtures for logged off lands and the best method of handling these lands on a long time or permanent basis.

Following the suggestions and others that were made, the Clatsop County Court, with representatives of the State Forester and the Experiment Station, selected a tract of

830 acres of typical cut-over land which the county leased to the Experiment Station for conducting the investigations recommended.

This area was seeded with different sod forming grass mixtures which were believed to be capable of controlling the fern, weeds, and brush. The seeding was done in October and November of 1936 at an average cost of $1.59 per acre for seed and about 40¢ an acre seeding cost.

An excellent stand of grass was obtained, and all of the grasses in the mixtures grew well except the legumes, which were winter killed. It was estimated that 75 percent of the ground seeded was covered with grass in 1937. Most of the grasses produced seed and reseeded the ground so that in 1938 the stand of grass was heavier than it was the previous year.

The area was fenced, substantial corrals and scales were installed for handling experimental livestock, and three winter shelter sheds were installed from cedar cut from the area. Then in June of 1937, 59 head of cattle, purchased in Eastern Oregon, were put on the area. As it was soon observed that this small herd was insufficient to handle the rapidly growing grass, 38 head of yearling heifers from the coast region were added. The Eastern Oregon cattle were unaccustomed to the new conditions, and did not settle down to eat the grass readily; consequently they made an average gain of only 74 pounds as compared with 148 pounds for native heifers.

In April, 1938, a flock of 727 ewes with lambs and 50 head of cows and calves were turned into the area. The livestock grazed a total of 43,653 sheep days and 10,547 cow days. The lambs had made an average gain of 44 pounds when sold September 1 at an average weight of 68 pounds. The gain would have been larger except for the fact that over half the grass was destroyed by fire June 16 and the sheep were herded outside the area for several weeks. The fire, which started from falling embers from a forest fire, burned over approximately sixty percent of the grass. Despite this loss, there was enough feed left to take care of the cattle.

These experiments conducted so far show that good sod-forming grasses can be established on logged-over lands where a reasonably good burn of the slashing has been made. However, a serious problem in the development of grazing lands is the problem of seeding old burns in a practical and successful manner. The presence of ground moss on these areas prevents the seed from coming in contact with the soil.[9]

The State Forestry Department has planted 128,000 trees of some 13 different varieties of trees on 127 acres of this land deeded to the state by the county. The experiment is being conducted on the rolling snagland near the upper north fork of the Nehalem river. In the summer of 1938, the small trees were eight to ten inches high, pushing their way upward through the bracken fern. Included in the plantings are species of trees never before

grown in this country. The forestry department hopes to uncover valuable information on a new economic rotation cycle of forest crop. Further information is being collected to obtain some yardstick for actual reforestation costs.[7]

Data for this report was obtained from library research, newspaper articles, and from data received from Professor Moore of the Agricultural School at Oregon State College. The report combines the ideas of men on both sides of the question, so the exact letter of the policy may not be conclusive.

HISTORY OF THE AREA

The total area of the four counties is 2,137,684 acres, approximately 80 percent of which is forest land. A classification of the forest land in the counties according to its ability to produce timber crops is shown in Figure 1. Practically all the forest land is capable of growing coniferous timber of merchantable character. Considerably more than 50 percent of the land is above site class II for Douglas fir, indicating that it is well above averabe in the Douglas fir region in its ability to grow timber crops. The area of below average productivity, sites IV and V, amounts to less than two percent of the total forest land.

The main species in the original cover on the area are Douglas fir, Western hemlock, Sitka spruce, true fir, Western red cedar, and a few hardwoods. Cascara bark has yielded a lively hood for a few people, but destructive methods of cutting are decreasing the chances of its continuing for any length of time. The sawtimber species in the area is for the main part old growth Douglas fir, with hemlock next in total volume. In Clatsop County, the sawtimber volume is about 37 percent Douglas fir, 37 percent Western hemlock, and the rest Sitka spruce, Western red cedar, silver fir, and various hardwoods. Columbia County has approximately 83 percent of Douglas fir by volume, with the remainder fairly evenly divided between Western hemlock and Western red cedar, with a few

hardwoods. Tillamook County is about 50 percent Douglas fir, 25 percent hemlock, and the rest Sitka spruce, cedar, noble fir, and hardwoods. Washington county is approximately 85 percent Douglas fir, with hemlock dominating the remainder. (Fig. 2) Most of this timber is mature or overmature, and the annual growth is offset by deterioration and decay.[5]

Clatsop County has been cutting about 9,000 acres per year on the average, by the clear cutting method, leading the other counties. In 1933 the area of deforested land in Clatsop County was 33,000 acres, most of which was caused by the Wolf creek fire. The great Tillamook burn in Tillamook County laid waste to 275,000 acres of timberland. The cutover land is burned over broadcast to rid it of slash, but in many cases this does not reduce the fire hazard on the area to a large extent, and weeds that come in make it very inflammable. Recurring fires on the areas often kill out any young reproduction that had come in, as well as any seed trees that were left, thus making regeneration even more difficult. There is very little National Forest land in the area, so the major problem of fire protection belongs to the state. The state at present gives very poor protection to forest land, and consequently many small fires result during the summer, with a few large ones originating from the smaller ones that are allowed to get away. The county governments have no program for protection of their laws against fire.

The present ownership of the land with the exception

of the tax delinquent lands is mostly private. There is small area of National Forest land in Tillamook County however. The area of tax delinquent land, however, is very large, being about 59,000 acres in Clatsop County, whose total acreage is 420,810 acres; 146,000 in Tillamook whose total acreage is 723,629 acres; and 23,530 acres in Washington County whose total is 467,770 acres. This means that about 15 percent of the total land area in these counties is tax delinquent forest land. (Fig. 3) The major part of the remainder of the forest land is in private ownership.[10]

The cutover land, as it is mostly in the hands of the counties, is lying idle, with no program of management other than to resell the land at any time, without cutting restrictions, to any private buyer often for less than the taxes and interest charges against them. In addition to this having distressing influences on the problems of the private owners by selling in competition with them, there are several adverse silvicultural aspects which tend to disrupt sound forest management and economic welfare. One of the most serious influences is sale by the county of timber of pole and tie size, which in this region is at the peak of its current annual growth, probably adding as much as 1,500 board feet per acre per year, with a corresponding quality increase.

A survey on the Tillamook burn showed that two years after the burn, approximately three-fifths of the area had medium or full restocking. Where the burn was not extremely

hot, cones remained on the fire-killed trees and shed their seeds into the ashes, thus accounting for the abundance of natural regeneration the year following. Salvage operations on about 15 percent of the area destroy the seedlings, however. This shows that not all of the burned over land is completely idle, as some of it is slowly regenerating.[2]

Two general land use policies are under consideration in the problem of what the counties should do with the tax delinquent lands. The old ranchers claim that Oregon is producing only about one-tenth the livestock she did half a century ago, and that an attempt should be made to turn this burned over land into grazing land as it occurs. The young forester, on the other hand, is against the burning of the lands to plant them to grass, and believe that a new crop of timber should be provided for. The grazer claims that the forester would let the whole state starve while he is growing trees; while the forester returns that the grazer would burn the whole countryside over every year regardless of young forests and we would never see another tree; and so the argument progresses.

PROPOSED FOREST LAND USE POLICY

The main purpose of a forest land use policy is to provide for the greatest return possible to the communities and local governments in return for the amount of capital invested. It should also provide protection for the lumberman from the result of unwise expansion, and attempt to control or rather balance production with consumption. And last, the forest land use policy should provide for the conservation of our natural resources for the generations to come.

In order to put these forest lands to their best use, they should first be classified according to their potential ability to be of the most economic and social value. It would be unwise to jump at conclusions and put a tract that will produce a thousand board feet per acre per year of good Douglas fir timber into a permanent grazing use just because someone estimates that it will yield an immediate return of a dollar an acre per year. Where economically possible, however, it would probably be wise to coordinate their uses into a multiple use plan wherever possible, in order to get an immediate return while restocking with timber, where the return is delayed. Also, some of the land that the farmers are attempting to farm is less productive as farm land than some of the river bottom forest land now growing timber; and an attempt should be made to make a change to that respect.

In the light of all this, a land use classification

should be made of the forest land by means of a potential use survey. The land should be divided into four main classifications: timberland (virgin timber and second growth), old burned over areas (areas where recurring fires have created a useless brush land), recent cutover land, forest bottomland capable of conversion to fertile farm land, and agricultural or non-forest lands.

Lands classified as timbered lands are those that now possess a timber crop, either mature, or immature. These timber lands should be further classified as to whether they are virgin or second growth material, for the purpose of determining a cutting regulation. The old virgin stands are not increasing in volume, and should be cut first where possible.

The second classification is that of old burns of either cutover or natural forest origin. This classification will require special consideration, as the repeated burning has killed off most of the vegetation, leaving the numerous deep-rooted brush species and fern, and leaving the soil in a depleted condition. It also has a heavy cover of ground moss, which makes the planting of grass on the area difficult. It will require special treatment to put these areas back into any sort of production again. The farmers have the misconception that if they burn over the area, they will rid it of the brush. However, the opposite is true. The more fires there are on the area, the more brush and fern comes in, as they seem to get a better foothold after a fire.

Recent cutover land should be classified as such, because it is the type of unstocked land best adapted to a grazing program, and will entail different considerations in reforestation.

Lands now bearing timber that are on rich bottomlands in some parts of the area should be classes as potential farm lands, and later developed as such where possible. It is a fact that some of the present bottomland timbered lands are of richer, deeper, more fertile soil than some of the land the farmers have put into agriculture and are trying to grow crops on at present.

All other lands are to be classified as agricultural or non-forest lands and will not be considered further.

The next important phase is to set up a definite land ownership policy on a stabilized basis. As long as the forest lands are continually changing hands as they are at present, it is almost impossible to set up a sustained yield management for the area. Stable private land ownership should be promoted as much as possible, because the private owner is in a better economic position to get the most out of the lands, and it also creates a better social attitude if the lands are in private ownership. In order to keep the land in private ownership, measures must be taken which will alleviate the pressure on the owner to liquidate as soon as possible, and the pressure to let the lands go tax delinquent after cutting, with no provision for regeneration. This will involve a system of long term credit at a low rate of interest, and a system of taxation

that will allow the forest owner to pay the major part of his taxes when he is harvesting timber and is able to pay and coast along with the taxes on the land that is regenerating.

The land that is at present in county ownership should be transferred to the state ownership as soon as possible, either through direct purchase under the Fulmer Act, or by an agreement with the county to manage them and pay for them as returns are realized. The state is in a much better position to manage and protect these lands and can set up a plan for sustained yield management where the counties could not.

Adequate fire protection must be provided for, and forest fires controlled, if sustained yield is to be practiced successfully. The state should provide for an adequate fire protection system in the area, and establish lookouts and guard stations to protect the private lands as well as state. This should be made a strictly kept, well-trained fire fighting unit something on the order of the present Forest Service setup. The private operators would be required to pay a reasonable fire protection charge that can be determined later. This will help lower the risk on forest property, as well as allow proper regeneration of cutover land to trees instead of brush and fern. Funds to carry on with this fire protection program can be raised through the Clark-McNary Act.

The most vital step of this land use policy is that

of setting up a sustained yield management system. The objective of forestry as a whole is to provide management that will return sustained annual timber crops of approximately equal size and value, furnish permanent employment, wages, and purchasing power, maintain stable industrial committees, and obtain full use of the productive capacity of the forest lands. When this objective has been satisfied, then sustained yield management is effective.

Some sort of sustained yield legislation should be passed to this effect, providing for sustained yield units, regulating cutting procedures to provide for closer utilization and proper regeneration, and regulation of slash disposal. The provision of sustained yield units and regulation on cutting will stabilize the communities socially and economically. This in turn will help the farmers on the adjoining lands, as they will have a more stable market for their goods. Then units will be set up in such a manner that the private operator can coordinate the use of his land with the state land in the following manner: It will be possible for him to cut his lands on a sustained yield basis, and supplement his cut with stumpage bought from adjoining state lands to carry him over the time that his lands are reaching maturity again. This operation should be so designed that the same areas will be cut periodically for an indefinite length of time. Under this system, each part of the forest property will be an integral part of a working circle or sustained yield unit producing its forest crop at regular intervales. The national

classified as virgin timber is no longer increasing in volume, and should be cut first, as fast as is in conformation with sustained yield, in order to make way for new fast-growing crops to come in.

If this proposed system of sustained yield is to work, a system of long term credit at low rates of interest and a fair method of taxation must be devised. It should be economically possible for a system of federal credits to be set up for the advancement of state and private forestry. It is recognized that long-term federal loans at reasonable interest rates would allow the private owners to secure sustained yield to some extent. It would aid in the liquidation of refinancing of indebtedness incurred for forestry purposes, and provide for the construction and acquisition of transportation facilities to connect forest lands with railroads, highways, and waterways, and assist the state in financing deferred timber tax systems.

It is generally recognized that one of the reasons for liquidation is the unfair tax on virgin timber holdings. The application of the annual property tax to standing timber is an economic misfit, leading to forced cutting in advance of demand, and weakening the industry with overproduction.

As an example of the pressure taxes bring to bear on the private owner, in the year 1926, the owner of an average acre of Douglas fir timber paid $1.33 per acre, or $851 for the section, in annual taxes. When such taxes

are carried for many years, especially without rising timber values to sustain them, they create a powerful pressure to liquidate. Long term plans for sustained operations become impossible.[11]

The outstanding need is a method of taxing standing timber that will work against forced cutting and for long-continued operation. The deferred timber tax of five cents per acre per year on land, and 12½ percent yield tax now in operation does not include virgin timber. To make the deferred timber tax effective, all timber should be placed under a similar tax, to allow the operator to pay when he gets his return. This would cut down forced liquidation, and the counties would still get their revenue.

Another major consideration is the restocking and utilization of the non-stocked forest lands, most of which is to be transferred to state ownership. The regeneration of non-stocked lands is of certainty to be a rather slow and costly procedure (the basic reason for state ownership) which can be coordinated in multiple use with grazing to insure the counties some immediate returns. The grazing experiment in Clatsop County indicated that lands classified as recent cut-over lands can successfully be planted to grass for grazing purposes. Experiments have shown that trees will come in at the same time as the grass that is planted after the first burn, and properly controlled grazing. Grazing of the area also materially decreases fire hazard and keeps the brush species down. The planting of grass on these areas when it is economically

feasable is beneficial in several ways. In the first place, it will take some time to provide for reproduction on all the non-stocked lands, and while the lands that are not well suited to grazing are being reforested, the grazers can get some benefit from the otherwise idle land. In fact some of the land may be proved through use to be more productive economically as grazing land than as forest land. Some of the recent cutover land can be grazed without planting, as it has a certain amount of natural vegetation such as native grasses, weed growth, pea-vine, wild vetch, and browse, which consists of hazel, willow, huckleberry, thimbleberry, blackberry, and vine maple. The proper grazing of such areas lowers the fire hazard, and still allows for regeneration of the forest crop.

The old burns must be put back into forest crops as soon as possible. This will probably mean planting trees on the area. It will be slow work, but it is the only solution at present. The farmers' idea of burning over these brushy old burns to cut down fires only reduce the desirable plants, and increase the deep-rooted brush species and fern. Each additional fire in turn makes the securing of a grass stand or of tree reproduction more difficult, and makes conditions favorable to another burn more certain.

SUMMARY

It is clearly evident that many years will pass before the forest lands can be correctly managed, but there will be continued work of increasing intensity in that direction until finally the major purpose is accomplished.

The relief of the pressures on the private owners to liquidate, and an efficient fire protection system should keep the counties tax base from decreasing so rapidly. Also, the use of the recently cutover lands that are capable of sustaining livestock for grazing will bring in an increased revenue.

Curtailment of public expenses should also be affected along with the stabilization of the tax base, in order to further lessen the pressures on the taxed lands. This could be effected by the removal of scattered settlers from isolated areas where public service costs for roads, bridges, schools, and relief are unusually high. The land purchase program of the resettlement administration will materially assist in the solution of this problem. Further settlement on such isolated areas as would unduly increase public costs should be prohibited. Review of Oregon laws pertaining to the subject indicates that the counties may refuse to sell land if settlement of such lands would be undesirable.

Forestry will always be a major industry in this part of Oregon, and if it is to function properly, some such program of coordinated sustained yield management is necessary.

As to the grazing angle, it will be very well to graze the areas when the brush has not yet taken over, because grass and grazing will tend to keep down the brush on the nearly cut and burned areas, but where the brush is established, there is not much chance of profitable grazing programs. As it is possible to get fairly good tree regeneration on correctly grazed land, it is also beneficial because of the immediate return on an area otherwise yielding no current income.

APPENDIX

Figure 1

County	Land Type	Site Class	% Commercial Coniferous Forest Land	Areas in Acres	% Total County Area	Total County Area
Clatsop	Coniferous Forest Land	I	7	32,833	6.3	
		II	56.1	262,606	50	
		III	34.8	162,945	31	525,475
		IV	.9		0.8	
		V	1.2		1.1	
	Non-forest				9.1	
	Other Lands				1.7	
Columbia	Coniferous Forest Land	I	1.1	3,664	0.9	420,810
		II	58.9	196,208	46.6	
		III	40.0	133,248	31.7	
	Non-forest Land			76,575	18.2	
	Other Land				2.6	
Tillamook	Coniferous Forest Land	I	1.8	11,804	1.6	
		II	60.9	385,450	53.3	
		III	30.6	193,674	26.8	723,629
		IV	4.5	28,541	3.9	
		V	2.2	13,003	1.8	
	Non-forest			74,443	10.3	
	Other Land				2.3	
Washington	Coniferous Forest	I	0.2	535	0.1	
		II	47.9	128,152	27.4	467,770
		III	51.8	138,586	29.6	
		IV	0.1	267	0.1	
	Non-forest			182,725	39.1	
	Other Land				3.7	

Figure 2

SAW TIMBER VOLUME BY SPECIES

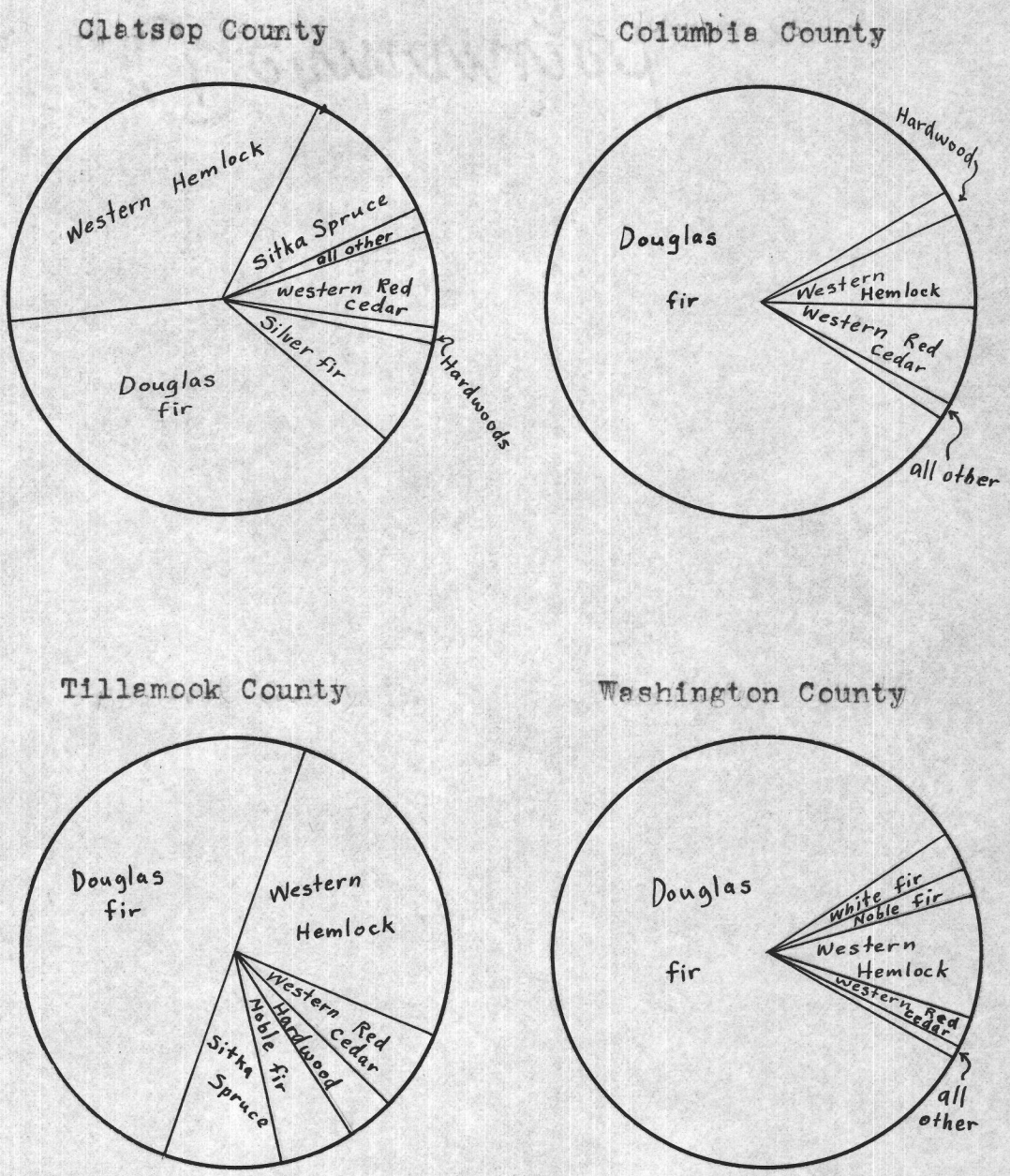

Figure 3

Land Type	Area in Acres	Assessed Valuation			Charges Against Property Taxes, Interest, etc.
		Land	Improvements	Totals	
Clatsop:					
Timber	19,215	$1,226,494	$24,850	$1,251,344	$1,649,125
Reforestation	9,206				
Non-tillable	30,099				
Tillable	289				
Total	58,809				
Columbia:					
Timber	977	400,367	6,625	406,992	137,943
Reforestation	14,582				
Non-tillable	66,285				
Tillable	1,876				
Total	83,720				
Tillamook:					
Timber	60,260	819,230	6,130	825,360	231,100
Reforestation	68,935				
Non-tillable	16,285				
Tillable	237				
Total	145,717				
Washington:					
Timber	1,039	90,590	895	91,485	55,726
Reforestation	3,077				
Non-tillable	19,346				
Tillable	68				
Total	23,530				

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