

Continuous Forest Production for Oregon

by

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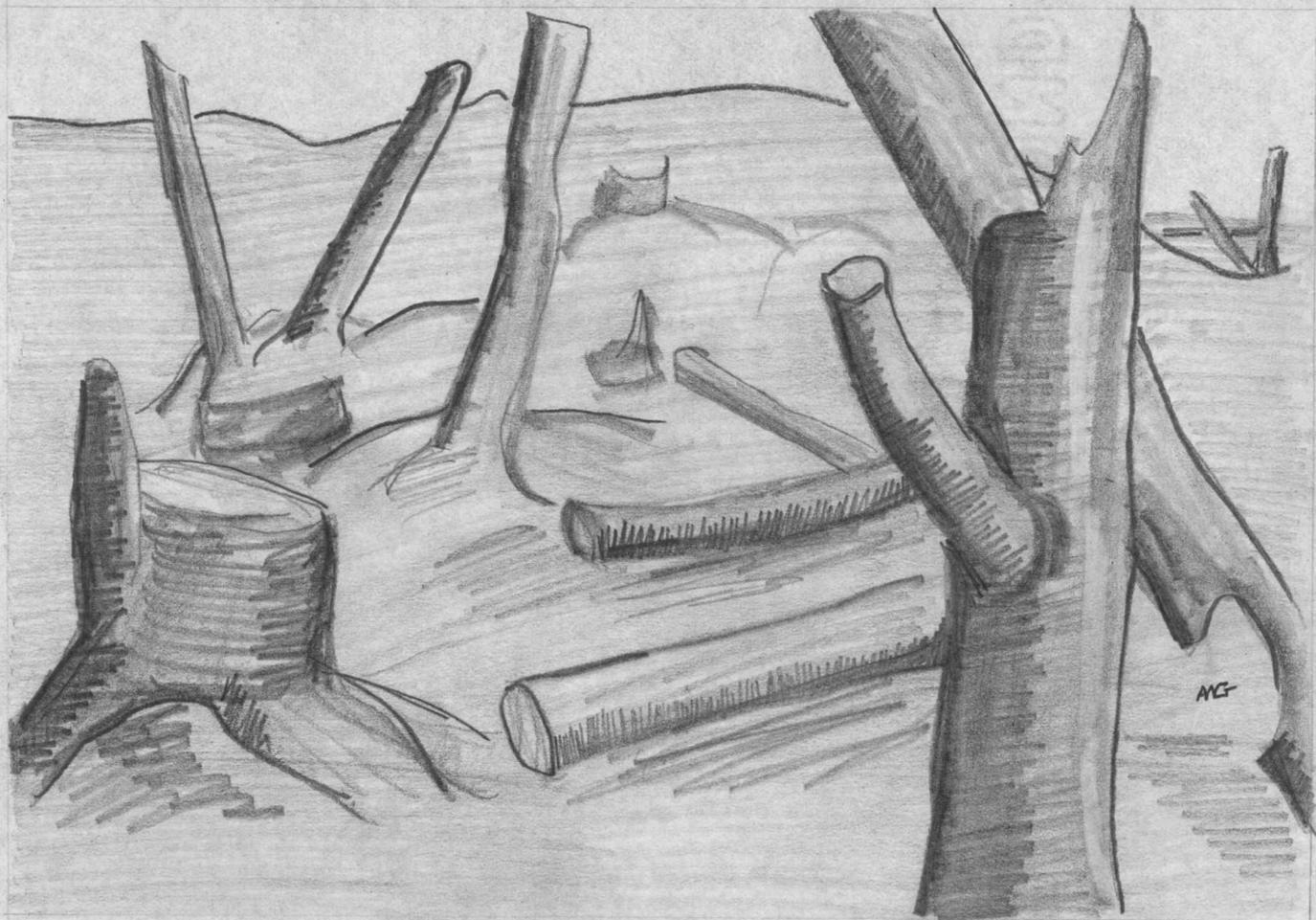
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Potential Forest Land, Now Barren of
Tree Growth

Introduction

The purpose of this thesis is to analyze Oregon's forest industries, to determine why some of the present poor conditions exist, and to work out a solution for continuous forest production in Oregon.

Oregon's forests provide nearly one-half of the state's income, \$224,000,000 out of a total of \$465,000,000 annually; give work to 77,000 men out of a total of 200,000 men; and provide wages of \$92,000,000 out of a total of \$193,000,000. These figures apply to the state's leading industries. Under present conditions the forests are cut with little provision for future crops which should cause the state deep concern.

Other uses of forest lands, fully as important as that of industry, even though less tangible, are the watershed protection furnished, the aesthetic value of forests for recreation, and the cover furnished wild life. If the precipitous mountain slopes are denuded rains will not be retarded by the duff and litter of forest cover, but will wash down the mountain sides to flood lowlands and cities. The eroded mountains and flooded plains of China may be the fate of Oregon if her mountains become deforested.

Some of the state's income is from tourists. One can easily foresee the decrease in visitors if our green scenic mountains are replaced by barren slopes. Natives of the

state would not appreciate such a change either. The fish and game of our forests would almost all disappear with the forests as has occurred in eastern states when areas became denuded of timber.

Previous studies of this subject have been made only on the various phases included under this study such as sustained yield or taxation as far as I can determine. This paper attempts to combine them all.

In gathering material I have attempted to determine the problems which face the forest industries and to find possible solutions. I have correlated the various phases. Many contradictory opinions exist on such a broad subject. There are alternative solutions to the ones I give, but I believe those advocated will prove most successful.

My sources of data were books and articles on forest finance, silviculture, and other subjects related to forestry. In addition many of my own notes gathered during classwork were used.

Background of the Timber Industry of Oregon

Acquisition of timber land

The background of the present status of Oregon's forest industry centers in the past acquisition of timber lands. Land was acquired by several methods. The timberland, originally owned by the government, was granted to settlers in order to encourage settlement, to railroads for building lines into the new country in order to develop it, and for various other purposes.

Railroad grants Three million acres were granted to railroads in Oregon when the transcontinental lines were built. The railroad grant lands were on alternate sections and were to be sold at prices ranging from \$1.25 to \$2.50 per acre. In cases where land was already occupied by settlers the railroad was allowed to select other land. Much of the land acquired by railroads was not easily sold. In 1913 the Oregon and California grant lands, amounting to 2,008,772 acres, reverted to the government.

Swamp act The swamp act, extended to include Oregon March 2, 1860 provided that swamp land, to be developed by the states, be ceded to them. It was originally intended to transfer only inunded lands along the Mississippi, but was extended to include other lands.

States were allowed to survey the land through their

own agents, and in several of the states, including Oregon, this was done. Agents employed in the survey were generally compensated per acre of land segregated. As a consequence large areas of land along rivers and streams were acquired. In Oregon 265,069 acres were so acquired up to June 30, 1922. Since then little land has been transferred through the swamp act. Swamp lands were sold by the state to purchasers, many of the speculative. According to the act the proceeds were to be applied to the reclamation of the land.

Educational grants Land grants by the federal government were made to states to foster education. Oregon received a total of 3,399,360 acres, sections 16 and 36 of each township being granted for common school education, on February 14, 1859 when she became a state. Another grant of 500,000 acres was made for common school educational purposes later. The proceeds from the swamp act land in Oregon were used for educational purposes rather than for reclamation of the land.

Seventy thousand two hundred forty acres of scrip land were taken up in Oregon. The proceeds from such lands went to states which did not have enough public lands to enable them to receive a grant of land within the state for the purpose of establishing a land grant college. Oregon was allotted a grant of 90,000 acres for such a college, 89,908 acres of which were finally received. This land sold for an average of \$2.28 per acre.

Scrip was also granted to civil war veterans in lieu of

land. Veterans could sell the scrip, but there was a limit on the amount of scrip any one person could hold.

Forty-six thousand eighty acres were also received by the state for the University and normal schools. The total grant for all educational purposes was 4,035,440 acres.

Homesteads or free land In Oregon before 1850 a single person was granted half a section of land and a married couple a section. In 1850 it was decreased to half this amount. At first, up to 1880, most of the homesteads were taken up by bonifide settlers. After that time an increasingly large number were acquired in order to sell them at once. This was done through the commutation priviledge which consisted of paying the regular price of \$1.25 to \$2.50 per acre for it, or agricultural college scrip or military bounty warrants instead of cash. The preemption right was that land could be held, and if certain improvements were made it could be obtained within six months.

The commutation clause was the means of large timber holdings being acquired through a perverted use of the homestead act. Some individuals made a practice of obtaining homestead after homestead in the best timber possible and selling it at a good profit to timber companies. The land so obtained was the basis for some speculation, but no great amount of timber was so acquired.

Timber and Stone act Oregon entrees under this act, June 3, 1870 to June 30, 1923, were 3,791,104 acres costing

\$9,665,758. This act was passed to enable the small homeowner to obtain a timber claim, but the results were entirely different. Cases of fraudulent entrees were numerous, and it was a tool by which timber companies secured large tracts of timber. In general, though most of the timber was acquired by fraudulent practices, such practices were accepted by the people at the time as justified. At least public opinion winked at such acquisition of land.

Speculation Prices of the original claims were from \$800 to \$1500 for 160 acres or from ¢10 to ¢25 per thousand board feet. In the decade ending in 1907 prices of timber trebled on the Columbia river from \$.75 to \$2.50 per thousand board feet, in the northern Willamette valley from \$.30 to \$1.00 per thousand board feet, and in the Nehalem valley from ¢10 or ¢25 to \$1.00 per thousand board feet.

Wilson Compton says of the speculation in timber that all timber withheld from the axe is speculative as long as dynamic influences exist which are capable of changing the condition upon which such timber may in the future be converted into directly marketable products.

The charge of speculative holding of standing timber is simply the plain admission of an inevitable economic fact.

Development of the Industry

Logging operations in Oregon were small in the 1800 as compared with present day operations. Horses or oxen were

used to drag logs, and any clearings which resulted were very favorable to reproduction. As logging machinery was improved and methods of logging progressed the size of clearings increased and slash piles became more inflammable. During the last two decades large areas of barren, burned-over land have resulted, logged clean with no reproduction or means of future reproduction seeding in.

Sawmill and other timber products have kept pace with logging, or perhaps led the way since the purpose of logging operations is to supply timber for further manufacture. Early sawmills supplied lumber to nearby settlers and later to California when gold was discovered there. As the railroads came in and world trade grew the variety and amount of products has increased until today Oregon furnishes a large amount of timber, shingles, pulp, and other forest products for export from the state. Her foreign exports have averaged annually about one billion board feet until the recent depression.

Present Status of the Timber Industry of Oregon

Organization of the Industry The timber industry has been built by men who were strongly individualistic. Very little cooperation took place. Because of the desire by many to liquidate their holdings as soon as possible sawmills have been built far beyond the need for them. Today there is an excess sawmill capacity of forty per cent. To go with this there is a surplus of men who follow the sawmill and logging trades because the demand is seasonal and has varied so much in the past. Many of them are out of work a part of the time.

The industry as a rule is built upon the idea of liquidating stumpage as fast as possible. The value of the land for timber growing has not been considered up to the present by the majority of the operators. Instead they have usually considered timber as a resource to be mined. As a result more of the silvicultural costs of production have been, and are, shifted to the public. The money that is spent for fire protection by the timber owners is put in on standing timber rather than young growth. Since the state has no working plan for reforesting lands, nor the available funds for such work, a large amount of the logged-off, burned-over, barren land is not reproducing at present. When such lands are put in production the public will have to pay the bill.

Marketing Conditions The United States has declined from first place in the export of lumber in 1928 to fifth place in 1938. Oregon's share has declined proportionately. The decline in exports has been due to the world wide depression and to the policy of self sufficiency of the European nations. The British empire, formerly our best customer, now trades almost exclusively with Canada in line with the "buy British" campaign. In addition, very little has been done by the United States to secure favorable tarriffs and quotas for American lumber.

Within the United States Oregon's trade has also declined with the advance of the depression. This has been due to a declining market rather than to increased competition from other states. Increased competition is coming from British Columbia since Canada has secured a favorable tarriff for Canadian lumber in the United States.

Poor Protection The loss from fire is greater than is usually realized. Much publicity is given to destruction of green timber, but the burns common on restocking areas are not so spectacular and receive little attention from the public. One and seven-tenths percent of the restocking forest area in private ownership burns over annually. This percentage may be reduced by areas of reburns and burns on grazing lands, but even so is much too large. If only one percent of the restocking areas were to burn over annually all restocking areas would be burned over in one hundred

years.

Ground fires, which are usually not considered serious, weaken the trees, destroy young growth, and give disease and insects a chance to enter the tree. Bad burns may later result because of the deadened underbrush.

Fires on logged over land and reburns on private land are not considered seriously enough, and money at present is not available for their control. Such land is usually tax delinquent so the former owner has no interest in it, and the county or state has not the money to adequately protect it.

Taxation Taxes are a heavy burden on the owner who is attempting to carry timber land until it will be mature and profitable to cut. It is true that in relation to his other carrying charges, such as that of interest, that the taxes do not amount to a large sum, but they have to be paid every year and so loom as his chief present cost in many cases. Another cause for apprehension as to taxes is the uncertainty of the amount in the future, and lack of uniformity in assessment. This has been improved by the forest tax law on land intended for reforestation, but this in turn has led to much dissatisfaction because few timber owners, although some classify their land under the law, are practicing reforestation under the present set up. The law provides for an assessment per acre on land which is held for timber reproduction. The assessment may vary, but is now set at \$4 to \$5 per acre. In addition a yield tax of $12\frac{1}{2}\%$ is charged

when the timber is harvested.

The average tax on timber in 1926 (fir and pine) was about \$.026 per thousand board feet on an assessed value of \$22.80 per acre which is 2.2%. In ten years this amounts to 22%, in 30 years to 66%. At compound interest of 5% this is \$16.61 per thousand board feet in 30 years.

In another example in 1926 the average tax on one section of Douglas fir was \$851 or \$1.33 per acre. In order to meet this charge the property must increase in value to the same extent. Taxes in Ponderosa pine are much lower, from 11¢ per acre in Umatilla county to 43¢ per acre in Deschutes county. Populations in these areas are concentrated, thus eliminating many of the costs of government such as roads.

The Surplus of Mature Marketable Timber Most of the present stumpage in the Douglas fir region is mature and should be marketed as soon as possible since the deterioration of the stand is greater than its increment, resulting in a net loss. Carrying charges mount on this timber, but increment does not, so, unless stumpage values increase to meet carrying charges, the sooner the timber is cut the better off the owner is financially. This is one of the principal reasons for the low stumpage prices in the Douglas fir region since so many owners are desirous of liquidating their timber. This is also the chief reason why little thought is given to reproduction of future timber crops. Many owners

think that if it isn't profitable to cut mature timber which has no reproduction charges against it, it surely will not be profitable to bear the expense of carrying young timber until it is mature.

A Plan for Continuous Forest Production for Oregon

Continuous production of forest lands means that depletion must not exceed growth. To bring this about stable ownership and a settled policy of forest development is necessary. Before cutover lands are managed for production someone must be interested in them. Most of the measures taken up to date have been initiated or advocated by private timber owners. The present disappointing conditions and slow progress have resulted due to financial pressure. Before continuous forest production for Oregon will become a reality it must be profitable for the lumberman to go on a sustained yield basis, and he must understand that it will be profitable.

A program which should make it possible for timber owners to practice sustained yield should include the following points.

1. Public acquisition of poorer timber lands.
2. A land use zoning plan for Oregon.
3. Reorganization of the state system of forest regulation.
4. Reorganization of the timber industry.

Public Acquisition of Poorer Timber Lands The present depressed timber market is caused by the large acreage of mature timber which is ready to be cut. The longer it is

held the higher is the cost of holding it as new taxes are added and interest is compounded upon the investment. There is danger of fire or insects and disease making the timber a complete loss. All of these help to create pressure upon the owner to sell. The result is a disorganized market.

Cutover land under the present setup is not being cared for with the purpose of growing a new crop of timber, but is left to lie idle with uncontrolled fires burning over it, and what little reproduction is present being destroyed. Acquisition by the government would mean that an effort might be made to put the land back into production. At least it would have better fire protection.

There are two sides to acquisition of land by the public. One viewpoint is that such acquisition will do away with private enterprise. The other viewpoint is that it will allow a planned economy. The probable results are somewhere between. Private initiative and enterprise with a chance to profit through effort will bring greater efforts than will government ownership. Federal men do not take an active interest in the timber being grown to the extent they would if they received direct profits from it.

The trouble with private ownership is that it must look for profit at the present if it is a going business; not fifty years in the future. On the other hand if the government should acquire all of the land we'd soon have a form of socialism. The practice that I advocate is that the

government acquire land now barren and cutover and enter upon a reforestation program, and that some of the poorer mature timber lands be acquired since such lands aren't profitable for private ownership at present. This would put our non-productive, cut-over lands back into production and would also relieve some of the pressure upon private owners to cut. The better, more profitable lands would remain for private initiative to develop.

The counties object to acquisition of land by the federal government because it takes away an immediate source of tax revenue. Even though they will profit in the long run by having the land in production rather than retrogressing the returns are too far in the future to help the local politicians and county courts. To overcome this objection it will be necessary for the government to make provisions to advance the counties money up to the percentage of land purchased by the government to meet their immediate expenses. Money advanced could be charged against the counties share of the final yield from the timber.

A Land Use Zoning Plan for Oregon

Perhaps the chief cause of the pressure to liquidate forest land rather than establish it upon a sustained yield basis is the uncertainty of taxes and the large annual sum of taxes. The first thing to be done in lowering taxes is to reduce the county expenditures and equalize taxes upon a basis of the value of the land. Land zoning seems to be

the best possible solution to this problem. It consists of a plan of land use and valuation based upon a thorough study of the land, its topography, soil properties, accessibility, and other basic features.

Recently the Oregon state planning board made a start in this direction, but very little practical good has been done except to prepare the way by familiarizing the public with the need for some kind of planning in order to eliminate uneconomic settlements, roads, and industries.

Another function of a state planning board is the elimination of overlapping governmental systems in order to have more efficient administration of government. At the present this is a future goal rather than an immediate one since our units of government are firmly entrenched and the leaders will balk at any change depriving them of jobs and political gravy. The thing to be done is to set up better, larger, combined, more efficient units to meet changing conditions, and to keep this goal before the public until public opinion will finally demand such a change.

In initiating a state or county planning act an enabling act is first necessary. The organization and steps necessary are given in Model Planning Laws by Bassett, Williams, Bettman, and Whitten. This book gives a number of possible laws and their effects in land zoning.

History of the Planning Board in Oregon Oregon has no state law authorizing official county planning boards. A

bill recommended by the State planning board at the 1936 session did not pass.

The Oregon state planning board was first created in 1935. The work ahead of it was far too great for the money and facilities provided. County planning boards were encouraged and twenty-eight organized in 1935, twelve of which continued active. The boards were appointed by local officials and soon became mixed up in political activities. They showed a tendency to boost their own county. However, much good work was done in preparing the way by the state board which held conferences and continued to educate and inform the county boards and interested citizens of the need for planning and the things that could be done through planning. WPA workers and other emergency workers of the Federal program were enlisted in planning work. Several county base maps have been made. It has been found necessary to have technically trained men to get efficient work done. The Forest Service and Resettlement administration furnished technical help. One of the most serious weaknesses of the initial county planning efforts was the inability to tie the county judges in closely with the organization. After some effort the county judges were brought into closer cooperation.

The state board attempted to get county boards to study their public improvement needs in order to plan for improvements such as roads, public buildings, and conservation work.

The attempt failed except in a few counties where far-sighted persons took a hand with little help or reference to the county board. Clackamas county is the outstanding example of county planning going ahead in the state, but at least a part of its work has been to secure benefits of public expenditures to the county. Help was given to army engineers in organizing irrigation and other projects.

Other achievements to date have been county land inventories in seven counties, detailed land use surveys in five counties, and recreation, flood control and mineral surveys in others. The Clatsop county planning board is studying its tax delinquent lands to determine what the most beneficial use would be.

Little has been done to date in educating the people of Oregon as to the nature of land planning. The problems of Oregon are determination of economic land use and sound management policies, conservation of forest and water resources, development of recreational areas, school consolidations, and better adjustment between the tax base and the resource base. In summing up the work done so far in Oregon it is apparent that the counties are unable to finance county planning boards, and only a few boards have been established. The county board serves only as an advisory committee to the county court. Recently, in April of 1939, the State planning board has been disbanded by the governor.

History of Land Zoning Few states or localities have tried zoning rural areas which would be the main function of zoning with which forestry is concerned. There are many city zoning acts in force. A study of these indicates the best way to zone, and how it may be done constitutionally under the state police power. Courts in recent years have given decisions favorable for zoning.

The first application of the zoning method to a rural land problem was in Oneida county, Wisconsin, in May, 1933. This ordinance was aimed to prevent farm settlement in parts of the cutover areas where such scattered settlements would create unwarranted burdens for schools, roads, and local administration of government, and where such settlement would interfere with the best use of the region as a whole, which is believed to be that of forestry and recreation.

The history of Wisconsin, particularly the northern part, has been one of exploitation of timber with high taxes resulting and development of the cutover land, much of it sub-marginal, for farming. The result is a scattering of poor settlers who cannot make a living from the land, and for which schools and roads must be kept up. In one authentic case a single isolated settler cost the town \$1400 a year while farming on land not worth that much.

Ordinances were passed to stop further undesirable settlement. The land was zoned and that good for farming, timber, recreation, and similar purposes was to be used for

the purpose to which it was most suited in the future. As a result about five million acres of marginal and sub-marginal farming land have been removed from cultivation and put back to timber growing. In addition another million acres was put in county, state, and federal forests. The area is now efficiently guarded against fire.

Many of the northern counties have a large number of summer recreationists who have summer homes. Regulation discouraging farms has helped this industry to a large extent by providing better conditions for recreationists. For example no billboards or auto junk yards are allowed. The state planning board of Wisconsin has a paid staff of experienced members. Its policy is to make all necessary studies and recommend needed legislation.

Other examples of state and county planning are to be found in Michigan and California. The Michigan plan has not been as successful as the one in Wisconsin, and the California plan which started chiefly as a means of road and city planning is now being extended to include rural zoning. It is based upon a master plan for the state.

Solution to Oregon's Land Use Problems Through Zoning
Oregon may well study the success of the rural land zoning in Wisconsin and the features of their plan which proved to be unfavorable. A zoning plan in Oregon should be state-wide before it will become effective. That is if each county is allowed to handle its planning as it sees fit there will

be confusion and lack of coordination with a great deal of local politics mixed in. A centralized state planning board will be most effective if it has authority and money enough to employ skilled technicians to make a comprehensive survey with a view to zoning the land for most economic uses. Advantage could be taken of the experience of other states in this regard. Forest service and other federal agencies would also be able to help.

The county court should be allowed to express an opinion through local planning boards as local men can often understand a local problem better than outsiders. Consideration should be given to the local problems, but not to the exclusion of forgetting the objective of the long time good.

By zoning the land to its best use many marginal land uses would be eliminated and a great saving made. Undesirable settlements and settlers would be eliminated. The resulting lessening of the tax burden on timberland would be a help to timber owners.

In addition to zoning a planning board should effect many economies in government spending, municipal, county, and state, by consolidating schools and other units of government, and making divisions upon an economic basis rather than a political one.

Land Zoning and Taxation One of the present drawbacks to the practice of sustained yield is the uncertainty of taxes. At present land which is being held for reproduction

of timber is classified under a reforestation law. However, this does very little real good since most cutover land, even under these conditions of light taxation, cannot be profitably held for a new timber crop. The remaining timber land is taxed at an ad valorem rate with the judgment of the assessor based not upon technical training, but upon what little knowledge he may gain while in office.

As the timber becomes mature its value increases and so do the taxes. This source of revenue is not overlooked by the county assessor. The increasing taxes are a good reason for cutting the timber before it is mature, or under present conditions timber now mature is liquidated as fast as possible. The value of the timber under liquidation is lower to the owner than is its management value.

A uniform tax base is needed throughout the state with an efficient assessor. Some change is needed in the method of taxation which will not create pressure to cut. This may be done by lessening the amount of tax and creating a yield or severance tax of some sort. The problem of taxation will be greatly simplified when all of Oregon's mature timber is cut, but at present the temptation is great to tax valuable timberland for all it will stand and often for more as is testified by the tracts of timber becoming tax delinquent throughout the state.

Reorganization of the State System of Forest Regulation

The state forest system at present is headed by a state board of forestry, consisting of nine members, the governor, head of the state forest school, and seven members recommended by timber associations and the United States forest service. The board appoints a state forester who may appoint his assistants and fire wardens. Under the supervision of the board the state forester administers and enforces the forest laws such as closures during the fire season, and provisions for fire protection. The state board classifies reforestation lands. Twenty-five thousand dollars are provided annually as a revolving fund for emergency expenditures in fighting fires.

With such an organization it is often difficult to place responsibility for enforcement of some cases. The present system developed through the establishment of private associations whose purpose was to protect their land and to secure all of the advantages possible to themselves. They found that in order to do this it was necessary to have a compulsory fire protection law, since association land would be endangered by fires on neighboring land which was not protected. When a state protection law was secured the associations were made the protective agency since they already had their protective force organized in the field. Lands under their jurisdiction did not have to pay the tax imposed for fire protection. Adjoining lands, not so protect-

ed are taxed and the tax turned over to the associations who use it for protection purposes.

Since the state foresters office was created it has continued to develop along these lines, the state forester being a coordinator in many respects rather than an administrator of the state laws. Many of the members of the state board are association men, so the tendency is to continue the present practice. One of the faults in the system is the fact that the associations are apt to be short-sighted in their policies rather than planning on a long time basis. This is to be expected in any such organization since the emphasis from its members is upon current financial returns with thought given only to the near future.

It is charged that lands protected by an association are not fairly administered, that land belonging to an association member is favored in protection. It is also claimed that the emphasis is on protection of timber lands with little money or time being spent on control or protection of cutover lands since most of the cutover land is either tax delinquent or of no interest to the timber owner.

Pressure is brought to bear on the state forester to administer laws as the timber owner wishes. In addition the state forester is hampered by a lack of funds for administration and fire control. The revolving fund of \$25,000 is easily exhausted in fighting a large fire. Other fires may occur later, so it is often impossible for the state forester

to put sufficient men on a fire to control it. This policy of the state results in thousands of acres of barren, useless land that could be producing timber.

The policy of the state board of forestry in reclassifying lands for reforestation is to hold hearings attended by one or more of the board members in each county, at which the land to be reclassified is discussed. A much better procedure would be to have a competent technically trained man cruise the land in the field, and later, after it is reclassified, see that the provisions for protection and reproduction are followed. At the present a field man does cruise lands for reclassification, but his work is not the most highly considered basis for the final decision. There is a great deal of dissention between county courts and the administration of the reforestation law because land so classified is a low source of tax revenue. The counties claim, with some justification, that lands classified under the law are not cared for as they should be. In Clatsop county a movement is being pushed to burn over large areas, part of them now reforesting, and establish grazing districts.

The state forest service should be administered wholly by the state forester. He should be entirely free of any control by the associations. In order to achieve this he should be appointed by the governor alone, the present state board to serve in an advisory capacity. Associations could be allowed to make suggestions.

The fire protective organizations should be directly under the control of the state forester, with adequate protection of cutover lands to ensure a chance for reproduction. Cutting should be regulated on private lands through concessions to owners, so that reproduction will be ensured. Greater flexibility is needed in the present slash burning laws as applied to west side logging conditions. Loggers in many cases are forced to burn slash when they know that all reproduction will be destroyed. A concrete example of this is given by J. E. Schroeder, a student at Oregon State College, who worked in a logging outfit above Mills City. In the fall of 1938 when the first rains occurred orders came to burn. The logging outfit protested, but the orders to burn were repeated. As a consequence the area was left with everything dead, and a fire hazard of dead snags for years to come was created. A young pole stand which might have been relogged within forty years was destroyed, and the next crop will be in two hundred years instead of forty years.

T. J. Starker, professor of forestry at Oregon State College, recommends greater flexibility in administration of slash burning laws. Studies by Thornton Munger and Donald Mathews of the Pacific Northwest Experiment Station indicate that the danger from unburned slash is not much greater than the danger on areas where slash has been burned. Both rate of spread and difficulty of control were considered.

From these studies Munger believes that in many cases greater protection would pay more dividends than burning all of the slash. He suggests that piles of slash in bad spots could be burned. The method of handling slash should vary with the area, amount, and placement of slash. The hazard caused by snags, brush, and weeds on burned over land should also be considered before burning slash.

A larger fund for fire protection is needed to ensure adequate protection. Funds are furnished for fire protection by the federal government under the Clarke McNary act which provides for federal assistance in fire control on private lands. However, such funds match state and private contributions, amounting to 25% of the total. As a result no money is forthcoming for tax delinquent and cutover lands since private individuals cannot afford to furnish money for fire protection on such lands under the present condition. The law should be amended to take care of this, and the amount of money increased. It should be realized that the public is responsible for a large percentage of fires. This indicates that the private owner has a right to expect aid from state and federal sources. The public benefits as much by keeping fire out of timber land as the owner does through the use of timberland as a refuge for game, as watershed protection, for its aesthetic qualities, and as a source of work.

It is difficult to do much about the land now deforested

and unproducing in Oregon, but if action is taken soon future unproductive land may be avoided. through the various methods of bringing about sustained yield, and in educating both public and loggers in the advantages and social responsibility of doing so.

In summing up the state forest system, many of the changes I advocate will take time, but can gradually be brought about. Private owners should have control of their land, but not as it may affect the public by being left barren and unproductive. They should not have the privilege of running the state forest service as they do now, but should cooperate with it. On the other hand the public has a responsibility in seeing that timberland is kept productive.

Reorganization of the Industry

At present the industry, or the more progressive members of it, are working toward the idea of sustained yield in their cutting operations, and all of the associations advocate continuous production when it is economically feasible. However, in the past and even at the present much of the land cut has been left to become tax delinquent. The slash was burned in accordance with the law, and the land was left, as a rule, unprotected from fire and with few seed trees or little reproduction on it.

Leadership is needed in developing sustained yield plans for timbermen, so that the logger may regard timber

as a crop to be harvested and regrown rather than as a resource to be mined. The results of this policy have not been as favorable to the timber owner as might be thought. Investment in tracks and other equipment is a total loss, whereas if the logging had been on a sustained yield basis such losses would be avoided. Other equipment must be depreciated on a shorter basis than would be necessary on a sustained yield operation. In addition the social loss to employees and neighboring towns is great, perhaps even larger than the direct loss to the operation. Buildings are abandoned and business houses become bankrupt or move out. The following taken from a news item in the March 15, 1939 edition of the Oregon Journal illustrates the point very well:

BIG MILL SAWS SING SWAN SONG

Depletion of Viola-Clarkes Timber Soon to Close Last of Eight Mills

Oregon City, March 15. Within the next three months the last two sawmills on the Clackamas Eastern railroad will have sent the final stick of available timber through the buzzing saws. The Roy Hehn mill at Swift will cut the last board within three weeks. The Clackamas Fir plant at Upper Highland will snake the last log from the pond some time in July.

The closing of these two mills, the last of eight that have operated in the Viola-Clarkes region, will mean loss of pay checks that bring livelihood to 125 families in the area. The Clackamas Fir mill employes a crew of 75, Hehn's mill 25, and the Clackamas Eastern railroad, which owes its existence to the transportation of lumber cut by the mills, employs another 25 men.

Most employees of the mills live on small farms and acreages in the vicinity. The soil, a sticky red gumbo in the winter and coppery dust in summer, has been classified as sub-marginal. The trial and error method has proved it incapable of producing even a meager living for a farm family.

Edmund Hayes, owner of the Clackamas Fir mill, has not definitely decided what he will do with his big plant, the largest sawmill in the county. However, he believes now the mill will be dismantled and sold.

Roy Hehn said yesterday that his mill would be moved and placed in operation in a new location, as yet undetermined. Most of his present crew will move with the mill.

It is believed that the Clackamas Eastern railroad will meet the fate which recently claimed the Willamette Valley railroad--abandonment and subsequent scrapping.

In the last 20 years more than 500,000,000 feet of fine timber has been cut in the area. Nothing is left today but brush-covered stump land, good for nothing but goats. As the timber goes, so does the tax income, and little effort is being made to promote reforestation.

The interest of the state is large enough in such social values that it could afford to take the leadership in helping to correct such maladjustments. On a sustained yield operation permanent, well-constructed homes are built, better schools are put up, and the social loss through moving, dissatisfaction, and other intangible things is avoided.

The timber operator putting his business on a sustained yield basis need not consider depreciation over a short period, but may lower his cost of operation by stretching depreciation over a longer period. By establishing a permanent operation, he avoids the expense of setting up in a new area when one operation is completed.

Blocking lands together The first necessity in establishing a permanent operation is to have a sufficient amount of timberland available. In large operations this may amount to 100,000 acres or more. Very few outfits own this much timber so it is necessary to block ownerships together under

one plan of management in order to have an area large enough for such an operation. Most of the larger operators have fairly large holdings already which can serve as a nucleus for the proposed unit.

The United States forest service encourages sustained yield by agreeing to sell timber to owners in accordance with the management plan. However, under present conditions forest service regulations provide that timber must be sold through competitive bidding. The owner or company trying to establish a block of land to be cut on a sustained yield basis cannot be sure of national forest timber. The plan used by the Oregon and California land grant administration could well be adopted for areas where sustained yield is being established. When bids are made for timber on the O. and C. lands a choice is possible of any of the highest bids. In this way the administration can allow the bid of the owner who has a plan for sustained yield which includes part of the O. and C. land in the working circle. The O. and C. administration considers such sustained yield plans carefully. If the forest service could initiate such a plan it would help greatly in getting sustained yield management started. Some government regulation could also be accomplished, and still allow the private owner freedom in handling his business. This could be done through making certain conditions, such as having the private land in good condition for restocking, a prerequisite to obtaining government timber.

In regard to such blocking together of land the private timber owners think that private timber should be cut first since it is usually more accessible. By cutting private timber first the financial burden on the private operator would be eased through lowering of taxes and of carrying charges. This is what is occurring anyway except that little thought is being given to ideas of sustained yield. The forest service would not lose anything by allowing owners to continue cutting their timber first under a management plan of continuous production which would include timber in national forests as a part of the working circle.

Economic selection Economic selection of only the most valuable, mature trees, cutting over the entire circle often, would help to solve the problem of which timber to cut first. It has been shown by Axel Brandstrom that economic selection will bring a greater profit to timber owners than will clear cutting or marginal selection. If economic selection were accepted and practiced by all timber owners many of the present problems of timber owners might be solved. Taxes would be lowered since the taxing bodies would be assured of a continuous revenue. The problem of reforestation would cease to exist. Social values of watershed, recreation, and game would be protected. The use of economic selection does not mean that all problems would be solved. The question of which species would be favored by partial cover during regeneration remains a question. Also some undesirable species

might be left to become the nucleus of the next crop. Research indicates that in the future timber may be grown on a basis of the amount of wood fiber produced rather than on qualities of the finished board. If this is true the species of tree will not be so important.

Development of Products and Markets Leading lumber manufacturers admit that the lumber industry can extend its markets a great deal by research. The possibilities of fiber board and of chemical utilization of wood pulp are barely touched. With the inventiveness of the American mind many new uses for wood are possible. Leading companies are realizing this and some progress is being made, but there is still room for more work. One of the functions of cooperative associations could well be to maintain research laboratories, and also to make use of the data obtained by the United States forest service laboratory at Madison, Wisconsin.

An advertising campaign would help to sell goods. The lumber industry is up against substitutes advocated by steel men and other producers of wood substitutes. The usual method of selling timber products is to let them sell themselves. Some organizations and companies are initiating advertising campaigns, but the industry as a whole is not doing so. Cooperation within the industry to solve the problems which arise such as uniform specifications for lumber grades is needed.

Out of date equipment should be modernized in many cases.

Modernization of equipment should include a readjustment of mill capacity to meet the demands.

Improvement of Public Relations Public relations cannot be stressed too much. The reaction of the public to the industry is expressed in such things as unfavorable tariffs and helping other industries at the expense of the lumber industry. Cheap government finances for the timber industry might be obtained as they have for other industries.

As a part of public relations a strong lobby is needed to inform legislators and the public of the various needs of the industry. Such things as an average wage of 25¢ an hour in the lumber industry of the South competing with the Northwest's wage of around 70¢ an hour should be remedied in order to place Oregon on an equal footing with other regions.

Unfavorable publicity given the loggers and lumbermen because of clear cutting policies in the past must be overcome, and a positive reaction substituted. The public should be made to realize its own responsibility in fire control, taxation, and finances of the timber industry.

Summary

The present troubles of the forest industry had their inception in past practices of loggers and lumbermen. Continuous forest production is hampered because of the problems of taxation, existing mature timber, lack of organization within the forest industry, and inefficient state administration of forest lands.

The solutions advocated here may not be the final ones used, but the ills of the forest industry have been explained, and the way to be followed in arriving at continuous forest production has been pointed out.

It will take a long time to correct all of the troubles of the forest industry. Such things as reforestation of denuded land may take a century or more. However, the signs point to a gradual shift to sustained yield plans, and as such plans are put in use they will be perfected until a workable plan is finally arrived at.

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