STATE OF OREGON
STATE PLANNING BOARD
SALEM, OREGON

Executive Offices
811 SPALDING BUILDING
PORTLAND, OREGON

June 3, 1936

Mr. W.L. Finley, Chairman,
Committee on Wild Life,
Route 10,
Portland, Oregon.

Dear Mr. Finley:

You will find enclosed the draft of a report entitled, Oregon's Forest Problems which has been prepared by the Advisory Committee on Forestry with the aid of the Research Staff of the Oregon State Planning Board.

Will you please review this report with the following things in mind?

1. Any possible conflict between the objectives of this report and those of your Committee on Wild Life.

2. Any suggested modifications or additions which you feel should be made to bring about the desired harmony.

3. Any general comments or suggestions which you feel might be valuable to us in making our final revisions.

In the final editing, it is more than likely that we shall condense this report to a more compact form.

If at all possible, will you please send us your comments within the next ten days?

Cordially yours,

J.C. Rettie

J.C. Rettie,
Supervisor of Research.

JCR:MR

OREGON'S FOREST PROBLEMS

Draft report prepared by:
Advisory Committee on Forestry,
with the aid of the Research
Staff of the Oregon State
Planning Board

INTRODUCTION Oregon, now in possession of one-fourth of the remaining stand of merchantable timber in the United States, is one of the States of the union where it is not too late to adopt a sustained yield policy which would insure a permanent and continuing industry. The timber resource of the state already furnishes the economic base of support for a large portion of our population. It is important that it shall continue to do so, not for twenty or forty years to come, but permanently. Oregon forest products are being used in every other state, and as time goes on, this old growth timber stand will assume even greater national importance.

In the preservation and conservation of the resource, there are many serious problems; control of fires, control of ravaging tree insects and diseases, the maintenances of favorable silvicultural conditions. But more critical than any of these is the problem of stabilizing ownership of forest lands in ways which will make possible sound forest management on both public and private properties. The policy of destructive exploitation must necessarily lead to economic and social disaster. In order to avoid such an outcome, there is much to be done in the way of public acquisition of certain stands of marketable timber, to facilitate integrating certain blocks of public and private timber into units for permanent operation. With

effective action, these things are still possilbe in Oregon and their public benefits will be large.

During the years 1928 and 1929, about 64 percent of the payrolls in Oregon were directly supported by the wood using industries. It is safe to say that these industries furnish directly and indirectly a livelihood for over 250,000 people in the state. Under a well devised plan of sustained yield operation, the forest industries could furnish a major share of support for perhaps half a million persons. This would require integration of farming and lumbering so that a fairly large number of people could depend upon the one for food supply and upon the other for cash income during a part of the year. Such an ideal of permanent, stable, forest communities is attractive, but it will not be realized without strenuous cooperative effort.

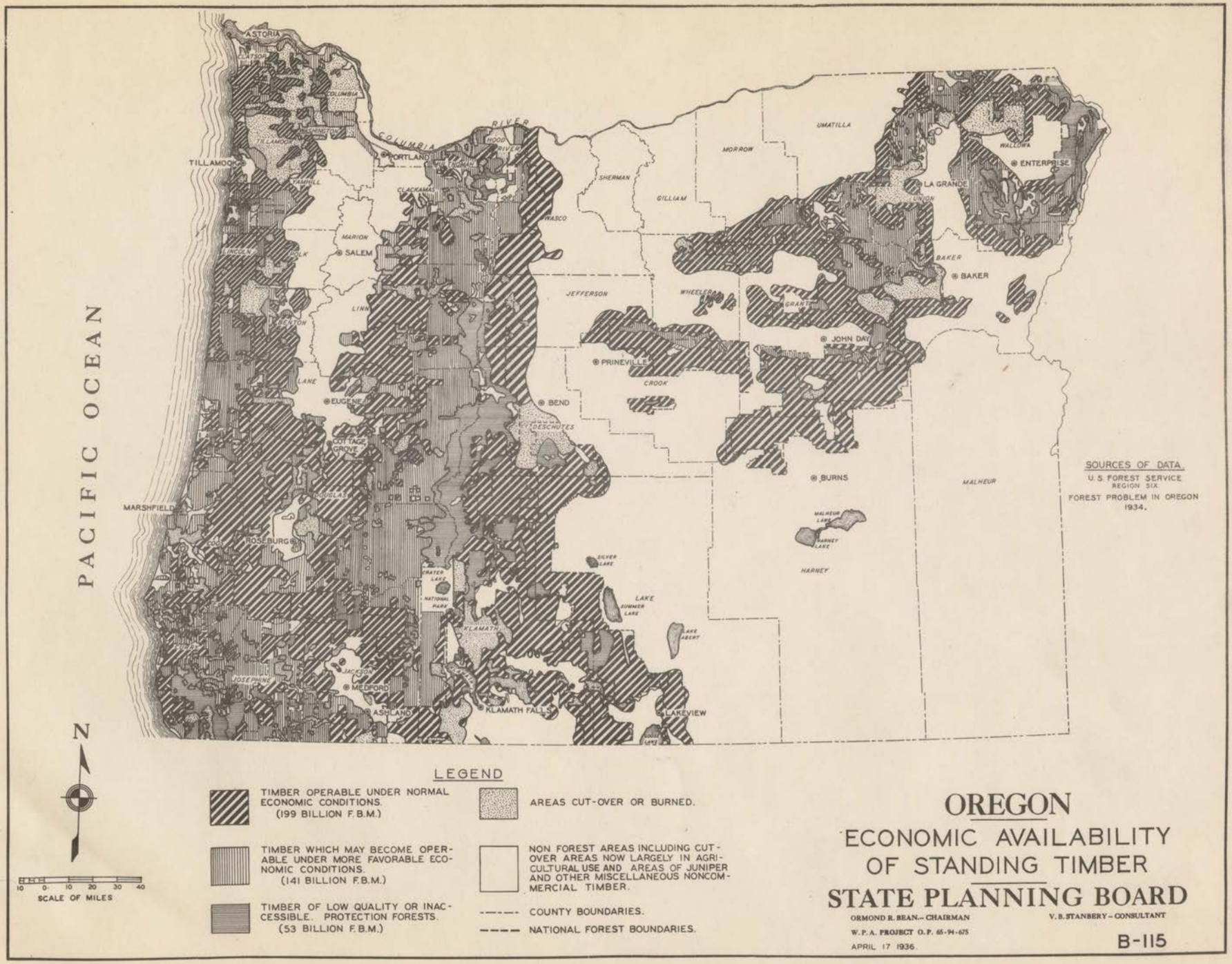
For over twenty years the pressure toward quick liquidation of timber investments has dominated the lumber business in Oregon. Investments in standing timber and carrying charges have relentlessly pressed the industry toward over-production and have resulted in wasteful utilization of the forest resource. This has worked havoc with the sawmill business and with the resource as well.

Counties such as Clatsop and Columbia bear stark evidence of the consequence of rapid liquidation without adequate plans for a permanent industry. Tax delinquencies have reached a startling proportion, and everywhere, as taxable assets are reduced by depletion of the timber stand, the rate of taxation goes up to such a level that land not producing a yearly income cannot economically be retained long in private ownership. The counties

are faced with a very critical problem of complete rehabilitation. A recent study indicates that in nine western counties of Oregon two and a half million acres are tax delinquent. Another one-third million acres have already reverted to these counties through foreclosure for unpaid taxes. Nearly half of the total area of these counties is involved in long time tax delinquency. This means that the owners of lands (principally forest, assessed at abour 34 million dollars) have ceased payment of taxes.

DEPLETION AND GROWTH Oregon's forests consist principally of old growth timber, in which annual growth is largely off-set by losses caused by insects, tree diseases and fire. ~~At the present time~~ In recent years the average annual timber cut amounted to almost twice the current annual growth. With the cutting of the virgin stands and the proper management and protection of the cut-over lands, the annual growth could be increased to three times the present growth. Forest land must be kept productive. To accomplish this there must be efficient protection from fire, insects and disease, and an adequate seed supply to start the new forest.

In order to contribute its legitimate share of the nation's lumber supply and to meet the demand which may reasonably be expected, Oregon might continue its present rate of cutting for the next forty or fifty years. This is almost a national necessity because some such period will elapse before the new-growth forests of the Eastern and Lake States will become usable. Whether this national drain upon Oregon's resources leaves the State in possession of producing forests or in a condition of depletion depends upon what action is taken now. A definite policy of forest management must be formulated and applied cooperatively to bring the greater portion of all private and public timber lands under sustained yield management.



SOURCES OF DATA.
U. S. FOREST SERVICE
REGION SIX.
FOREST PROBLEM IN OREGON
1934.

LEGEND

- TIMBER OPERABLE UNDER NORMAL ECONOMIC CONDITIONS. (199 BILLION F.B.M.)
- TIMBER WHICH MAY BECOME OPERABLE UNDER MORE FAVORABLE ECONOMIC CONDITIONS. (141 BILLION F.B.M.)
- TIMBER OF LOW QUALITY OR INACCESSIBLE. PROTECTION FORESTS. (53 BILLION F.B.M.)
- AREAS CUT-OVER OR BURNED.
- NON FOREST AREAS INCLUDING CUT-OVER AREAS NOW LARGELY IN AGRICULTURAL USE AND AREAS OF JUNIPER AND OTHER MISCELLANEOUS NONCOMMERCIAL TIMBER.
- COUNTY BOUNDARIES.
- NATIONAL FOREST BOUNDARIES.

OREGON
ECONOMIC AVAILABILITY OF STANDING TIMBER
STATE PLANNING BOARD

ORMOND R. BEAN.– CHAIRMAN
V. B. STANBERY – CONSULTANT

W. P. A. PROJECT O. P. 65-94-675
APRIL 17 1936.

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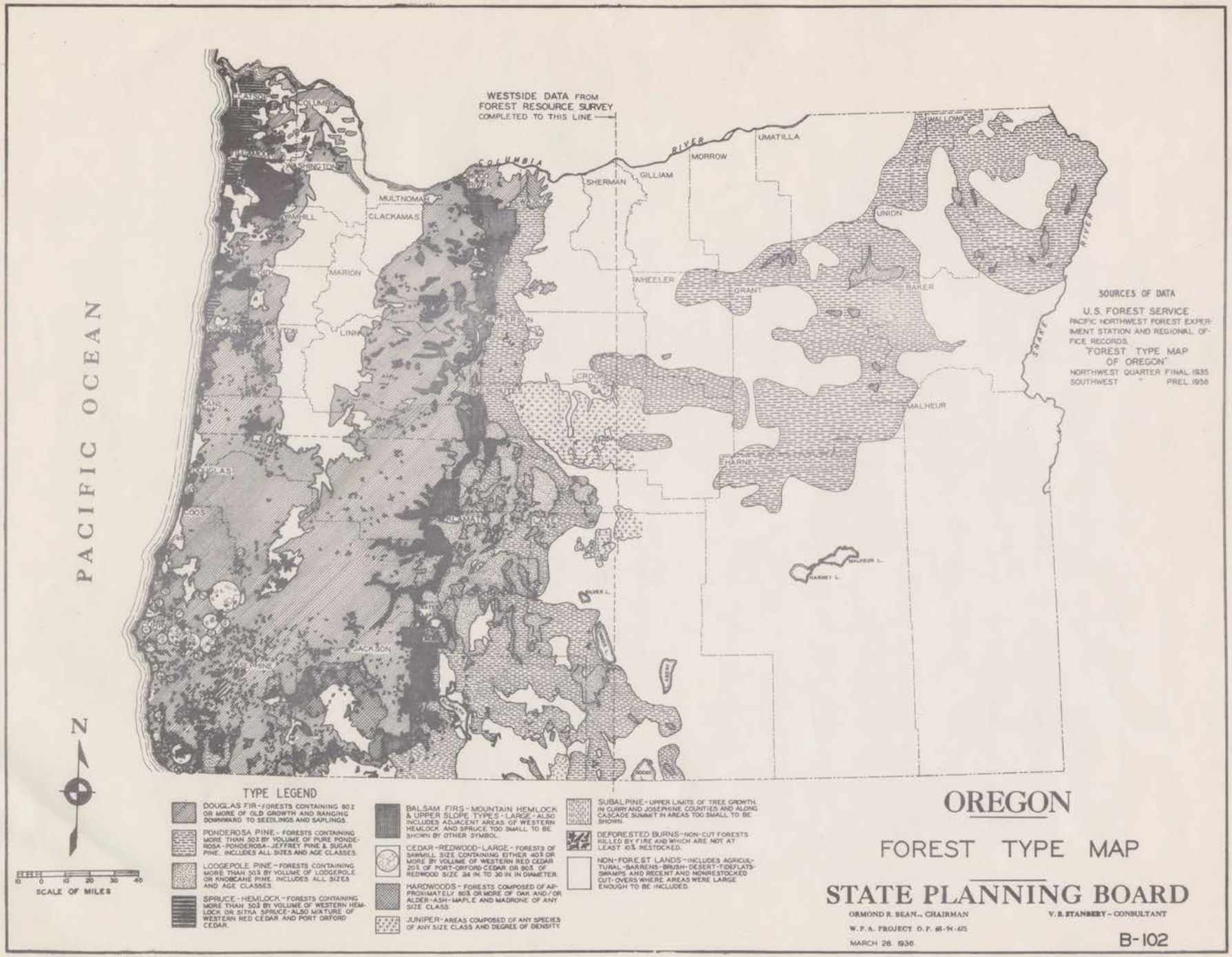

OREGON

FOREST TYPE MAP

STATE PLANNING BOARD

ORMOND R. BEAN., CHAIRMAN

V. B. STANBERY - CONSULTANT

W. P. A. PROJECT O. P. 65-94-675

MARCH 26. 1936

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While there is no impending shortage of timber, still annual depletion is greater than the annual growth. Also, it is likely that many sawmills now operating in the State of Washington will migrate to Oregon in search of a timber supply. Since such a movement is now taking place, it is evident that the 201 billion board feet now economically available in Oregon will not last indefinitely. There is some encouragement in the fact that national forest lands have already been placed on a sustained yield basis, but it must be recognized that large portions of these lands are high and rugged mountain areas, difficult to reach by any means of transportation, and that logging costs will be proportionately high. The future of timber on these lands is uncertain and depends upon the development of wood substitutes, trend of lumber prices, and the competition of other regions and foreign countries. There are also considerations for the need of forest-covered lands in watershed protection, grazing and recreation.

We should not rush into the false idea that all of Oregon's forest area constitutes a commercial timber resource. For example, of the total of 300 billion board feet of standing timber in the Douglas fir region, only 46 percent (139 billion) is considered economically available, based on operating conditions of the period 1925 and 1929. The actual situation isthat Oregon has a total stand, including both east and west side species, of about 397 billion board feet. Of this total stand, 53 billion board feet are classified as inoperable under ordinary economic conditions. This timber is remote, and there is considerable doubt that it will ever be operated because of high logging costs. An additional 143 billion board feet are classified as operable under a more favorable price situation or under conditions in which production costs would be lower than at present.

the remaining 201 billion board feet are all which would be cut under such conditions as existed during the period 1925 — 1929. ~~Tables I and II contain a summary of classified timber volumes and acreage.~~ Table No 1 and No 2 Contain a summary of timber volumes and acreage

TABLE I.

AREAS OF TIMBER LAND and VOLUME OF TIMBER BY OWNERSHIP CLASSES

WESTERN OREGON (DOUGLAS FIR REGION)

Areas in 1,000 acres
Volumes in 1,000,000 ft. b. m. log scale

Ownership Class	Area - Thousand Acres	Volume of Timber Million Ft.B.M. Log Scale basis	Per-cent.
Private	7,284	137,042	46
National Forest	5,365	112,598	37
Revested land grants	2,115	45,874	15
Indian	17	256)	
State	115	742)	2
County & Municipal	398	2,781)	
Other Federal	283	1,499)	
West Side	15,577	300,792	

NOTE: Data for West Side stands obtained from the Resource Survey conducted by the Pacific Northwest Forest Experiment Station.[1]

TABLE II - EASTERN OREGON (PINE REGION)

Private	5,067	42,066	44
National Forest	5,873	45,220	47
Indian	1,165	7,914	8
Other Public	918	1,396	1
Total	13,023	95,596	

NOTE: Data for East Side stands obtained from the Forest Service and Indian Service.

TABLE III - SUMMARY

Ownership Class	Area in thousand Acres	Volume of Timber million ft. B.M. Log Scale Basis	Per-cent.
Private	12,351	170,108	45
National Forest	11,238	157,818	40
Indian	1,182	8,170	2
Other Public	* 3,829	52,292	13
GRAND TOTAL	28,600	397,388	

* Of this figure, about 125,415 acres are state lands and 434,298 acres county and municipal.

NOTE: The statements include both conifers and hardwoods, the latter amounting to about 3 billion board feet.

ECONOMIC DEPENDENCY ON FOREST INDUSTRY

A large portion of our people are dependent on the forest industries directly and indirectly. A recent study based on the best available census data shows that in 1929, the following number of people drew at least the major part of their support from the timber industry: (1)

Workers directly employed	52,000
Their dependents	68,172
Workers in service industries	76,000
Their dependents	100,796
T o t a l	296,948

The people who were dependent directly, or indirectly, upon the timber industry in 1929, comprise nearly a third of Oregon's total population. Over 60% of the State's industrial payroll was paid in 1929 to workers in woods' industries.

These figures are undoubtedly too high for the years of the depression, when many wood-using or converting plants were forced to shut down. With such a large number of people depending on it, any major disturbance in the timber industry inevitably affects employment and gross income. It may be inferred that unemployment cannot be greatly reduced until the timber industry once again supports about as many people as it did in 1929.

An analysis of the principal sources of incomes in Oregon for the year 1929 shows that forest industries account for 44 percent of the income earned by all manufacturing. It was substantially greater thatthe total cash income which accrued to all agricultural industry.

PACIFIC OCEAN

CLIFTON
MARSHLAND
ASTORIA
RAINIER
WARRENTON
BIRKENFELD
DEER ISLAND
ST. HELENS
BONNEVILLE POWER AND NAVIGATION PROJECT
WHEELER
COLUMBIA RIVER
MT. HOOD
THE DALLES
TILLAMOOK
PARKDALE
BRIDAL VEIL
MARMONT
CHERRYVILLE
PORTLAND
NEWBERG
COLTON
SHERIDAN
WAPINITIA
SILVERTON
SALEM
KINZUA
TOLEDO
ALBANY
CORVALLIS
LEBANON
SISTERS
MOHAWK
BEND
EUGENE
CUSHMAN
WALTON
EULA
GARDINER
COTTAGE GROVE
OAKRIDGE
NORTH BEND
MARSHFIELD
COQUILLE
BANDON
KOLER
CHILOQUIN
GRANTS PASS
MODOC POINT
MEDFORD
DRYDEN
KLAMATH FALLS
ASHLAND
PINEHURST
WARD
LAKEVIEW
MILTON
WALLOWA
ISLAND CITY
LAGRANDE
BAKER
WHITNEY
BATESVILLE
VALE
BURNS

N

10 0 10 20 30 40
SCALE OF MILES

SOURCE OF DATA
U.S. FOREST SERVICE
PACIFIC NORTHWEST FOREST EXPERIMENT STATION

LEGEND

- COMBINED CAPACITY OF SEVERAL ADJACENT MILLS 500,000 TO 1,000,000 F.B.M. PER DAY.
- COMBINED CAPACITY OF SEVERAL ADJACENT MILLS 201,000 TO 500,000 F.B.M. PER DAY.
- INDIVIDUAL MILLS CAPACITY OF 201,000 TO 500,000 F.B.M. PER DAY.
- INDIVIDUAL MILLS CAPACITY OF 101,000 TO 200,000 F.B.M. PER DAY.
- INDIVIDUAL MILLS CAPACITY OF 51,000 TO 100,000 F.B.M. PER DAY.
- INDIVIDUAL MILLS CAPACITY OF 21,000 TO 50,000 F.B.M. PER DAY.

OREGON

SAWMILL LOCATIONS
PRINCIPAL MILLS WITH CAPACITY OF 21,000 F.B.M. AND OVER

STATE PLANNING BOARD

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APRIL 1936

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Salaries and wages paid by the forest industries were $59,000,000 as compared with $26,000,000 for agriculture.

SOURCES OF INCOME IN STATE OF OREGON - 1929 (2)

Manufactured products (including lumber)	$411,800,000
Farm production (cash income)	129,300,000
Mineral production	6,900,000
Fish products	2,600,000
Forest industries (3)	181,700,000

. . . . . .

(1) Research Committee, Portland Chamber of Commerce: Economic Dependence of the People of Oregon

(2) Bureau of the Census and U.S. Department of Agriculture.

(3) Included in "Manufactured Products"

PRIVATE INVESTMENTS IN WOOD-USING INDUSTRY (3)

Timber	$ 211,610,000
Logging Investments	39,150,000
Sawmills	65,250,000
Pulp Mills	30,000,000
Paper Mills	23,000,000
Other Wood-using Industries	16,660,000
T o t a l	$385,670,480

(3) Rough estimate based on analysis of large groups of operations by the Forest Service.

Traffic studies made in 1929 indicated that during that year over 50 per cent of all freight car loadings consisted of forest material,- logs, lumber, fuel, etc.

MAJOR PROBLEMS

Private Timber

The privately owned timber lands are of primary importance because they contain the great bulk of the most highly productive

forest lands and the larger portion of the saw timber which has immediate commercial value. The most critical problem which has become the key to all others, is the financial one.

Immense areas of timber were placed under private ownership through ill-advised land policies. It became subject to speculation, over-capitalization, and other value inflations. Taxes have increased, in many cases more rapidly than the stumpage value of the timber. All these factors have pyramided carrying charges and compelled the private owner to liquidate his holdings as rapidly as possible. Even under normal circumstances where a private timber property is bonded or otherwise mortgaged, interest charges, if not in default, are heavy.

The Forest Taxation Inquiry (4) indicated that during the period 1923-1927 interest on representative investments by active operators in Oregon and Washington made up 64% of the total carrying charges. The interest rate used in the calculations was 3%, and the investments were calculated from the original costs by subtracting the total charges for timber depletion on a cost basis. Taxation constitues a charge which must be met year after year. There is still another annual charge for fire protection and similar necessary services. If the forest property is not being operated these charges will probably have to be met by additional borrowing. The rate at which these charges multiply, under the conditions we have now, exceeds the rate at which timber will grow and increase in value. Under such conditions, timber must be liquidated in order to procure working capital for the operation of mills, payment of taxes, and

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(4) United States Department of Agriculture: Forest Taxation in the United States, page 262.

costs of protection, even when liquidation involves a partial or entire write-off of stumpage investment. There are, therefore, powerful economic motives for increasing sawmill capacity above the sustained yield capacity of private lands.

In the Douglas fir region of Oregon, the existing sawmill capacity is far above the average actual production, even beyond the production of the years 1925 to 1929. This excessive capacity is detrimental to the entire industry. Given slightly favorable market conditions, production accelerates immediately to upset the price structure again and create another instability. It is a direct cause of excessive waste. A recent study made by the Forest Service shows that in a normal production year, over 5 billion board feet of material from cord wood to saw log size, is left behind in the logging operations of western Oregon and Washington.

This wasted material is equivalent to more than 20 per cent of what is taken to the mill. The amount wasted per acre is greater than the original stands in some other parts of the United States. This debris constitutes a serious fire problem for several years. In many places, recurring slash fires have not only destroyed the young trees but they have also exhausted the humus from the soil, thereby retarding future tree growth.

APPROACHES TO THE PROBLEMS

Two procedures for correcting this trend are available. The first would attempt to establish economic conditions favorable to private ownership of the timber required for sustained yield management. This would include provision for cheaper credit than is now available; forest taxes which are adapted to the manner in which income is obtained from forest properties; and additional assistance from the public in providing adequate protection, not only from fire, but also from insects and disease.

Such measures would go far toward facilitating private ownership of the timber which is required to practice sustained yield, but there are numerous areas of timber land, forming part of logical sustained yield units, which private enterprise cannot own, either because such areas are in some form of permanent public ownership, or because they are of poor quality, or remote, or are denuded and will not produce commercial timber for many years.

In view of this, and in order to stabilize ownership of such lands, the public should acquire timber lands which cannot be owned by private enterprise, but which are needed to round out and consolidate sustained yield units.

An essential accompaniment to these two lines of attack upon the problems of timber liquidation and sustained yield, is authority for public agencies charged with administration of public timber to enter into contractual relationships with private timber owners for the purposes of integrating public timber with private timber, insuring uniform policies for management of both, and assuring good forest practices and full pro-

tection to both the public as a whole and the private owner as an individual. At present, neither the State of Oregon, nor the Federal Government can enter into the necessary long-time contract with private owners. Therefore, proposals have been made that Congress authorize the Secretary of Agriculture to sell inter-related national forest timber at full appraisal price without competitive bid to operators who enter into contractual relationships, agreeing, in return for assurance of continuing supplies of national forest timber -

1. To integrate their properties with related national forest timber to produce sustained yield on both; and
2. To adopt conservative practices on their own lands.

It is also necessary for the State to provide similar authority with respect to State-owned timber.

Such arrangements once made would be invaluable in establishing sustained yield, in retarding over-expansion of milling capacity, and in effecting good forest practices.

Forest Credits The financial problem, which is necessarily the key to any proposal that private forests be played on a sustained yield basis, has become increasingly difficult in these latter years. Many timber owners, in order to put their properties on a sustained yield basis, require credit because they will have to borrow money to purchase timber required to round out logical sustained yield units. This credit must be available at rates commensurate with the ability of forests to produce income over the period for which loans are obtained. Since the period of transition between outright liquidation and general

sustained yield management will of necessity be lengthy, the period for which loans will be required must be lengthy also. Private investors and banking houses, however, do not provide the inexpensive long-term credit which is necessary, and, in consequence, a better source of credit for financing sustained yield is needed.

The Fletcher Bill (not passed in May 1936) was introduced in the Senate in July 1935 in order to provide such credit. This Bill would establish a Federal Forest Credit Bank to function within the framework of the present Farm Credit Administration. The original capital of this bank would be $10,000,000 in Class A stock, which would be purchased by the United States. Class B stock would be issued and borrowers would be obliged to subscribe to this to the extent of 5% of their loans. During a period of ten years after enactment, the bank could, with approval of the Secretary of the Treasury, issue and have outstanding up to, but not more than, $200,000,000 in bonds, but in any case not more than the total assets of the bank. The bank would be authorized to make amply secured loans for not more than 30 years. All such loans would be contingent upon the borrower's practicing sustained yield, and upon his compliance with State fire laws.

Although the Federal Government would vitilize this bank by subscribing to the Class A stock, and subsequently would supervise its bond issues and other activities, the provisions of the Fletcher Bill should be distinguished from forthright Federal credit. The Bank would be a cooperative enterprise between the Federal Government and private

individuals or corporations, especially timber owners and operators whose properties are on a sustained yield basis. The Bill provides a central credit organization for organizing private credit to provide the cheap long-term credit which is needed to establish sustained yield management. Much of the private credit would be provided by the lumber industry itself.

This problem of forest finances leads to a number of very acute questions. Because forests grow slowly and the crop cycle covers a period of from forty to one hundred fifty years or more, the business of growing trees can never sustain compound interest or even a high rate of simple interest. Nowhere in the United States are large amounts of private capital being invested in denuded and non-productive lands for the express purpose of growing forests. In consequence, only the most productive lands can remain ~~stable~~ stable under private ownership, while all the less productive lands will probably go into permanent public ownership. At present, public ownership of highly productive but cut-over and denuded forest land is rapidly increasing through tax delinquency, but these reversions are to a type of public ownership that is unstable.

FOREST TAXATION It is generally recognized that the present system of taxation, as applied to timber lands, is detrimental to conservative forest management and to the handling of lands pn a sustained yield basis. The statement made in the report of the Federal Forest Taxation Inquiry that there are at least three phases of this

problem is directly applicable to the Forest situation. Any improvement in the taxation situation, as related to timber, will involve - -

1. Reduction in the heavy cost of local government that is borne by districts where forests predominate in the tax base;

2. Improvement in the assessment and collection of the property tax;

3. Such modification of the property tax as needed to adapt it to the peculiarities of the forest investment

In Oregon where forests form a large proportion of the tax base in half the counties (Table ~~II~~ IV) such modifications of the existing systems are of vital concern to the forest owner and tax gathering agency alike.

The problem of forest taxation is much too complicated to be given detailed analysis here, but some general observations may be set forth:

1. The present practice of taxing forests just as other property is taxed is a definite reason for adopting the "cut out and get out" policy. This brings economic and social dislocation to the local communities which have been dependent on the forest industry. The tax system now in use makes the financing of sustained yield management extremely difficult.

2. As a rule, the actual taxes upon remaining taxpayers increases with the diminishing timber resource of a particular taxing district, and this thereby accelerates the rate of depletion.

3. The uncertainty of taxes is an important influence making for unstable private ownership.

4. The interspersion of agricultural communities throughout the distinctly forest areas raises the costs of public service out of due proportion, and the cost of these public services must be paid from taxes levied against timber. Tax reforms should be accompanied by a program of land classification and zoning, which would control some of these costs of local public service and prevent gerrymandering of the taxing districts.

5. An increase of public ownership will further complicate the problem of providing current revenue for the support of local government. Some workable plan should be devised to insure a more equitable current contribution to local tax revenues from the public agencies which own and administer forest lands.

TABLE IV.

FORESTS IN THE TAX BASE OF THE COUNTIES OF OREGON 1928 (1)

County	Assessed Value			Ratio of forests to rural real estate	Ratio of forests to total tax base
	Forests (2)	Rural real estate (3)	All Property		
	1,000 dollars	1,000 dollars	1,000 dollars	Per-cent.	Per-cent.
Baker	4,326	11,554	19,677	37	22
Benton	1,300	7,185	12,839	18	10
Clackamas	7,191	16,608	28,477	43	25
Clatsop	14,942	16,497	28,023	91	53
Columbia	6,351	11,550	16,101	55	39
Coos	10,012	14,859	25,845	67	39
Crook	2,853	4,448	5,593	64	51
Curry	3,097	4,862	5,868	64	53
Deschutes	2,735	4,992	8,780	55	31
Douglas	9,765	18,094	26,461	54	37
Gilliam	1,244	7,594	10,149	16	12
Grant	5,029	6,578	8,225	76	61
Harney	2,830	6,862	9,296	41	30
Hood River	979	5,238	7,687	19	13
Jackson	7,344	15,507	27,344	47	26
Jefferson	2,633	4,507	5,347	58	49
Josephine	1,903	3,613	6,438	53	30
Klamath	11,030	17,625	28,349	63	39
Lake	7,701	10,667	13,650	72	56
Lane	10,170	19,766	39,537	51	26
Lincoln	7,386	8,514	10,937	87	68
Linn	10,426	19,402	25,986	54	40
Malheur	1,795	6,039	9,062	30	20
Marion	2,500	22,631	41,839	11	6
Morrow	400	7,979	10,724	5	4
Multnomah	613	29,115	326,330	2	-
Polk	3,260	9,124	12,544	36	26
Sherman	546	9,035	10,648	6	5
Tillamook	18,473	21,700	26,067	85	71
Umatilla	800	32,055	43,416	2	2
Union	2,589	10,827	18,647	24	14
Wallowa	2,483	6,914	10,607	36	23
Wasco	2,518	9,005	15,382	28	16
Washington	7,003	19,267	24,027	36	29
Wheeler	3,361	4,539	6,231	74	54
Yamhill	3,382	14,220	19,897	24	17

(1) U.S. Department of Agriculture: Forest Taxation in the United States, page 218.
(2) Includes grazing lands.
(3) Includes forests.

6. The present trend toward complete liquida tion of private timber holdings, will, if allowed to run its course, deplete tax bases seriously and leave many counties as distressed as Columbia and Clatsop counties are at present.

FIRE PROTECTION The third important element in the carrying charges of forest lands is that of fire protection. The annual loss from fire on private and state forest lands is 1.81 percent. of the area. With adequate protection it should be possible to reduce fire losses to about 0.15 percent. This cannot be done, however, without a more adequate fund for fire protection, and here again it seems clea rly in the public interest that the contribution of private owners should be supplemented by additional public funds. Fires caused by forest owners comprise a small proportion of the total fire risk and, accordingly, the public should assume responsibility for part of the costs of a more adequate fire protection plan. The following table shows the number of fires from different causes in the Counties of Oregon:

TABLE V.

TABLE OF FIRES BY CAUSES - 1935 (1)

Areas under jurisdiction of State Forester

	Light-ning	Incend-iary	Camp-ers	Smok-ers	Brush Brn'g	Slash-ing	Log-ging	Rail-road	Misc-l'ns	Total
Baker	7	-	-	14	-	-	3	-	-	24
Benton	-	4	-	2	2	1	1	2	-	12
Clackamas	1	20	1	12	16	5	3	-	2	60
Clatsop	1	1	8	12	8	-	3	-	3	36
Columbia	-	8	2	5	5	-	2	3	3	28
Coos	-	47	17	11	10	-	6	3	6	100
Crook	7	-	-	1	-	-	1	-	-	9
Curry	-	6	2	9	3	-	-	-	2	22
Deschutes	19	-	7	9	1	-	-	-	2	38
Douglas	27	108	9	34	6	1	2	1	8	196
Grant	15	-	1	15	-	-	1	-	2	34
Harney	10	-	1	-	-	-	-	-	-	11
Hood River	4	-	1	3	-	-	-	-	6	14
Jackson	66	17	1	40	1	7	1	3	14	150
Jefferson	1	-	1	1	-	3	-	-	-	6
Josephine	20	12	-	29	3	5	3	1	9	82
Klamath	66	9	17	55	9	-	5	5	35	201
Lake	25	-	5	25	-	-	1	-	4	60
Lane	3	31	4	3	9	7	10	-	7	74
Lincoln	-	8	9	2	2	1	-	-	3	25
Linn	17	8	10	8	7	-	5	2	4	61
Marion	-	-	-	3	3	-	3	-	1	10
Morrow	5	-	2	-	-	-	-	-	1	8
Multnomah	-	-	1	7	4	2	-	-	1	15
Polk	-	5	2	2	-	3	-	1	2	15
Tillamook	-	-	6	3	7	4	-	1	-	21
Umatilla	8	-	1	7	1	-	1	-	1	19
Union	11	1	4	12	1	-	-	5	5	39
Wallowa	9	-	6	10	1	-	2	-	1	29
Washington	-	1	2	10	16	-	5	-	5	39
Wheeler	22	-	1	18	-	-	-	-	1	42
Wasco	4	-	1	4	1	-	-	-	-	10
Yamhill	-	1	1	5	3	-	6	-	1	17
T o t a l s	348	287	123	371	119	39	64	27	129	1,507

(1) From the State Forester's Annual Report - 1935.

The Federal government recognized this responsibility when the Clark-McNary law was passed in 1924. This law authorized an annual appropriation of $2,500,000 to assist State and private agencies in fire protection and provided that the Federal government could match fire protection expenditures by the State and recognized private agencies, dollar for dollar. It was, of course, necessary to develop a federal policy as a guide for the distribution of the Clarke-McNary funds, so it was assumed that the protection costs should be borne on the so-called 50-25-25 basis, wherein the private timber owner would contribute 50 per cent. of the total cost and the balance would be divided equally between the State and Federal Governments.

This law has been an important factor, contributing to the development of Oregon's State and private fire protection systems; but in order to meet the protective requirements of properly managed forests, both the basic law and the working thereof require revision.

Congress has never appropriated as much money as the law authorizes, so that Federal contribution has never matched the sum of State and private expenditures. Also, since the average annual burn is much too large and since many other states are expanding their forest fire protection and making larger demands on Clarke-McNary funds, the original authorization is too small to meet all requirements. Therefore, requirements with respect to public responsibility are

1. An increase in the authorization from two and one-half million to five million dollars; and

2. Increase in appropriations to the full amount authorized.

On the 50-25-25 basis, the States' contribution to fire protection should equal that of the Federal government. The state now levies against Forest lands a special tax which is used for fire protection purposes. This tax need not be paid if the owner belongs to a protective association, or will protect his own land; but in any case, the costs are paid by timber owners alone. In view of the large number of fires which are set by the general public (Table ~~III~~ IV) and in view of the 50-25-25 basis, the State's contribution should come from the general tax fund. In actual practice, the State has never appripriated as much money for fire protection as has been contributed by the Federal government. When it is considered that most man-caused fires are of local origin, i.e. they are set by residents of the State rather than by non-residents, the State's responsibility for matching the Federal contribution from general tax receipts, becomes very plain. In order to meet this responsibility, the State would have to approximately double the size of appropriations made the last few years.

There is another reason which would justify public interest in protecting forests from fire and in contributing to protection costs. In 1933 half the timber in Tillamook County burned, Portland and the nearby territory lost about ten billion feet of timber which would have been available to the Portland industrial area for milling. The fire cost the people of Portland millions of dollars. Damage by controllable fire can be reduced to a minimum by increased protection.

PORT ORFORD CEDAR SITUATION

The world's supply of Port Orford cedar is 1,140,000,000 board feet and 92 percent. is located in Coos and Curry Counties. The remainder is in Douglas and Josephine Counties, and there is a little in northern California. 69% is in private ownership, and the remainder is on public land.

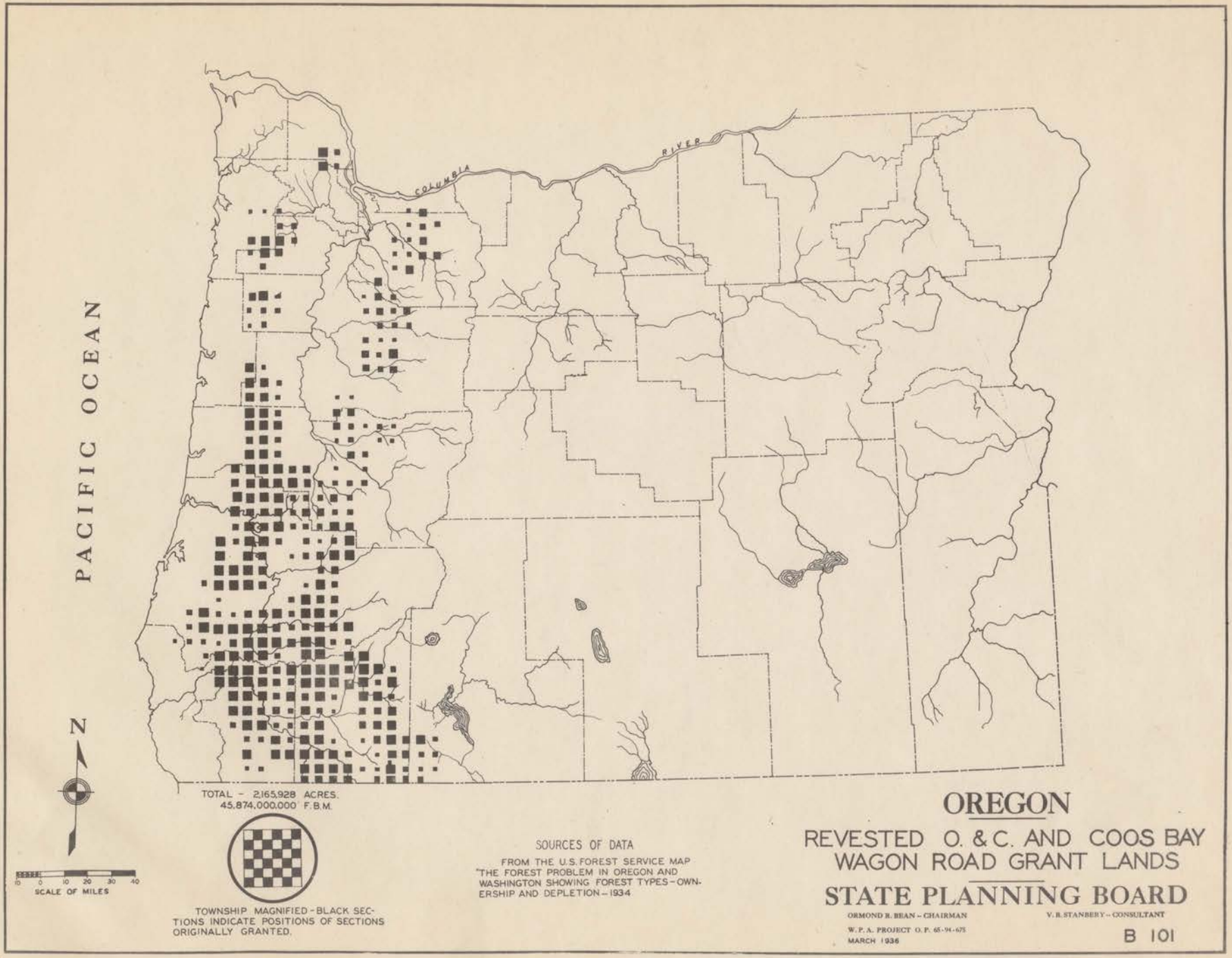
This valuable state resource is being exploited on a liquidation basis. About eleven per cent. of the people in Coos and Curry Counties are employed in this industry which represents a total capital investment of seven million dollars. Some plan of sustained yield should be worked out for this species.

TIMBER OF THE REVESTED OREGON AND CALIFORNIA AND COOS BAY WAGON ROAD GRANT LANDS

At the time the original grants were cancelled and title revested in the government, these grant lands included an area of 2,467,139 acres. The lands are located in the Douglas fir region west of the Cascade summit in Oregon, extending the full length of the state north and south with a concentration in the southern Oregon counties. The original grant to the transportation companies was composed of the alternate odd numbered sections within the limits of the grant. Before the grant was cancelled, practically all of the lands of agricultural value, and large acreages of the more valuable timber lands, had been sold by the transportation companies, leaving the remaining lands somewhat scattered. Some 640,075 acres are located within the boundaries of existing National Forests; the balance is intermingled with privately owned lands for the most part reasonably adjacent to existing National Forests.

The peculiar nature of this problem is quickly seen by a glance at Map No. _____. This map truly represents the total area and the approximate location, but it was necessary to generalize the checkerboard pattern location of sections in order to avoid the impression of a dotted map.

The acreage remaining in the grant is chiefly timber land and carries a stand estimated at from 34 to 45 billion feet of timber of merchantable


PACIFIC OCEAN
COLUMBIA
RIVER
N
0 0 10 20 30 40
SCALE OF MILES
TOTAL - 2,165,928 ACRES.
45,874,000,000 F.B.M.
TOWNSHIP MAGNIFIED - BLACK SECTIONS INDICATE POSITIONS OF SECTIONS ORIGINALLY GRANTED.
SOURCES OF DATA
FROM THE U.S. FOREST SERVICE MAP "THE FOREST PROBLEM IN OREGON AND WASHINGTON SHOWING FOREST TYPES - OWNERSHIP AND DEPLETION - 1934
OREGON
REVESTED O. & C. AND COOS BAY WAGON ROAD GRANT LANDS
STATE PLANNING BOARD
ORMOND R. BEAN - CHAIRMAN
V. R. STANBERY - CONSULTANT
W. P. A. PROJECT O. P. 65-94-675
MARCH 1936
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size. Excluding other public lands, such as National Forests and Indian Reservations, it is the largest tract under one control in the State.

This property is under the jurisdiction of the Department of the Interior and is being disposed of under the terms of the Chamberlain-Ferris law, as modified by the Stanfield Bill. This law provides that the Counties and the State of Oregon are to receive 50% of the moneys obtained from the sale of these lands, the reclamation fund to receive 40%, and 10% to go to the Federal Treasury, presumably to cover the cost of administration. The disposition policy established by this law is one of outright liquidation with no provision for cutting in accordance with well recognized and desirable forest practice, and management on a sustained yield basis. The timber is sold on competitive bids. Policy governing the disposition of this timber is directly comparable with that which private owners are forced to follow by reason of the economic conditions resulting from the excessive quantities of stumpage held in private ownership. Directly contradictory policies govern the O&C land, as compared with intermingled and adjacent National Forest lands.

The Chamberlain-Ferris Act provides that every 40-acre sub-division carrying less than 300,000 board feet of timber, either prior to or after the merchantable timber is removed, shall be classified as agricultural land. Inaccessible, rugged terrain and steep mountain sides are classified as agricultural land subject to homestead entry if they happen to have a stand of timber less than 7,000 board feet per acre. As of June, 1931, 205,418 acres of this so-called agricultural land had been patented, 79,091 acres were covered by pending entries, and 771,526 acres were vacant and subject to entry.. During the depression many uninformed and inexperienc-

ed individuals have attempted to carve out homesteads and eke out an existence on this so-called agricultural land. These scattered settlers are without road or school facilities in many cases and on account of their inability to earn a living from this essentially unagricultural land, have increased the relief rolls in many counties, becoming a serious problem. Fortunately, about a year ago, as a result of efforts of the land policies section, the Resettlement Administration and other land and general planning agencies, these lands were withdrawn from further homestead entry, pending some change in policy. Prior to this withdrawal the governmental policy encouraging settlement on these lands was the direct antithesis of the marginal land purchase policy recently initiated by the government.

Under provisions of legislation covering these lands, and in connection with their administration, the Federal Government has appropriated approximately $7,000,000 to reimburse the transportation companies and the counties for losses suffered when the lands were revested in the United States. In addition, the Government has spent about $75,000 per annum to cover fire protection cost and additional sums annually for current administrative expense.

In order to bring O&C and Coos Bay wagon road grant lands under systematic forest management, they should be placed under a sustained yield management policy, and their administration coordinated with that of adjacent National Forest lands. The present agricultural classification should be abolished.

COUNTY FOREST LANDS

Cut-over lands are rapidly moving into county ownership through foreclosure for tax delinquency. In nine western Oregon counties two and one-half million acres of forest lands are tax delinquent. About 350,000 acres in these counties have already been foreclosed for unpaid taxes. This process of transfer promises to be accelerated in the future since, under present conditions, there is little incentive for private owners to hold land after timber has been removed. Map No. _____ gives an indication of the extent of existing cut-over and burned areas within the entire state. Unless some definite changes are made, these ever-growing areas constitute our potential county-owned lands.

The problems here involved are extremely difficult. Preventive measures, such as the tax reform discussed above, are necessary. The Reforestation Act of 1929 provides that cut-over lands or other lands not bearing merchantable timber, may be specially classified as "reforestation lands". On lands so classified an annual specific tax called the "forest fee" is imposed at the rate of four cents per acre in Eastern Oregon, and five cents per acre in Western Oregon. Before any "forest crop" may be cut from such lands, a declaration of value must be filed with the State Board of Forestry and a yield tax of twelve and one-half percent of the unit value as fixed by the State Board of Forestry, paid to the proper tax collection authority.

Lands already in county ownership, or hopelessly delinquent, should be classified for land use. It is a completely mistaken policy which forces unsuitable lands into agricultural use for the sake of replacing them on the tax roll. The only result which can follow is recurring delinquency, high cost of local governmental service to poverty stricken communities, and a repetition of the ever-vicious circle. No county is equipped to administer

forest lands nor to provide adequate fire protection. It is, therefore, recommended that a law be passed authorizing the state to acquire these lands from the counties by transfer, without charge, at the request of the State Forest Board. The lands should then be blocked into state forests which could be efficiently managed.

The State of Washington has such a law and is acquiring about 300,000 acres this year to be managed for the benefit of the counties.

STATE LANDS The greater part of Oregon's grant lands were sold to private owners years ago. Within recent years, the remaining unsurveyed grant lands situated within the National Forests were consolidated by means of exchanges with the Federal Government to form a State forest of about 70,000 acres. An additional 80,000 acres remains in scattered tracts.

The State, however, could well acquire and manage additional state forests. Large areas of cut-over land on the way to county ownership via tax delinquency, should pass into the stable ownership necessary for sustained yield management. Large areas having immature second growth, threatened with premature liquidation, should also be in stable ownership ~~and~~, moreover, in ownership which does not need to liquidate immediately. In addition, there are bodies of first or second rank timber which private enterprise cannot own and hold, for which county ownership is illogical and which are remote from Federal forest lands. For such lands, State ownership is logical, and the State should adopt a vigorous policy for acquiring and consolidating State forests. Many ~~acres~~ areas which could and should become State forests are highly productive, and when once organized and managed conser-

vatively, would yield to the States and Counties a permanent revenue. Several methods for building up State forests are available.

Legal provision has been made for acquiring additional lands by gift, exchange or purchase. It is to be expected that there will be considerable transfer of county-owned tax-foreclosed lands to the state as time goes on. Thus far the appropriations for the support of the state forest have been too small to carry on any acquisition and inadequate for protection needs also. It is hoped, however, that the Fulmer Act will provide opportunities for the increase of state forest holdings. Under this act, the Federal government is authorized to purchase lands for the states for state forests. The state would assume responsibility for the administration of the lands as soon as acquisition is made, but the actual title would be vested in the Federal government until it has been reimbursed for expenditures made. Fifty percent. of the proceeds of timber sold would be used to repay the Federal government.

So far there has been little cutting on the State forest land because the timber is principally small second growth, but the legislature of the State of Oregon should declare it to be the policy of the State to encourage the practice of sustained yield forest management on all forestry lands within the state, and authorize the State Board of Forestry to enter into agreements with other agencies to promote the purposes of the policy.

INDIAN LANDS Indian Lands are either allotted or undivided tribal lands. In either case there is a heavy pressure to liquidate the timber values. If these lands are to continue to provide a base of support for the Indians, it is highly important that the resource

shall not be impaired or destroyed. The principle of sustained yield has already been recognized and in some cases is being satisfactorily observed. In general, cutting practices are good, and fire protection is provided. The only thing greatly needed is authority to enter into cooperative agreements with other ownerships for the working out of the unit schemes mentioned above.

NATIONAL FORESTS

The National Forests in Oregon comprise about 11,238,000 acres. This area is administered by the Forest Service of the Department of Agriculture. It is the established policy that the lands shall be managed according to principles of sustained yield and multiple use.

Because the National Forests have been aided by reasonably adequate Federal appropriations, their problem of protection is not nearly so acute as that of other ownerships. The established policies protect them from destructive liquidation and their forest practice regulations guarantee that cutting operations will not injure the productive capacity of the lands.

The chief needs are for authority to revise methods of sale of timber, in order that cooperative agreements may be signed for the integration of privately owned tracts with national forest areas for sustained yield management. More adequate appropriations are required to combat certain tree-destroying insects and diseases. Insects destroy more timber in the pine region alone than fire destroys in the entire state. Control of these pests is requisite to profitable management of ponderosa pine, but control is expensive if infestations are permitted to become epidemic.

FOREST PROGRAM A program of public acquisition which would include large areas of cut-over land, second-growth stands, and mature stands, is necessary to facilitate sustained yield management, to meet certain scenic and re-creational needs, to effect some control of production, and for watershed protection. Tracts acquired should be selected on the basis of their suitability for forming practicable sustained yield units, either separately or in conjunction with present public and private forest areas. An extensive program of public acquisition would necessitate making provision for assistance with local taxes.

It is desirable for stable private enterprise to own a maximum of forest lands. However, since the resources of private enterprise are limited, it cannot own lands which are either infertile or remote. As a general guide, the most accessible and productive lands now in private ownership are those most likely to remain in private ownership; but in any case stable private ownership should be encouraged and assisted in every possible way.

It is also desirable for the State to own a maximum of forest lands. there are, however, remote or infertile areas which even the State, since its resources also are limited, cannot own. For such lands, the Federal government is the only stable owner.

In view of this situation and in view of the necessity for stabilizing ownership of forest lands and securing sustained yield, a program for adjustment of forest land ownership in Oregon should be based upon the following policies:

1. Public acquisition of forest lands should be an instrument to prompte sustained yield forest management.

2. Private ownership should own a maximum of forest lands.

3. The State should acquire all forest land which it can manage and which is unsuitable for private ownership.

4. The Federal government should acquire all forest lands which are unsuitable for either private or State ownership.

5/ County ownership of forest lands is illogical when the requirements of sustained yield management are considered, since counties do not have resources or organization to own and administer forest properties.

6. Ownership adjustments should proceed upon the basis of well considered plans in order to secure cooperative action between all interested agencies, and integration of all ownerships in workable sustained yield units.

PROTECTION

Fire Problem in Oregon

Approximately 28,000,000 acres of forest land in Oregon require protection from fire. Approximately 11,000,000 acres are in the National Forests, 15,500,000 acres are protected by the State Forester, and the remaining 1,500,000 acres are in Reservations and National Parks. While important and material progress has been made in protecting the valuable timber resources of the state from fire, the problem is far from solved. During the nine-year period from 1925 to 1933, inclusive, there has been an annual loss in Oregon of 24,600 acres within the National Forests and 179,637 acres on private land and State lands. The annual loss of timber is 44 million feet on National Forests and 335* million feet on State and private lands. One, and 0.81 percent. of State and privately owned forest areas, and 0.17 percent. of National Forest areas are burned over annually.

*Exclusive of the Tillamook Burn in 1933. If this burn is included, the average for the same period is 1,382 million board feet annually.

A reasonable objective for rate of annual losses as determined by careful study is estimated at 0.15 percent. of the forest areas for the state as a whole. Comparing this figure with recent losses makes it obvious that energetic steps are necessary to improve the fire protection situation. On State and private lands the annual loss is twelve times the objective.

The present cost of protection is 4.5 cents per acre, and the amount needed for adequate protection is 9.7 cents per acre.

INCREASE IN PROTECTION FACILITIES Carefully prepared plans covering the National Forests have been worked out indicating in detail the transportation, communication and detection and other facilities required to attain the established objective in fire control work. Similar plans have been or are being developed for State and private forest areas. These plans indicate that the following costs are necessary for the development and maintenance of additional protection facilities:

State and Private Lands

Capital investment, about	$11,000,000
Annual operating costs	1,100,000

Federal Lands

Capital investment	8,000,000
Annual operating costs	1,500,000

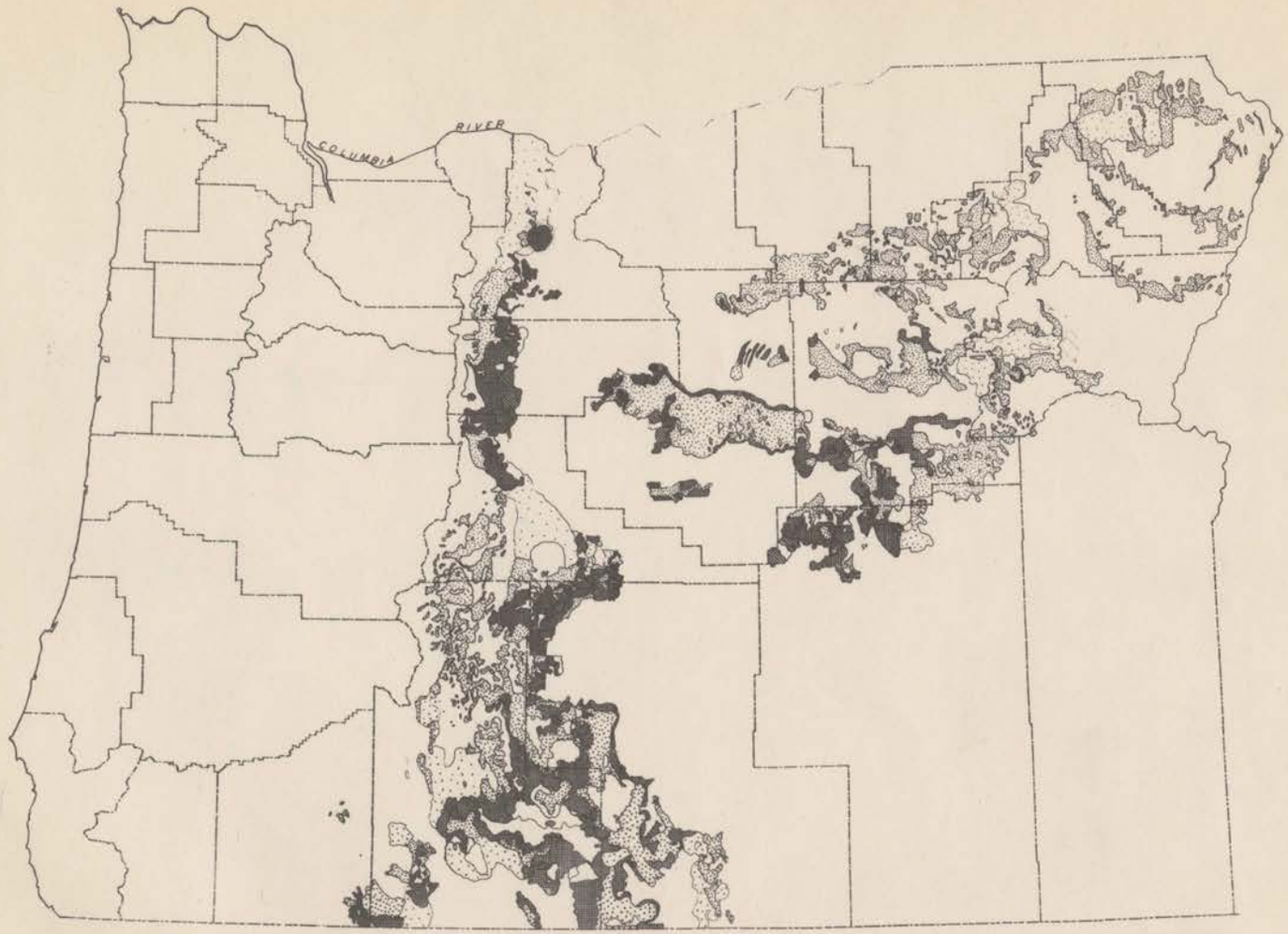
In addition to the above it is estimated that hazard reduction work, including construction of fire breaks, the cleaning up of debris, and falling snags along roads, will require an additional expenditure estimated at $3,000,000 for National Forests and $2,500,000 for State and private lands.

POSSIBLE MEANS OF FINANCING NECESSARY FACILITIES — During the past few years the Civilian Conservation Corps has proved extremely valuable by providing needed improvements such as truck trails, telephone lines, lookout houses and by providing trained crews immediately available for fire suppression. This organization shouls be continued as long as unemployment relief of this kind is necessary. Other Federal and State appropriations for unemployment relief have played an important part in providing necessary facilities for protection whenever available.

FIRE RESEARCH NEEDS — Effective forest fire control depends upon proper technique. Research in fire protection should continue studies looking to make effective technique in prevention, detection and suppression of fires, especially in the following fields:

1. Fire behavior;
2. Fire protection planning;
3. Tools and equipment;
4. Tactics and training;
5. Meteorology as it affects fire behavior, hazards, etc.;
6. Reduction of fire hazards, especially on logging operations;
7. Studies of fire damage.

INSECTS AND DISEASES — The damage caused by insects and diseases is a major problem. During the years 1932-1934, inclusive, pine beetles killed 2,800,000,000 feet of Ponderosa pine. In the fir region, the hemlock looper, hemlock saw fly and other insects threaten periodic outbreaks. The hemlock looper alone has killed 500,000,000 board feet of fir and hemlock in a single epidemic.



PACIFIC OCEAN

N

10 0 10 20 30 40
SCALE OF MILES

—LEGEND—

NORMAL INFESTATION—
LESS THAN 50 TREES PER SECTION

LIGHT TO MODERATE EPIDEMIC—
FROM 50-200 TREES KILLED PER SECTION

HEAVY EPIDEMIC—
OVER 200 TREES KILLED PER SECTION

SOURCES OF DATA
FROM 1935 SURVEY

U.S. BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
U.S. FOREST SERVICE—U.S. INDIAN SERVICE

OREGON

PINE FOREST AREAS INFESTED BY WESTERN PINE BEETLE

STATE PLANNING BOARD

ORMOND R. BEAN – CHAIRMAN V. B. STANBERY – CONSULTANT

W. P. A. PROJECT O. P. 65-94-675
APRIL 16, 1936

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PROTECTION FROM INSECTS and TREE DISEASES

The enormous annual loss caused by insects and the attrition by disease demonstrate that protection from insec ts and tree diseases is as important as protection from fire. An annual Federal authorization and appropriation of one million dollars should be provided for preventing and combatting forest insects and tree diseases. The same principle of cooperation as is now effective in connection with fire control through the Clarke-McNary Act should govern.

On account of injury to the tax base and destruction of potential payrolls, the State of Oregon should be amply justified in cooperating financially with private owners and the Federal government in controlling forest insects and tree diseases.

Protecting Oregon's forests from insect and tree diseases requires:

1. Adequate research to improve methods of control;
2. A system of insect and disease detection to avoid introduction of foreign pests, and to discover outbreaks of native pests while still in an early stage.
3. Prompt control of outbreaks when they do occur.

OBJECTIVES OF FOREST ADMINISTRATION

A. Multiple Use Management

Timber products are not the only values derived from forest lands. Some other major values are inherent in properly protected watersheds, in forage for both wild life and domestic stock, and in recreation. Multiple use

management seeks to correlate the use of the several resources in a forest in such ways that utilization of one will not interfere with the utilization of the others. The purpose is to insure that land resources will provide a maximum of industrial and social benefit.

A policy of exclusive use requires the dedication of land to one purpose and involves the loss to our civilization of other uses which might be developed through correlation and integration. Sound public economy demands development of harmonized uses, controlled and regulated in the interest of all.

Under multiple use management, lumbering, and grazing by domestic stock are harmonized, not only with each other, but also with preservation of game, soil conservation, watershed protection and recreational use.

It is very important to Oregon that these uses be harmonized and that the resources be perpetuated. To irrigated areas adequate protection of water sources in mountain watersheds is vital and in such watersheds the forest is a powerful preventive of accelerated erosion. A lucrative stock industry with investments of more than 20 million dollars which supports a large share of the population living east of the Cascade Mountains, depends largely for summer range upon forage which grows in the forests. The recreational resources of Oregon's forests are unsurpassed, and the fact is becoming better known, not only to residents, but to travellers and tourists also.

The contribution which forest resources, other than timber, can make to the general public welfare, is unquestionably so great that strenuous efforts to coordinate use of all resources are amply justified.

SUSTAINED YIELD MANAGEMENT The particular objects to be sought through sustained yield management are, annual crops of timber which will approximately balance the annual growth. This would enable the forests to maintain a permanent industry with regular employment and a consistent supply of purchasing power feeding into the state and local communities. The basic conception suggests the creation of industrial communities economically connected to various wood conversion factories with a stable population permanently supported by the continuous timber output of a given forest area. Permanent homes would supplant transitory camps and the amenities for an attractive and wholesome community life would be provided. These are the broad cosial objectives.

The physical arrangements for sustained yield management call for the establishment of what have come to be known as "sustained yield units". These are made up of (1) the properties containing the timber stand which is economically available to some convenient sawmill center; (2) the manufacturing plants which convert the raw timber into manufactured product; (3) the community in which the people live who manage the forests and man the factories. The manufacturing plants need not adjoin the forest nor be owned by the same interests. The crucial point is that there must be a smooth-working and continuous integration of all the necessary factors.

Before sustained yield units can be successfully established there must be these conditions:

1. Stable ownership of forest land;
2. Uniform and equitable distribution of the carrying charges on the privately owned non-supporting forest properties as are included in the unit;
3. Cooperative agreements which will integrate the public and private timber stands in order to procure sustained yield management of both. This will promote economic stability in dependent communities and populations.

Numerous potential yield units are prevented being so managed because of the multiplicity of land owners whose diverse interests prevent their adopting a logical and permanent policy suitable for the whole unit. This condition is further aggravated by certain forms of corporate ownership arrangement which are fundamentally unsuited for the permanent and stable management of a business. These conditions, coupled with unbearable carrying charges of interest and taxes result in recurring shifts of ownership which are incompatible with sustained yield schemes.

Under present economic conditions it is not practicable for a lumber producing company to carry the large quantity of stumpage required to place any good-sized operation on a sustained yield basis. Under the present system the carrying of privately owned stumpage for more than twelve to thirty years is generally recognized as a losing game. One solution of the ownership problem is that in connection with every sustained yield operation the public shall own all the timber. Private capital is then confined to the development and operation of the logging and milling facilities. Given the necessary funds, this is a direct solution to the problem in those areas where sufficient quantities of timber are available to permit sustained yield operations being established. Nationalization of the timber resources, however, is not in conformity with present American ideals. A more desirable solution of the problem is for private owners to retain title to the maximum amount of stumpage which can be carried under the economic conditions existing from time to time. The public could carry the balance of the total amount required. It is to be anticipated that the creation of more favorable economic conditions by such measures as deferred timber tax laws, forest credits, and similar changes, will make it possible for private owners in the more favorable locations to retain sufficient lands to operate on a sustained yield basis.

SUMMARY OF NEEDED LEGISLATION

STATE 1. Deferred timber tax,- separates land and timber tax base, with an annual tax on land and a tax on timber at the time it is cut.

2. Law authorizing the zoning and regulation of the use of land so that non-agricultural forest land may be given a stable status.

3. Law providing for the transfer of county tax delinquent, non-agricultural forest lands to the state on demand of the State Board of Forestry to be managed as state forests in trust for the counties with provision for an equitable division of future receipts between the state and the counties.

4. An enabling act to allow the State Board of Forestry to enter into agreements for the purchase, management and development of State Forests, under the terms of the Fulmer Act (Public No. 395-74th Congress).

5. Sustained Yield law,- providing for formation of sustained yield units and valuation of same for taxation purposes, and providing for State putting its land into cooperative units.

6. Increased appropriations for fire protection, insect and disease control.

7. Appropriations for purchase and management of land for State Forests.

8. Providing additional funds for State Board of Forestry to employ technical foresters and necessary clerical assistance for promoting forest management, and for research.

FEDERAL Of numerous provisions which should be made by the Federal government in order to solve forestry problems, the following are contained in the so-called McNary-Doxey Bill, which was introduced in the Senate by Senator McNary, of Oregon (S-4507) and in the House by Doxey of Mississippi (H.R. 12,446).

1. Sustained Yield law - providing for Secretary of Agriculture to enter into sustained yield cooperative agreements.

2. Increase Federal allotments for assistance in protection from fire, insects and disease.

3. Federal acquisition of merchantable timber to promote sustained yield policy

4. Provision for financial assistance because of tax dependency of the Counties on acquired lands.

5. Continued appropriation to finish Forest Survey and keep it up to date.

6. Provide authority for United States to accept donations of forest lands subject to reservations of merchantable timber or minerals or other rights, and to pay for accrued taxes not exceeding the value of the land, exclusive of interest and penalties, and to pay costs of recording deeds and other expenses incident to title.

7. Authorize exchanges under present exchange laws to apply within six miles outside of the exterior boundaries of the National Forests.

8. Provision for cooperation with owners of Forest lands in management of forests and utilization of products, including aid in standardizing methods of forest practice.

9. Provision for assistance to States in controlling erosion and floods governed by the principles of the present Clarke-McNary law.

10. The Fletcher Bill introduced in the Senate August 14, 1935, and still before Congress, would provide credit at reasonable rates for forest properties being managed on sustained yield basis.

Other Federal legislative needs are as follows:

11. Law providing for application of sustained yield management to non-agricultural federal forest lands included in O & C and Coos Bay Wagon Road grant lands, public domain and Indian lands, in line with practice on National forests.

12. Increase authorizations and allotments for research.

13. Provide for continuance of Civilian Conservation Corps as long as relief need is present.

14. Place all Federal forest land under a policy of forest management which will result in sustained yield.