

A Working Plan for a Community
Forest for Corvallis, Oregon

by

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A Thesis

Presented to the Faculty

of the

School of Forestry

Oregon State College

In Partial Fulfillment

of the Requirements for the Degree

Bachelor of Science

May 1942

Approved:

Professor of Forestry

PURPOSE

This thesis is presented as a collection of basic background material from which action can be taken for the development of a community forest for Corvallis, Oregon. It is understood that a complete coverage of facts necessary for such a development is beyond the scope of this thesis, however it is hoped that further study will be made on points not completely covered in this thesis. For example, other studies might cover an acquisition program or the effect of cutting on run-off.

It is hoped that this thesis serves its purpose.

Lauren F. Godard

May 1942

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ACKNOWLEDGMENTS

Without the advice and aid of various individuals this thesis could not have been written. I wish to thank Dahl Kirkpatrick, formerly supervisor of the Siuslaw National Forest; also Professors C. H. Willison and W. F. McCulloch for their interest and advise on this subject. The Benton County Assessor and Sheriff were very cooperative in furnishing essential information for this thesis.

A WORKING PLAN FOR A COMMUNITY FOREST
FOR CORVALLIS, OREGON

PART I

INTRODUCTION

The cry is timber! It rings through the valleys and over the hills; it races across the windswept plains of the midwest; it whistles about the skyscrapers of the cities, through the mills and down to the shipyards. The call is for saw logs, peeler logs, piling, cordwood, and a host of other items. But let us not forget that to have timber there must be forests; and with forests come wildlife, recreationalists, and a clear cold water supply.

Over two and a quarter centuries ago the little town of Newington, New Hampshire did not forget, and today it has its timber, its wildlife, recreationalists, and its water supply. Only 112 acres were set aside by the town; but within the last fifty years over \$6,000 worth of timber has been sold. ^{5/} It has furnished fuel wood for many public buildings; it has supplied materials for the construction of a library, school, town hall, and church. ^{1/} Even after all these years, the forest has an estimated value of \$5,800. ^{5/}

This is the seed that started the growth of community forests in the United States. Since then the growth has been tremendous. For a conclusive analysis of what such a forest is, the Federal Forest Service has given the

following:

"Community forests are properties owned and operated for such forestry purposes as timber production, water production, recreational opportunities, etc., by a town, city, school district, church, and such youth organizations as Boy Scouts, Girl Scouts, Y.M.C.A. They may be classified locally by numerous titular adjectives. The paramount idea in starting and managing these forests is service to the people who own and operate them!! 9/

On further examination we find that in 1933, over three and one-half million acres from twenty-seven states are in community forests owned by 1800 towns. In several ways, these town forests are comparable to State and National forests, but they differ in their manner of support. Town forests are expected at least to support themselves, and even to contribute to the town coffer. 7/ Such forests are serving as local laboratories to demonstrate the multifarious benefits of forestry. Growing timber, unlike idle land, accumulates in value year by year as does money in the bank. Naturally profit should be the urge behind community forest; such is the case in Europe and most established American forests. There are numerous other reasons why town forests are beneficial; some are well known and some not. Town forests insure more stable community life, provide employment outlets and a profit to the community, thus relieving the tax burden. Such forests provide for community recreation, wildlife protection, and preserve the aesthetic and beautification values of adjacent hillsides. A major benefit for numerous communities is the assurance of a sanitary and protected water supply. Cool water from clear mountain streams and lakes

surrounded by green forests, is an asset that many communities would hate to see lost. Many towns maintain schools, hospitals, and other municipal enterprises as a result of the many or few acres of community forest land. 9/

Professor Holdsworth of Amherst College sums the benefits up in his statement:

"...the real dividends are in the future and the grandest results come with the passing of centuries. We are only beginning something that somebody else will finish after we are dead. Working with trees we envision the future in longer terms than our own brief lives. Town forests are teaching this lesson, by example, to owners of private wood tracts. Town forests are doing more than anything else to imbue the private timber owner of this too-rich nation with the new spirit of conservation." 7/

PRESENT COMMUNITY FORESTS

A big question concerning community forests is:

"Will they pay"? If past results are any indication, the answer is certainly yes. In Vermont, the town of Rutland purchased in 1910, a 4,000 acre forest for \$60,000. In the past five years the forest has paid over \$11,000 interest on the investment.

The little town of Westfield, Massachusetts, in 1919, planted 5,600 acres to red pine. Their height has increased over a foot each year. They have been pruned twelve feet up, thinned and made to produce thousands of cords of firewood each year which pays for the forest upkeep and allows a small profit. Westfield has planned for the future; the plan is to eliminate local taxes with an eventual lumber revenue of \$20,000 a year. 7/

"The city of Concord, New Hampshire retained one-hundred acres of forest land on a poor-farm which it had purchased to relieve pauperism during the period from 1813 to 1827. In 1883 the forest land was valued at \$3000. An additional 400 acres of old farm lands and woodlots were acquired for reservoir protection during the 1870's. About 3000 white pines were planted on open land in 1895 and the trees made an average diameter growth of 15 inches in 31 years. Additional trees were set out later, and a forest nursery was started. In 1913, \$16,000 worth of timber was sold. The city now has 400 acres of forest land around the city reservoir on which it is estimated there are 2,000,000 board feet of merchantable pine worth \$50,000." 5/

Example after example of town forests that pay could be cited from the Northeast. These forests range from 99 acres to 5,000 acres in size, all of which are under capable management and are providing very profitable returns--tangible and intangible.

Europe is dotted with community forests. There it is a common sight to see such forests yielding a net annual return of from five to twenty dollars per acre. Two-thirds of all the forest land in Switzerland is owned by local communities. Towns of France, Norway, Sweden, Bulgaria own over a fifth of the country's forest lands. 7/ Many years were taken to impress European cities with the desirability of town forests. It is hoped that it will not take so long to impress American communities.

However, communal forests that pay are not all located in the East or in Europe. The State Forester's office of Oregon reveals that there are 30,465 acres classified as community forests in Oregon. These 30,465 acres compose 101 different forests. Tillamook county alone has 9,000 acres in communal forests. Benton county

contains 1,080 acres of land so classified.

The State of Oregon recognizes the following as community forest: Property owned and operated for forestry purposes by a town, school, county, various clubs, etc. In Oregon this would include county parks, municipal watersheds, forests set aside for Boy Scout use, 4-H forestry use, recreational areas owned by municipalities but outside the city limits. 4/

The community forest idea is spreading. It is being encouraged and promoted by both Federal and State Forestry departments. They pay both in tangible and intangible returns. Intangible returns are always being received. Tangible returns have been plain in Europe, are being noticed in the East, and soon will come to the many youthful community forests of the West.

PART II

GENERAL CONSIDERATIONS

Lands best suited--

In considering what lands could be used as community forest lands, it would be natural to consider only forest lands. A mixture with agricultural lands will create some difficult problems. In some cases, however, it would be the best policy to include such lands. Cheap, abandoned, tax delinquent land or otherwise waste land is ideal property to acquire as a start for the community forest. Numerous owners are paying taxes for acres of non-producing land. This is poor property for almost

anyone. This same land growing the right kind of trees immediately begins to accumulate in value. In a short number of years it will produce a timber crop that will pay taxes and yield a good profit. ^{6/} These non-productive acres are good community forest lands, but a community that has acres of merchantable green forests has an income source ready for the harvesting. Such a community is fortunate.

Size best suited--

The ideal arrangement for size is for a relatively large area in community ownership. Thus the "equivalent family income may be sufficient to meet the annual family tax bill." There are 149 school forests in Wisconsin and the average size is forty acres. Throughout the country sizes vary from ten to 200,000 acres, although the preferable size is something over 1000 acres. ^{9/} Leo Isaac of the Pacific Northwest Forest and Range Experiment Station states that ten acres of well managed Douglas fir will supply an average farm family with a lifetime of fuel wood. Community forest sizes will vary considerably with local conditions such as available funds, available lands, and community interest and backing.

Methods of acquiring--

When acquiring land, the first lands to be given consideration in many cases are the watershed areas. The basis for many community forests is watershed protection.

^{2/} Land may be acquired in several ways. Some cities

acquire land as gifts from civic minded citizens.

Considerable land is often acquired through tax delinquency. The Pacific Northwest has the highest acreage of tax delinquent land in county ownership than any other section of the country. Surely there is a place to start. Many acres of such land can be acquired merely for the payment of back taxes. Direct purchase is perhaps the most common method of acquiring. The cost of non-productive forest land is generally quite low. ^{9/} The town of Russell, Massachusetts, used the following method to acquire land: the town fathers used money which was supporting farm families on submarginal farms, and placed the families on marginal land. Then they made community forests out of the abandoned farms. ^{7/} It should be remembered, however, that the smaller the initial expense involved in the establishment of a communal forest, the lower will be the carrying charges in later years. ^{9/}

Costs of acquiring--

Costs of acquisition will vary with the locality and conditions. Community forest must pay; therefore it is advisable to keep acquisition costs below actual benefits derived. But money benefits should not be the only benefits considered. Other than these tangible returns, there are the numerous intangible returns that must be considered.

Probable developments of the forest--

With any forest there will probably be a certain

amount of developing that must be done before incomes can be realized. But before any extensive development is done, it will be necessary to obtain and organize a large amount of factual data. Forest conditions, forest types, site quality, growth rates, and maps of various types are among the several records to be acquired. After all this has been organized and a plan has been drawn up, then actual development can commence.

Protection--

A successful community forest must be assured of adequate protection from fire. With the well organized protection association of this State, such a task should not be difficult.

Planting--

Planting is a good method of arousing public interest in the development of the community forest. It is something tangible that many service organizations can take part in. Planting is something that sooner or later will need to be done, so a planting plan for now and for the future should be made.

Thinnings and improvement cuttings--

Quite often forests require thinnings and improvement cuttings to put them into the most productive state. Generally thinnings can be sold as piling, poles, or fuel wood. The cost of the operation can quite often pay its own way.

Permanent improvements--

It will be necessary to plan for future improvements such as roads and trails for protection and recreation use. Some cases may require the construction of buildings. 2/

Markets and income--

Marketing will vary with local conditions. Types of markets will be a big influence on the kind and amount of income. The tangible values derived from a community forest generally fall into three categories: timber values, recreation values, and values as a watershed protection. 5/ Well managed and productive forests may yield from one to four dollars per acre each year from the sale of pulpwood, fuelwood, Christmas trees, poles, piling, sawlogs, etc. 9/ Some town forests draw a tangible income from recreational facilities, picnic grounds, ski trails, and the like. These by-products add much to the forest. But the main objectives of town forests are profitable harvesting of timber products and the protection of reservoirs and watersheds. 7/

Administration--

Efficient management requires the supervision of a trained forester. Some forests are too small to warrant the full-time employment of such an administration. In some cases where water is a product, a specially trained combination forester-water superintendent may be employed. In these cases the already-employed water superintendent

may take over the forester's duties if he be capable. This would require paying no extra salary. At least one all-the-year-around man should be employed. During seasons of heavy use more employees will be required. 2/

PART III

MANAGEMENT PLAN FOR PROPOSED CORVALLIS COMMUNITY FOREST SUMMARY

PURPOSE:

The purposes of this plan are:

1. To bring together all the available data concerning this area that are necessary for forest management.
2. To determine roughly, the amount of cutting that will best carry out the policies necessary for the most favorable forest management.

LOCATION:

From 6 to 12 miles west of Corvallis, Oregon.

AREAS:

Private ownership	18,208	acres
City	2,644	"
County	772	"
State	<u>3,010</u>	"
Total	24,634	"

Permanized
OLD RELIABLE BOND

RA. CONTENT

Type 6 and 7	2,135	acres
" 8	6,525	"
" 9	7,995	"
" 10	2,435	"
" 35, 36, 37	3,960	"
" 29	<u>50</u>	"
Total	23,100	"

ANNUAL CUT:

Average annual cut, 5,024 M board feet for the first 17 years, at the end of which time all overmature oldgrowth and half of the large second growth will be removed.

PROPOSED CORVALLIS COMMUNITY FOREST

LOCATION:

The area that is proposed for the Corvallis community forest lies approximately six miles west of Corvallis, Oregon and about one mile west of Philomath, Oregon, in the heart of the Willamette Valley. It is an area comprising parts of two townships (T 11S and T 12S) lying between state highways numbered 26 and 34 which lead to Newport and Waldport. In the locality of Corvallis, it is known as the "Rock Creek Watershed area" or "Mary's Peak drainage area." Accompanying maps will show the exact location to be T 11 & 12S, R 6 & 7 W, W.M. Certain sections and parts of sections were set aside within this location as a basis for planning. Borders of the proposed area were determined by the size of ownership, forest



P

N

A

E

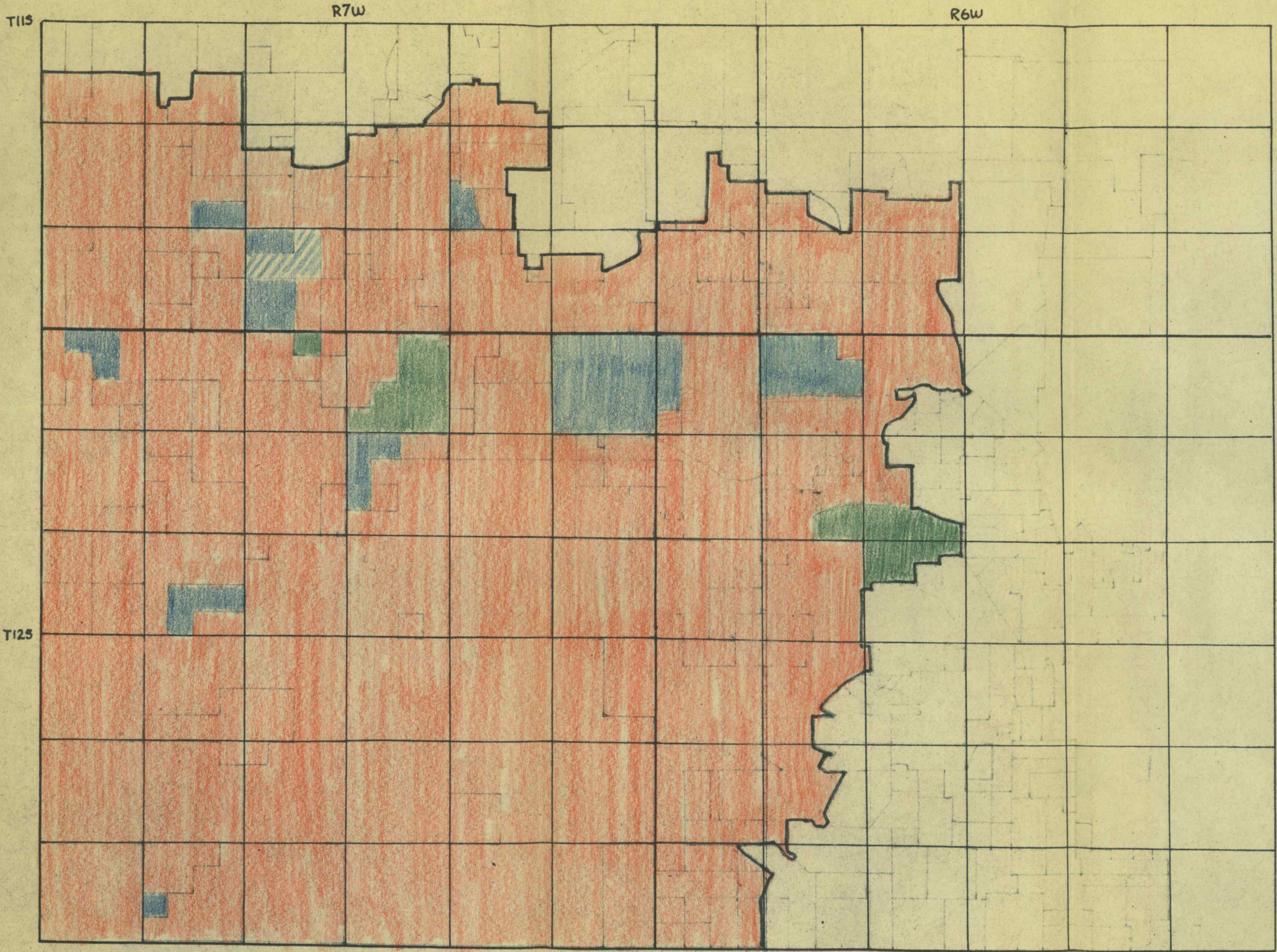
cover limits, and a size in keeping with a logical maximum size. The ownership map will show the boundaries.

PHYSICAL DESCRIPTION:

The topography is typical of that on the eastern slopes and in the foothills of the Coast Range. Elevation varies from approximately 300 feet to 4,097 feet on the top of Mary's Peak, highest point in the Coast Range. Average elevation is from 400 to 1,000 feet. The terrain is not rugged and jagged like the western slopes of the Range, but is more gradual. Percent of slope varies from level to 60 percent. Areas are easily accessible.

Two main creeks, Rock Creek and Woods Creek, with their numerous tributaries, adequately handle all drainage in the area. Rock Creek is the source of domestic water supply for Corvallis and Philomath.

The mean annual temperature for the surrounding area is 55 degrees. Temperatures generally vary from 25 degrees to 100 degrees, the hottest seasons coming in July and August and the coldest in December and January. High seedling survival is hampered by hot summer weather especially on south exposures. Approximately 55 percent of the days are cloudy and 35 percent are clear. Records show that the average annual precipitation is 40 inches. Greatest rains come in November and December when as high as 8 inches per month is reached. July is often without any precipitation. The prevailing wind comes from the west. 8/



**OWNERSHIP
CLASSIFICATION**

S $\frac{1}{2}$ T11S, R6W, R7W;
T12S, R6W, R7W, W.M.

BENTON CO. ORE.

DATA FROM BENTON CO. ASSESSOR

JAN. 1942

SCALE: 1" = 1 MILE

~~NUMBERS REFER TO "MAP NO."~~
~~ON OWNERSHIP LIST.~~

L.F. GODARD
1942

(Excluding Public Lands)

- Local Resident Ownership
(within 10 mile radius)*
- Willamette Valley Ownership*
- Out-of-Valley Ownership*

Nearly 100 percent of the soil is nontillable, suitable for forest production and grazing. The hilly sections are termed as rough and mountainous by government classifiers, too steep and rocky for agricultural purposes. Along the Woods Creek Valley are located several acres of Olympic clay loam and Aiken silty clay loam, both of which are low in agricultural value. The rough mountainous soil is shallow and characterized by the red clay which is gummy in wet weather and hard and crumbly in hot dry weather. The entire area is best suited to timber growing.

ECONOMIC FEATURES:

Within the area proposed as a community forest live approximately 30 farm families. These families have their few acres of grain crops, a band of sheep or goats, and a few cows. Their existence is typical of lonely homesteaders. Roads which must be maintained at public expense are rough and difficult to travel. Only a small percent of the owners have their land under such conditions that it is paying for itself and providing a comfortable living for the owner.

At the foothills is the town of Philomath with a population of 856. This is a steadily growing community with two sawmills which could serve as outlets for timber products of the community forest. The town is built around these mills and the agricultural production of the area. Six miles to the east is the city of Corvallis. Both Philomath and Corvallis depend on the forest area,

proposed as a community forest, for water for domestic consumption. Corvallis has a population of 8,400. It is chiefly a college town, depending on two sawmills, chicken hatcheries, creameries, flourmill, and surrounding agriculture for survival. Numerous farm communities under a population of 100 surround Philomath and Corvallis.

OWNERSHIP:

The ownership from the 1941 Benton county records is shown on the accompanying map. Boundaries of the proposed forest exclude all Federal forest lands. Therefore the following discussion will not include National forest or Oregon-California land grant ownership.

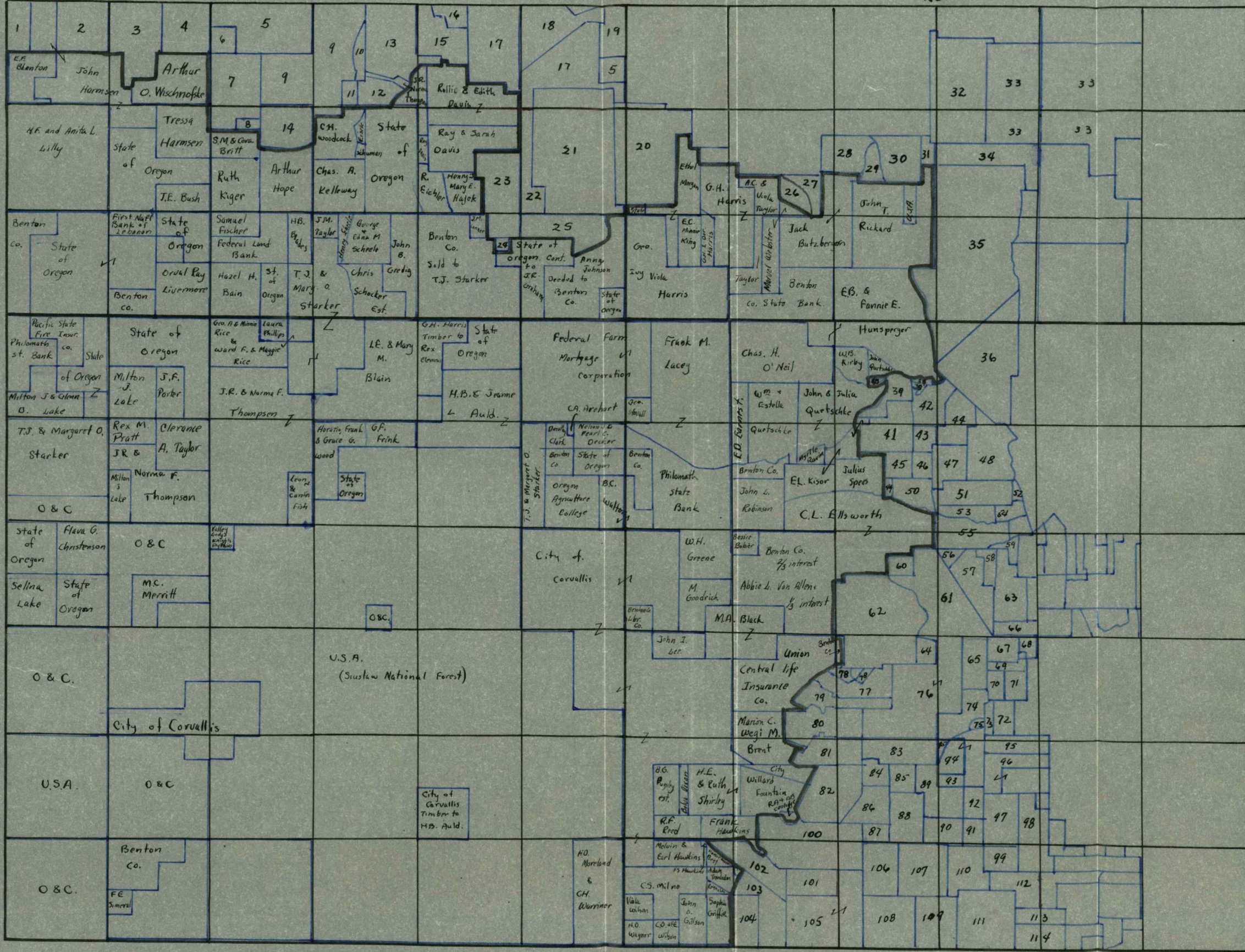
Approximately 87 percent of the acreage is owned by local residents, leaving 6 percent owned by residents of the Willamette Valley and 7 percent out of the Willamette Valley. Local owners are considered as those living in and around Corvallis, Philomath, Blodgett, Wren, etc. "Outside of the Valley" includes some owners from Ohio, Pennsylvania, Washington, Portland, etc.

Of the 24,634 acres included in the community forest boundary, 18,208 acres or 75 percent is privately owned land; 6,427 acres or 25 percent is publicly owned. This publicly owned land can be subdivided into State, County, and Municipal ownership. The State of Oregon owns 3,010 or 12 percent, Benton County owns 772 acres or 3 percent, and the City of Corvallis owns 2,644 acres or 10 percent of the total acreage proposed as a community

T11S

R7W

R6W



**OWNERSHIP
CLASSIFICATION**

**½ T11S, R6W, R7W;
T12S, R6W, R7W, W.M.**

BENTON CO. ORE.

DATA FROM BENTON CO. ASSESSOR

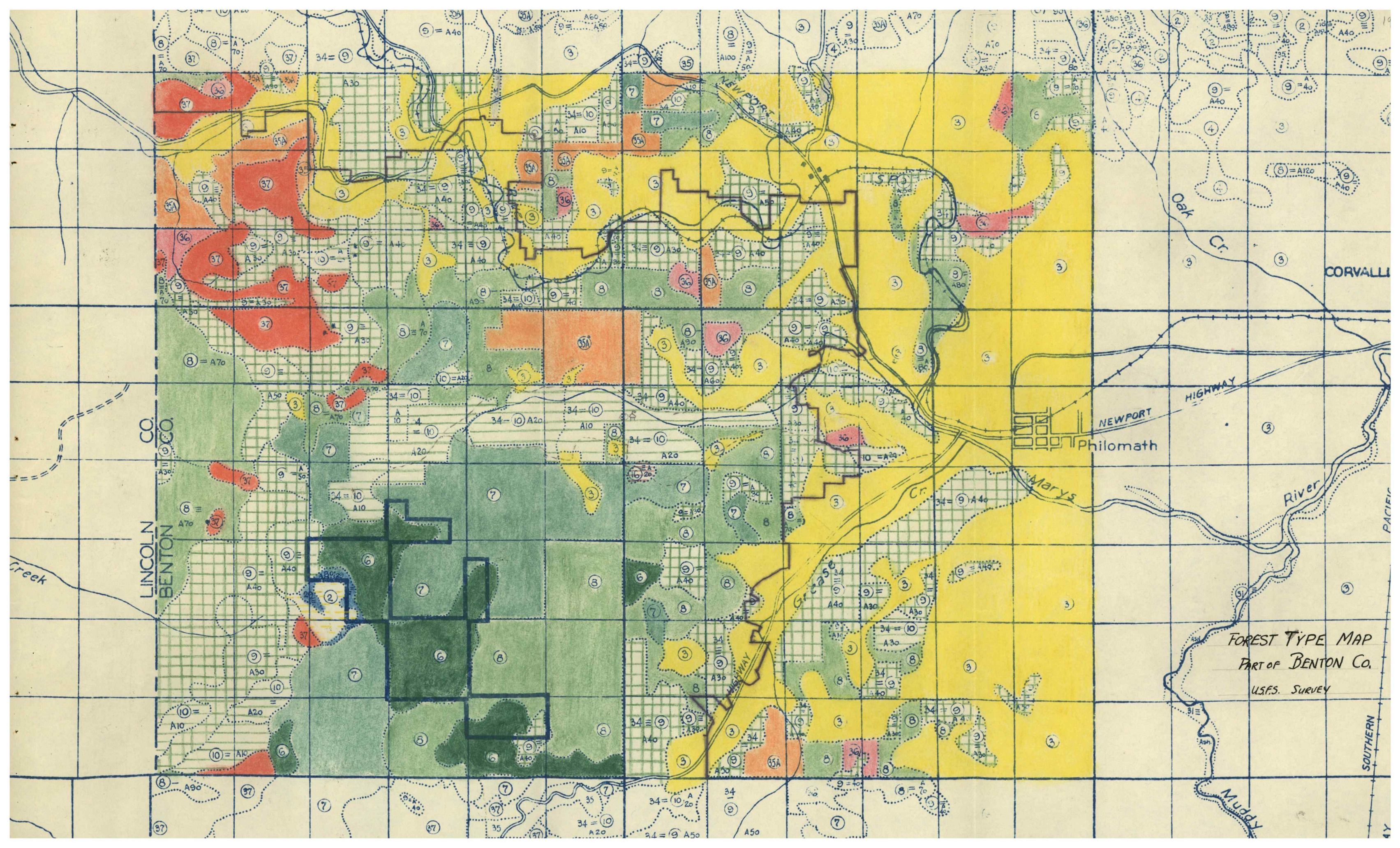
JAN. 1942

SCALE: 1" = 1 MILE

**NUMBERS REFER TO "MAP NO."
ON OWNERSHIP LIST.**

**L.F. GODARD
1942**

T12S



FOREST TYPE MAP
PART OF BENTON CO.
U.S.F.S. SURVEY

Area Included on This Sheet _____

LEGEND AND TYPE DEFINITIONS

Pencil Number ^{1/}	Type Number	Definition
<u>Non-Forest Land Types</u>		
D-353 ^{1/2}	2	Non-forest land other than agricultural ^{2/}
D-353	3	Agricultural: Cultivated, and cleared pastures on operated farms
D-353	3X	Agricultural zone: A large area of agricultural land containing scattered areas of forest land too small to map in place
<u>Woodland Types</u>		
D-352 ^{1/2}	4	Oak-madrone: A forest containing over 60% oaks or madrone
D-324	5 ^{1/2}	Ponderosa pine woodland: Scattered and largely unmerchantable stands of ponderosa pine on unfavorable sites
<u>Timberland Types</u>		
D-354	6	Douglas fir, large old growth: A forest containing over 60% Douglas fir, and over 40" DBH
D-354 ^{1/2}	7	Douglas fir, small old growth: A forest containing over 60% Douglas fir, 20-40" DBH
D-389 C-14	8	Douglas fir, large second growth: A forest containing over 60% Douglas fir, 20-40" DBH
D-389 C-14	9	Douglas fir, small second growth: A forest containing over 60% Douglas fir, 6-20" DBH
D-389 C-14	10	Douglas fir, seedlings and saplings: A forest containing over 60% Douglas fir, 0-6" DBH
C-20	11	Sitka spruce, large: A forest containing over 50% Sitka spruce, and over 24" DBH
C-20	12	Sitka spruce, small: A forest containing over 50% Sitka spruce, 6-24" DBH

C-20	13	Sitka spruce, seedlings and saplings: A forest containing over 50% Sitka spruce, 0-6" DBH
D-323	14	Western hemlock, large: A forest containing over 50% western hemlock, and over 20" DBH
D-323	15	Western hemlock, small: A forest containing over 50% western hemlock, 6-20" DBH
D-323	16	Western hemlock, seedlings and saplings: A forest containing over 50% western hemlock, 0-6" DBH
C-11	17	Western red cedar, large: A forest containing over 40% western red cedar, and over 24" DBH. 17-IC indicates incense cedar type
C-11 D-324	18	Port Orford cedar, large: A forest containing over 20% Port Orford cedar, and over 30" DBH
C-11	19	Cedar, small: A forest containing 40% or more of either western red or Port Orford cedar, and under 24" or 30" DBH respectively
D-324	20	Ponderosa pine, large: A forest containing over 50% ponderosa pine, and over 22" DBH
D-354 ^{1/2} D-324	20A	Sugar pine, large: A forest containing 20% or more of sugar pine, and over 22" DBH. This type mapped only outside the boundaries of national forests
D-324	21	Ponderosa pine, small: A forest containing over 50% ponderosa pine, 12-22" DBH
D-324	22	Ponderosa pine, seedlings, saplings, and poles: A forest containing over 50% ponderosa pine, 0-12" DBH
D-320 ^{1/2}	23	Fir-mountain hemlock, large: A forest containing over 50% of either noble, silver, or Shasta fir and/or mountain hemlock, over 16" DBH
D-320 ^{1/2}	24	Fir-mountain hemlock, small: A forest containing over 50% of either noble, silver, or Shasta fir and/or mountain hemlock, under 16" DBH
D-343	25	Lodgepole pine, large: A forest containing over 50% lodgepole pine, and over 12" DBH
D-343	26	Lodgepole pine, small: A forest containing over 50% lodgepole pine, and under 12" DBH
D-325	27	White fir-larch-Douglas fir, large: A mixed forest of western larch, white fir, Douglas fir, ponderosa pine, or lodgepole pine, over 20" DBH
D-325	28	White fir-larch-Douglas fir, small: A mixed forest of western larch, white fir, Douglas fir, ponderosa pine, or lodgepole pine, under 20" DBH

D-350	29	White fir, large: A forest containing over 50% white fir, and over 20" DBH
D-350	30	White fir, small: A forest containing over 50% white fir, and under 20" DBH
D-352 ^{1/2}	31	Hardwoods: Alder, maple, ash, and/or cottonwood predominating. 31.5 indicates hardwood types of merchantable size
D-323 ^{1/2}	32	Redwood: A forest containing over 80% redwood
C-55	33	Subalpine: A forest at the upper limits of tree growth, usually unmerchantable
D-321	35	Nonrestocked cutovers: "35" signifies clear cut prior to January 1, 1920; "35A" signifies clear cut from January 1, 1920, to December 31, 1929.
D-322	36	Recent cut-overs: Clear cut since January 1930
D-321 ^{1/2}	37	Deforested burns: Any nonrestocked burn, not cut over
D-353	37 3A	Deforested burn: Intentional for agriculture (found extensively in Douglas County, Oregon)
Dots in type color	38	Noncommercial rocky areas

* Occupied farm less than 40 acres

For second growth types under 20" DBH, symbols indicating age and density will also be shown on the map. (The age is shown by 10-year classes and the stocking by bars, either -, =, ≡ .

- (poorly stocked) means the area is from 10 to 39% stocked
- = (medium stocking) means the area is from 40 to 69% stocked
- ≡ (well stocked) means the area is from 70 to 100% stocked

The number 34 does not represent a type but is a prefix number to indicate that the area was cut clean prior to 1930, or cut selectively any time and is now restocking. Whenever the combination symbol 34 - 10, 34 = 9, etc. is used the second number indicates the type.

Therefore, the type designation 34 = 9 A40 means the type is cut-over land containing Douglas fir second growth 6" to 20" DBH, 40 years old and with medium stocking. Or, 9 ≡ 60 would signify an area not cut over, which is now covered with a 60-year old well stocked stand of Douglas fir 6" to 20" DBH.

In certain areas where hardwoods and conifers are mixed, dual types such as 31 10 or 10 31 were mapped. The first number indicates the predominant type. The color for the predominant type should be used for such areas. When type number 37 is followed by a second type number, i.e., 37 7, the second number indicates the type burned over.

^{1/} Official Forest Survey color scheme may be duplicated by using colored pencils designated by number. C refers to Castell pencils; D to Dixon pencils.

^{2/} On national forests, shown as 1 (barrens) and 2 (grass and brush).

forest.

Private ownership seems to be quite stable. Very little land has been deeded over to the County on account of tax delinquency, and at present only a small percentage of owners are lagging in tax payments. Idle land, however, is considerable. Size of private ownership averages about 160 acres.

State land composes mainly deforested burns, non-restocked, with a few scattered ownerships of second growth Douglas fir.

County ownership is chiefly small scattered ownerships which have in the past been deeded over to the County. Both State and County land to date is lying idle, producing no immediate returns and in some cases no future return.

The 2,644 acres owned by the City is chiefly a protection of the Corvallis-Philomath water supply. However, approximately 640 acres include other timberland and the grassland on Mary's Peak, which is an excellent recreational area. The City already owns an area large enough to pay handsome dividends once put under a producing state.

FOREST DESCRIPTION:

Cover type--. The accompanying United States Forest Service forest type map will serve as a good guide to the timber cover on the area. Within the working circle are scattered areas of agricultural land. The boundary lines extend to and include some agricultural land. This land is used chiefly for grazing and some grain crops. Small

patches of garden produce can be grown.

Types numbered 35, 35A, 36, and 37 are areas which were at one time timber and have been logged or burned off, and stocking has not succeeded. The present ground cover is mainly grassland and brushland--vine maple, rose, poison oak, etc. There is approximately 4,000 acres of this non-stocking cutover and burned area.

Two thousand four hundred and thirty five acres of Douglas fir seedlings and saplings up to 6 inches dbh. are included in the working circle. This area is 40 to 69 percent stocked and averages about 20 years old. Over much of this type the Douglas fir is forcing its way up through a ground cover of vine maple and similar brush cover.

The most acreage of the working circle (8,000 acres) is composed of small second growth Douglas fir from 6 inches to 20 inches dbh. The volume of these stands of 40 year old second growth averages approximately 10,000 b.f. per acre. Total volume of this type would then equal 80,000,000 b.f. These stands are scattered throughout the working circle, interspersed with agricultural lands and larger sized timber. Areas are about 70 percent stocked.

Large second growth Douglas fir averages approximately 46,000 per acre. There are 6,525 acres of this second growth which is 60 percent stocked. Age of this second growth varies from 70 years to 150 years.

The small acreage of old growth timber is of high volume but of low value. Two hundred fifty acres of type

TABLE I
ACREAGES BY TIMBER TYPES

<u>Type No.</u>	<u>Acres</u>	<u>Sub-totals</u>
6	255	
7	1880	
		2135
8	3515	
8-90	620	
8=70	1860	
8≡70	530	
		6525
9-40	160	
9=40	1555	
9≡40	185	
9=50	100	
9≡50	650	
9=30	665	
9≡30	1315	
34 9-60	240	
34 9=40	985	
34 9≡40	920	
34 9-40	195	
34 9=30	415	
34 9≡30	610	
		7995
10=20	320	
10≡20	35	
10=10	95	
34 10-20	395	
34 10=20	1300	
34 10=10	290	
		2435
36	375	
35	55	
35A	1745	
37	1785	
		3960
29≡160	15	
29≡80	35	
		50

6 and 1,880 acres of type 7 average 80,000 per acre but are nearly 50 percent defective. An excessive amount of *Trametes pini* runs through the stand.

The entire working circle is characterized by even-aged trees in numerous uneven aged stands - favorable to progressive cutting. Douglas fir is the only merchantable species.

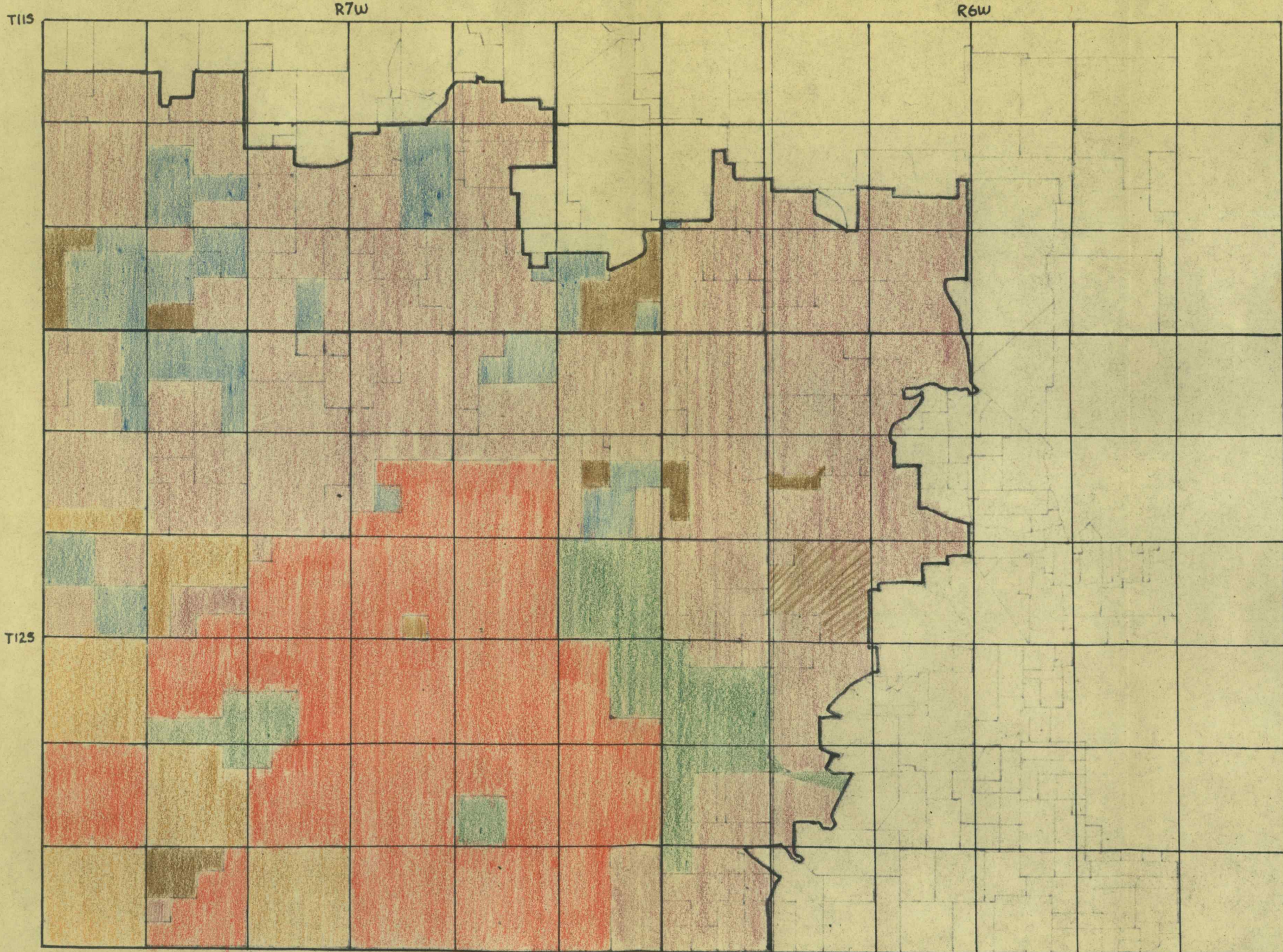
Protection--. At the present forest protection is cared for by the U. S. Forest Service and there is no reason why it could not be continued in this manner. Protection cost will depend on the number of acres to be protected.

CURRENT LAND VALUATION:

Benton County has assessed the value of all the private land. The averaged value of the land is \$6.10 per acre. This is derived from the total assessed value of \$111,490 for the 18,208 acres of privately owned land. The annual tax return on this private property amounts to \$613.20. County, City, and Federal land is tax exempt.*

Probable purchasable and non-purchasable land is determinable to some degree by studying the residential location of the owner. For example: a owner living out of the State would be more apt to sell his property sooner and at a more reasonable price than owners living on their property. See accompanying map for these classifications.

* See Table V in Appendix. (Table of assessed values, acre and tax returns by ownerships).



**OWNERSHIP
CLASSIFICATION**

S½ T11S, R6W, R7W;
T12S, R6W, R7W, W.M.

BENTON CO. ORE.

DATA FROM BENTON CO. ASSESSOR

JAN. 1942

SCALE: 1" = 1 MILE

~~NUMBERS REFER TO "MAP NO."
ON OWNERSHIP LIST.~~

L.F. GODARD
1942

- PRIVATE OWNERS
- CITY
- COUNTY
- STATE
- FEDERAL
- NATIONAL FOREST
- O.&C.

Determining average annual cut--

Calculations of annual cut are of necessity crude. Cruise data were insufficient to insure a high degree of accuracy. Data used for type 9 will prove within 90 percent of accurate, types 6 and 7 within 70 percent of accurate, 95 percent of the time. Data for type 8 cannot be relied upon.

TABLE II

<u>Type</u>	<u>Area</u>	<u>Volume Scribner Rule Per Acre</u>	<u>Total</u>
6 and 7	2135	40 M	85,400 M
8	6525	46 M	300,150 M
9	7995	10 M	79,950 M
10	2435		
35,36,37	3960		
29	50		
	<u>23,100</u>		

One hundred and twenty years was chosen as rotation age because this is the age at which the mean annual growth is the highest for site class IV and site index 120. The stand in general was averaged to be 70 percent stocked.

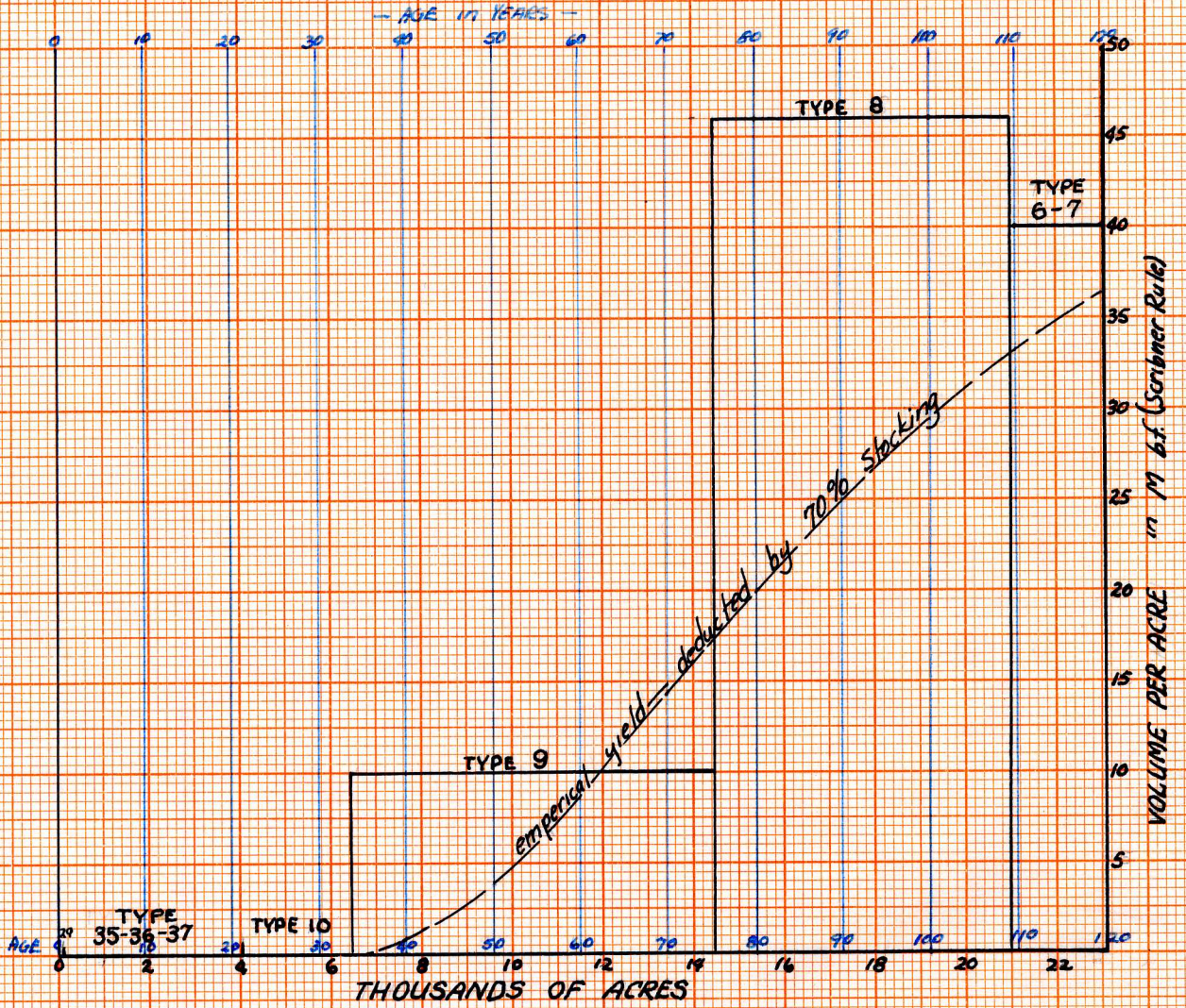
Determining lag--

TABLE III

<u>Type</u>	<u>Years to Curve</u>	<u>Area</u>	<u>Product</u>
8	28	6525	182,700
9	7	7995	55,965
10	6	2435	14,610
35,36,37	11	3960	43,560
		<u>20,915</u>	<u>180,495</u> ÷ 20,915 = 9

Regulatory period = normal time of cutting overmature minus the lag. Therefore 26 minus 9 equals 17 years regulatory period. Average annual cut equals overmature divided by the

TABLE IV
 GROWING STOCK CHART
 COMMUNITY FOREST AREA



regulatory period. Hence 85,400 M divided by 17 equals 5,024 M board feet annual cut. This average annual cut is for a regulatory period of 17 years. After this cut of old growth and a portion of the large second growth is completed, a new calculation of annual cut must be made to care for the change in the stand composition. The next annual cut following the 17 year regulatory period will approximate 10,166 M per acre.

This first annual cut has been determined on the basis of a clear cutting operation where the operator can cut through the old growth timber in 17 years. This was done to allow a rough idea of what returns could be expected from the area under one method of cutting. Actually, however, due to the necessity of watershed protection, a different method of cutting will be necessary. A light selection cut or group selection or a regulated clear cut could be made. Further study would be necessary to determine the method of cutting which would give optimum watershed protection.

Under favorable market conditions poles, piling, or fuel wood would yield a profit to the City. The present war prices for piling make such a timber product quite valuable. The numerous partially defective overmature trees may make a favorable percentage of cut on the watershed when removed as fuel timber.

It is necessary therefore that an intensive study of market conditions, transportation facilities, and timber

resources be made before any cutting is started. It is desired to obtain the highest net return and yet reserve the essentials necessary for a good watershed.

Recreation

At present recreational developments are few. The major one is at the top of Mary's Peak--a development by the Forest Service. Hiking, hunting, and fishing are done to some extent outside the restricted watershed area. There are numerous places along Rock Creek below the intake dam and along Woods Creek and the Ridge road where camping and picnicking spots would be welcome.

Administration

Administration should be done by competent individuals who have had technical training in forest management and watershed management. The City now employs a staff to manage the watershed area. If the superintendent has not had some technical forestry, he would probably not be capable of managing the timber production. There would be no additional costs involved to employ a man trained in both phases of management. Then the administrative staff organization could remain as now organized.

Improvements

Improvements must be developed as needed and as money is available. Present roads seem adequate to handle the protection of the forest.

PART IV
RECOMMENDATIONS

I recommend that the City of Corvallis collaborate with the City Water Commission, Benton County and the State of Oregon in securing such publicly owned lands as possible for inclusion into the proposed Corvallis Community Forest. Some arrangements might be made with the County for title to their land by paying back taxes. After this, I recommend that the City purchase, as funds become available, any purchasable private land which will serve to block up the public land already owned by the City, or which will prove profitable to the City at some time.

After sufficient area is owned by the City, the City should formulate a short time management plan. This will give a working basis from which to obtain a tangible profit from the area. Careful and accurate planning must be done to protect the watershed and yet obtain highest possible returns from the area. Cutting should not be eliminated from the watershed.

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Continued

APPENDIX

OLD FRENCH BOND

CONTENTS

TABLE V
DETAILS OF LAND OWNERSHIP

Owner	Sec.	T. S	R. W	Address	Acreage	Assessed Value	Annual Tax Return
Arehart, C. A.	12	12	7	Corvallis, Ore.	2.5	10.00	0.06
Auld, H.B. & Jeanne L.	2	12	7	"	400	3200.00	17.60
Bain, Hazel H.	33	11	7	Long Beach, Calif.	160	1200	6.60
Benton Co. Lbr. Co.	18	12	6	Philomath, Ore.	45	400	2.20
Best, Homer	32	12	6	"	29.3	490	2.69
Black, M. A.	17	12	6	"	220.0	1000	5.50
Blades, H. B.	33	11	7	-	80	640	3.52
Blain, L.E. & Mary M.	3	12	7	W.E. Marks, 1st Nat'l Bk., Albany	452	1000	5.50
Blanton, E. F.	19	11	7	Blodgett, Ore.	112.9	950	5.23
Bobier, Bessie	17	12	6	Philomath, Ore.	40	120	.66
Brent, Marion C., Weg: M.	22	12	6	"	169	2440	13.42
Britt, S. M. & Cora	28	11	17	-	80	146	8.03
Bush, J. E.	29	11	7	Dresden, Ohio	80	240	1.30
Butzbergern, Jack	28	11	6	-	350	3300	18.15
Christenson, Flava G.	18	12	7	Blodgett, Ore.	160	800	4.40
Clark, Dorothy	12	12	7	-	37.5	120	.66
Connar, J. M.	35	11	7	Corvallis, Ore.	34	350	1.92
Coolidge, R.A. & A.B.	29	12	6	-	18.7	400	2.20
City of Corvallis	18	12	6	Corvallis, Ore.	284	-	-
"	19	12	6	"	871.39	-	-
"	13	12	7	"	644.51	-	-
"	20	12	7	"	444	-	-
"	24	12	7	"	400	-	-
Davis, Ray & Sarah	26	11	7	Philomath, Ore.	200	2860	15.73
Davis, Ray	26	11	7	"	22	450	2.47
Davis, Rollie & Edith	23	11	7	"	249.56	4050	22.21
Davis, L.	26	11	7	L.W.Fox, Blodgett	56.75	850	4.67

Table V (Continued)

Owner	Sec.	T. S	R. W	Address	Acreage	Assessed Value	Annual Tax Return
Decker, Pearl C. & Nelson J.	12	12	7	Corvallis, Ore.	80	420	2.31
Dixon, Belva	30	12	6	-	40	520	2.86
Dingus, Everett, Lynn	28	11	6	Wren, Ore.	24	410	2.26
Earnest, E. D.	5	12	6	Philomath, Ore.	80.15	300	1.65
Eichler, R.	26	11	7	Vancouver, Wash.	93.8	550	3.03
Eisele, E. M.	27	11	7	Blodgett, Ore.	5	100	1.10
Ellsworth, C. L.	9	12	6	Albany, Ore.	548.93	2850	15.67
Federal Farm Mortgage Corporation	6	12	6	-	126.68	780	4.29
"	1	12	7	-	648	1350	7.43
Federal Land Bank of Spokane	33	11	7	Spokane, Wash.	160	900	4.95
First Nat'l Bk. of Lebanon	32	11	7	-	80	640	3.52
Fisher, Samuel	33	11	7	Carlyle, Mont.	80	640	3.52
Fish, Leon H. & Carolin	9	12	7	-	80	240	1.32
Fountain, Willard	29	12	6	Philomath, Ore.	124	1600	8.80
Frink, G. J.	10	12	7	Corvallis, Ore.	80	1000	5.50
Gillson, John O.	31	12	6	Philomath, Ore.	79	550	3.03
Goodrich, M.	18	12	6	"	120	960	5.28
Gredig, John B.	34	11	7	"	140	1100	6.05
Greene, W. H.	18	12	6	"	160	320	1.76
Griffith, Sophia	31	12	6	Corvallis, Ore.	77.76	1230	6.77
Hajek, Henry J. & Mary E.	26	11	7	-	61.17	310	1.71
Harmsen, Tressa	29	11	7	-	160	480	2.64
Harmsen, John L.	19	11	7	Blodgett, Ore.	339.9	4570	25.13
"	29	11	7	"	80	240	1.32
Harns, G. H.	2	12	7	-	170	410	2.26

Table V (Continued)

Owner	Sec.	T.	R.	Address	Acreage	Assessed Value	Annual Tax Return
Harns, Geo. & Ivy V.	31	11	6	-	450.7	450	2.48
Hawkins, F. S.	31	12	6	Philomath, Ore.	10	200	1.10
Hawkins, Melvin & Earl	31	12	6	"	70	210	1.15
Hope, Arthur	28	11	7	Burnt Woods, Ore.	190	2700	14.85
Hunsperger, E.B. & Fannie E.	33	11	6	-	566.3	3660	20.13
Johnson, Anna (Benton Co.)	36	11	7	-	302.69	850	4.67
Kelleway, Chas. A.	27	11	7	Blodgett, Ore.	160	2150	11.82
Kiger, Ruth	28	11	7	"	160	1750	9.62
King, E.C. & Minnie	30	11	6	"	355.4	3510	19.30
Kirby, W. B.	4	12	6	Philomath, Ore.	54	450	2.47
Kisor, E. L.	8	12	6	"	130	650	3.58
"	9	12	6	"	83	1300	7.18
Knights of Pythias, Valley Lodge	16	12	7	-	40	-	-
Lacey, Frank M.	6	12	6	-	637.1	2210	12.16
Lake, Milton J.	6	12	7	Burnt Woods, Ore.	157	600	3.30
"	8	12	7	"	80	400	2.20
"	5	12	7	"	160	600	3.30
Lake, Selina	18	12	7	-	160	600	3.30
Lee, John I.	19	12	6	-	80	500	2.75
Lilly, H. T. & Anita L.	30	11	7	-	628.46	2230	12.27
Livermore, Orval Ray	32	11	7	Blodgett, Ore.	160	1450	7.97
Merritt, M.C.	17	12	7	New Castle, Penn.	160	800	4.40
Milne, C. S.	31	12	6	R. 3, Corvallis, Ore.	167.62	500	2.75
Morgan, Ethel	30	11	6	Wren, Ore.	285.61	2050	11.28
O'Neil, Chas. H.	5	12	6	Portland, Ore.	354.12	1750	9.63
Pacific St. Fire. Ins. Co.	6	12	7	Manchester, N. H.	148.49	1000	5.50
Phillips, Laura	4	12	7	Whiteson, Ore.	48.49	150	.82
Philomath St. Bank (Benton Co. St. Bk.)	6 7	12 12	7 6	- -	161.42 392	480 960	2.64 5.28

Table V (Continued)

Owner	Sec.	T.	R.	Address	Acreage	Assessed Value	Annual Tax Return
Porter, J. F.	5	12	7	Corvallis, Ore.	80	240	1.32
Pratt, Rex M.	8	12	7	-	80	500	2.75
Pugsley, B. G.	30	12	6	Philomath, Ore.	80	250	1.37
Quetschke, John	4	12	6	"	30.8	500	2.75
Quetschke, John & Julia	5	12	6	-	230.82	2300	12.65
Quetschke, Wm. & Estella	5	12	6	-	177.18	1780	9.79
Ravin, Myrtle	8	12	6	Corvallis, Ore.	14	150	.82
Reed, R. F.	30	12	6	-	80	520	2.86
Reynolds, A. L. & Hilda	31	12	6	Philomath, Ore.	11.75	120	.66
Rickard, John J.	33	11	6	"	381.7	2100	11.55
Rice, George A. & Minnie & Ward F & Maggie	4	12	7	R. 2, Corvallis, Ore.	267.23	650	3.57
Robinson, John L.	8	12	6	Philomath, Ore.	160	1520	8.30
Scheele, Geo. & Edna M.	34	11	7	Blodgett, Ore.	130	2000	11.00
Scheele, Henry	34	11	7	"	30	400	2.20
Schocker, Chris	34	11	7	Corvallis, Ore.	140	1100	6.05
Schuman, Alfred & Emily	27	11	7	-	5	30	.17
Shirley, H.E., Ruth	30	12	6	-	160	1380	7.59
Simeral, F. E.	32	12	7	Monelta, Wash.	40	380	2.09
Spees, Julius	9	12	6	Philomath, Ore.	116	640	3.52
Starker, T.J. & Margaret	35	11	7	Corvallis, Ore.	513	830	4.57
"	34	11	7	"	160	500	2.75
"	3	12	7	"	293	-	-
Stovall, Geo.	6	12	6	-	43.62	210	1.16
Taylor, J. M.	34	11	7	-	40	120	.66
Taylor, A.C. & Viola J.	29	11	6	Wren, Ore.	149.8	1310	7.21
Taylor, Clarence, A.	8	12	7	Blodgett, Ore.	160	600	3.30
Thompson, J.R. & Norma F.	4	12	7	"	280	840	4.62
Trenholm, Adah	31	12	6	Philomath, Ore.	28.25	450	2.47

Table V (Continued)

Owner	Sec.	T.	R.	Address	Acreage	Assessed Value	Annual Tax Return
Union Central Life Insurance	20	12	6	Portland, Ore.	350	3200	17.60
Webster, Marvel	29	11	6	Wren, Ore.	110.74	860	4.73
Wagner, H. D.	31	12	6	-	48.08	240	1.32
Walton, B. C.	7	12	7	-	80	-	-
"	12	12	7	-	50	-	-
Wilson, C. O. & F. E.	31	12	6	-	41	120	.66
Wilson, Viola	31	12	6	-	47.85	140	.77
Wischnofske, Arthur O.	20	11	7	Blodgett, Ore.	210	2350	12.92
Wood, Horatio, Frank & Grace G.	10	12	7	San Francisco, Cal.	160	480	2.64

Totals - Privately owned - 18,207.52 acres

Value \$111,490.00

OWNERSHIP OUTSIDE WORKING CIRCLE

Map
No.

1. A.D. & Katie I. Hymes
2. J. R. Thompson
3. Helena Papke
4. W.H. & Margaret Malone
5. Benton County
- 6.
7. Elmo A. & Gertrude A. Wehnert
8. C.T. & Mae Huffman
9. E.M. & Fannie T. Eisele
10. Olaf & Mary Erickson
11. E.M. & Eunice Christain
12. Lawrence W. Fox
13. Sue Plunket
14. Ivan G. & Margaruite Lebold
15. James Blodgett
16. F.L. & Edith Cadwalder
17. Thomas H. Rowland & W.H. Rowland
18. Ray E. & Sarah Davis
19. Merrit A. & Ethel M. Dilley
20. E.C. & Minnie King
21. Edward Golbek
22. R. W. Tripp
23. Kathleen R. Hutchinson
24. A. C. Taylor
25. Hilda Winney
26. Ana Peterson
27. A.C. & Violet Taylor
28. Margaretha Goldman
29. Dingus

Map
No.

30. C. B. Bell
31. Ballard & Ross
32. C. O. Mays
33. Marie L. Anderson
34. Carrie B. Ballard
35. Margaret L. Chandler
36. Mable J. Rickard
37. Allen
38. Tissue
39. G. Voight & J. Boone
40. O. Klotzbac
41. Marvin & Dorothy Sawyer
42. L. P. & M. M. Smith
43. F. W. Fish
44. Louie H. Gross
45. C. L. Ellsworth
46. Mary Klecker
47. S. M. & Ollie D. Hughes
48. Joseph H. & Lilas G. Thomas
49. Spring
50. Grant H. & Etta Biswell
51. J. W. & Clara Farmer
52. J. Stovall
53. Obidiah B. Flentge
54. Martin & Carrie Hessel
55. Federal Farm Mortgage Corporation
56. Ida Green
57. W. R. & Edith Conrow
58. B. F. & Effie Kimball

Map
No.

59. Bulhke
60. Robert H. Gellatly
61. Merrimac Co. Savings Bank
62. Joseph A. Gray
63. Claude A. & Gladys Shafer
64. Robert H. Gellatly
65. Chas. O. & Nellie M. Lindley
66. Geo. Singer
67. Lafferty Bro. Inc.
68. Orin & Mable Post
69. Jennie Webb
70. Lafferty Bro. Incorporated
71. Edgar & Iola Dibble
72. Henry Vosberg
73. Ella A. Bogue
74. Earl & John Scoville
75. Newman
76. I. N. Roderick
77. L. F. Wood
78. Goben
79. Nellie Watkins
80. Zelma H. & E. B. Carey
81. C. J. & Elizabeth Baker
82. Willard & B. Wallace Totten
83. Federal Land Bank
84. Benton County
85. Henry F. & Anna M. Busher
86. Guy & Mildred Kemp
87. M. R. Link

Map
No.

88. H. C. & Livva Bushnell
89. Roland & Dorothy Seeger
90. Sarah Ellis
91. Geo. Ranchman
92. Frank & Earl Husted
93. V. A. Wolf
94. Frank & Emma L. Pliska
95. Geo. Linck
96. Rufus Crane
97. Luree A. Roberts
98. Federal Land Bank
99. Emil V. & G. Irene Hoerauf
100. Hugh P. Hanna
101. J. T. Gray
102. Mary Detjen
103. Ella Mann
104. Chester Huffman
105. Daniel & Verda Farmer
106. S. J. Ervin
107. Walter Ervin
108. Arthur E. & Virginia Farmer ($\frac{1}{2}$ int.)
Elmer S. Farmer ($\frac{1}{2}$ interest)
109. Mary & Glenn Decker
110. Lena Davis
111. Adeline Friend
112. Addison Oney
113. William L. Haines
114. M. E. Hendricks