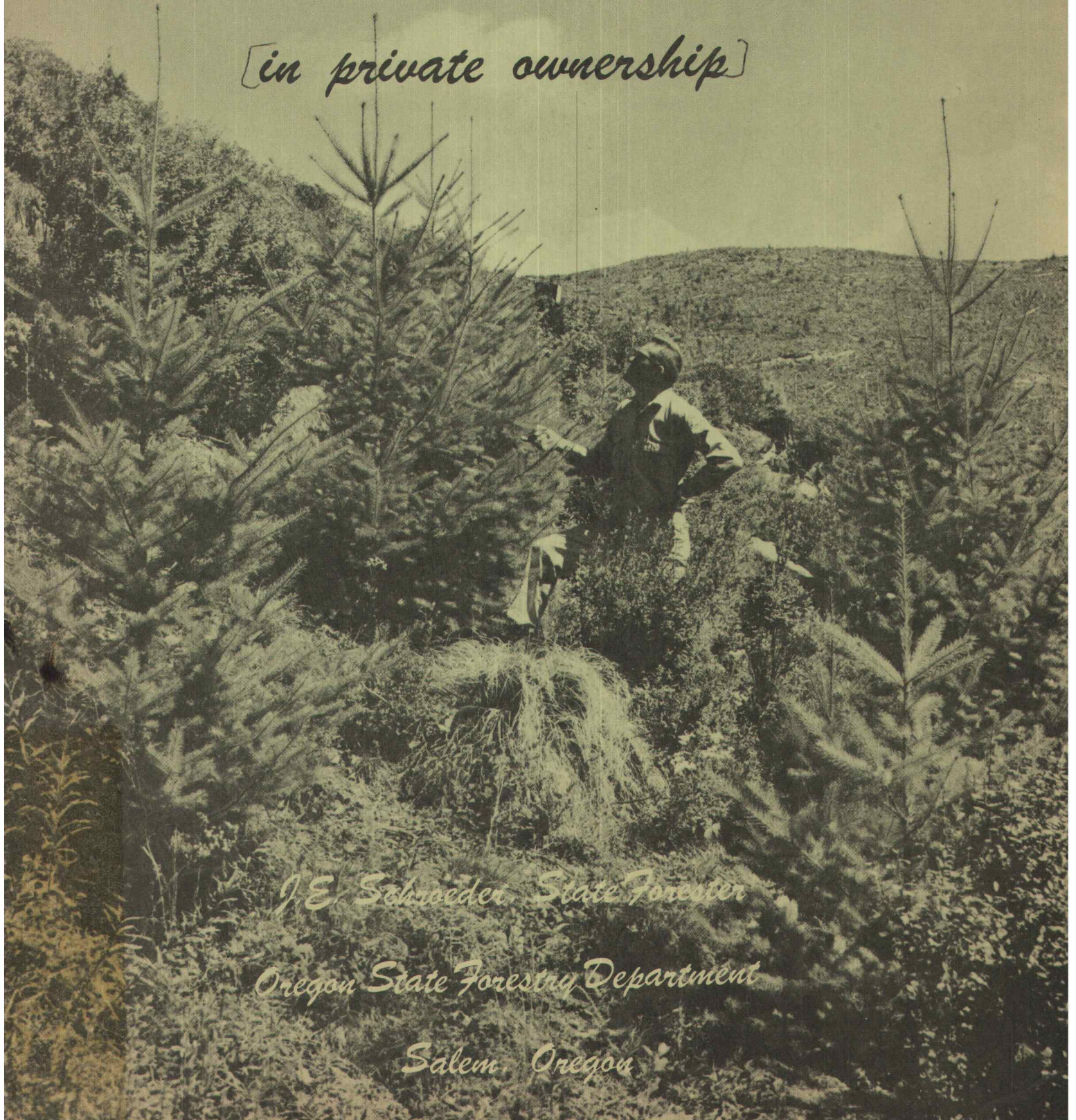


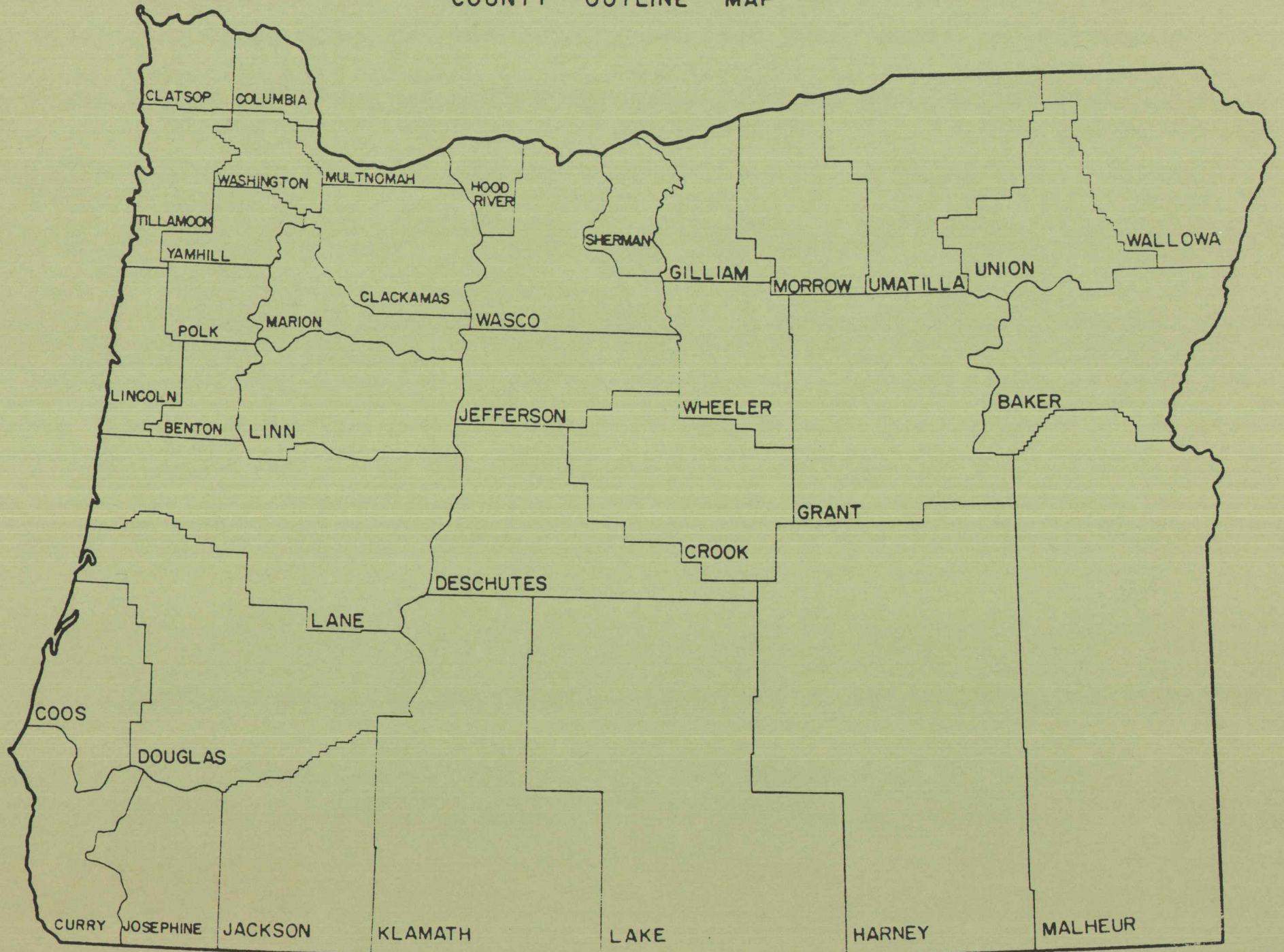
Survey Of Oregon's [privately owned] Cutover Forest Land

[in private ownership]



*J. E. Schroeder, State Forester
Oregon State Forestry Department
Salem, Oregon*

STATE OF OREGON
COUNTY OUTLINE MAP



923(795)

P.066

FOREST RESEARCH LABORATORY
LIBRARY

**SURVEY OF OREGON'S PRIVATELY OWNED
CUTOVER FOREST LAND**

**Eugene R. Manock
Project Coordinator**

Forest Management Division

**State of Oregon - Department of Forestry
J. E. Schroeder, State Forester
Salem, Oregon
October, 1969**

Table of Contents...

PART I	Page
The Problem.....	1
Objectives of Study.....	1
Scope and Method.....	2
Findings.....	3
Observations.....	4
Conclusions and Recommendations.....	4
References.....	5
Definitions of Terms.....	5
 PART II	
Appendix "A"	
Basic Statistical Information by County.....	7 - 105
Appendix "B"	
Basic Statistical Summaries by Condition.....	106 - 155
Appendix "C"	
General Sampling Plan.....	156 - 165

SURVEY OF OREGON'S CUTOVER FOREST LAND IN PRIVATE OWNERSHIP

THE PROBLEM:

This survey of Oregon's privately owned cutover forest land developed as an outgrowth of a review of the Oregon Forest Conservation Act to determine its effectiveness over the nearly 30 years since enactment in 1941.

The policy statement in the law includes "the preservation of the forest, conservation of forest resources for the equal and guaranteed use of future generations, protection of forest and water resources and the continuous growth of timber on lands suitable therefor". Permits are required for harvesting timber or other forest tree products, and certain forest practices deemed adequate to insure continued forest crop production are required for each major forest type.

An estimate of the present condition of Oregon's privately owned cutover land was sought as one measure of the effectiveness of the present Act, as well as an indication of the need for and direction of future state regulation of activities on private forest lands. Past surveys, while they are valuable for the purposes for which they were conducted, did not have the information needed on a local basis. The specific problems for which information was sought were:

- (1) How much of Oregon's commercial forest land is inadequately restocked?
- (2) On how much of this land would additional stocking result in more effective site utilization?
- (3) On how many acres would such additional stocking be desirable but impractical?
- (4) What limiting factors make the additional stocking impractical?

The answers to these questions were sought on a county basis, in order to permit location of specific problem areas. This would also make it possible to combine groups of counties to conform to administrative area organization, or other combination as needed.

OBJECTIVES OF THE STUDY:

The privately owned forest land subject to ad valorem taxation has been inventoried by the Department of Revenue (formerly State Tax Commission). This inventory provided a sampling framework from which a series of sample tracts designated as inadequately stocked was selected for re-examination. The specific objective of this study was to update that portion of the inventory which was classified as inadequately stocked. For this study, two type classifications were considered as

inclusive of all forest land below 40% stocking, based on crown closure estimation. The two classifications were cutover and Class "C" Reproduction. The data was collected and processed on a county basis in order to measure the effects of forest practices in each locality.

SCOPE AND METHOD:

The survey was designed to include every county, but as work progressed it became apparent that interpretations were needed. Two counties, Clatsop and Jackson, were finally omitted from this survey because of different criteria in the Department of Revenue inventory which suggest a different sampling framework.

The cooperation of the office of the Forest Survey, Pacific Northwest Forest and Range Experiment Station, was helpful in exploring survey possibilities. The Industrial Forestry Association offered its assistance in gaining cooperation from member companies. The survey method employed was adapted to this study through the assistance of Dr. Scott Overton, Professor of Biometrics, OSU, and the field survey instructions, sampling program and mathematical formulae were prepared by Stephen Titus, also of OSU.

Briefly, the procedure may be described as a two-stage sample with inclusion probabilities proportionate to size, and arbitrary sampling for unit characterization at the second stage. The first stage sampling was accomplished according to a scheme which recognized differences in acres of inadequately stocked forest lands between tax accounts. A tape record was made from the card inventory record for each county, from which a series of tax accounts was selected for field re-examination. The second stage sample was a field procedure involving selection of sample points within each forest type island characterized by the inventory as inadequately stocked, and recording of stocking information in reference to each sample point. Stocking was recorded according to distance between each sample point and the closest tree under 1" diameter, to a maximum of 11.8 feet; distance to the closest tree 1" or larger in diameter, to a maximum of 30 feet; and basal area per acre in crop trees 7" diameter or larger. Examiners were asked to make judgments about (1) the desirability of additional stocking from the standpoint of better site utilization, (2) whether or not such reforestation would be practical, and (3) if not practical, which of 9 limiting factors was most important.

Data from completed reports was transferred to punched cards and machine processed. A report for each county is included in the appendix, except for the two counties, Clatsop and Jackson which were not included in the study; Sherman, which had no timber; and Gilliam, which had only 191 acres of inadequately stocked land, and from which only one sample was drawn. It is believed that Gilliam County results may be determined on the basis of the proportions found from the adjoining Wheeler County data.

A limitation imposed by use of this tax record is in the exclusion of approximately 994,000 acres of classified reforestation land and 50,000 acres classified under the Western Oregon Small Tract Optional Tax Law. These lands must meet minimum stocking standards as a condition of classification; since no current uniform inventory of the timber on this land is available, a different sampling scheme would be required. It should be concluded that because these lands are subject to periodic inspection as a condition of classification, they are adequately stocked.

For those interested in a more complete statement of the sampling plan, material prepared by Dr. Overton has been placed in the appendix.

FINDINGS:

The inventory of privately owned forest lands from which the frame for the survey was taken included 8,022,837 acres. This area, together with 994,000 acres of reforestation lands classified under the Forest Fee and Yield Tax Law, and 50,000 acres of lands classified under the Western Oregon Small Tract Optional Tax Law, comprise the total private commercial forest land ownership in Oregon.

5,718,510 acres were classified by the Department of Revenue inventory as supporting stands of at least 40% stocking density, of reproduction and larger size classes of timber stands. These lands were not re-examined by the survey, the reason for this being that each county inventory had been maintained by adjustment of records in accordance with reports of harvesting; where no harvesting or other activity occurred after the inventory date, the inventory was found by this survey to represent stocking density adequately.

2,358,749 acres were inventoried as cutover and class "C" reproduction. It was assumed that the same approach to normal stocking would occur in time for these areas as for the lands supporting better stands. The re-examination of these lands by this survey revealed an estimated 68% or 1,603,500 acres as now exceeding the stocking levels for either cutover or class "C" reproduction. The remaining 767,000 (9.5% of the 8,022,000 acre private forest ownership inventoried) was estimated to have less than 40% stocking density. While it should be obvious that even the better stocked lands might benefit from additional intensive management practices, the presence of inadequately stocked lands indicates a priority to programs which will increase production on these lands.

The detailed examination made of these 767,000 acres permits their classification also according to average number of trees per acre. From this survey, 225,000 acres were found to be stocked at rates in excess of 300 trees per acre, the present minimum standard for adequate stocking under the Oregon Forest Conservation Act. These were all lands previously inventoried as having less than 40% stocking based on the crown closure estimates.

There remain 542,000 acres classified by this survey into four stocking classes, ranging from 0 to 300 trees per acre. In the lowest classification, 130,400 acres were determined to have no stocking. 77% of this area was found to be in six Western Oregon counties - Clackamas, Coos, Douglas, Curry, Marion and Linn.

312,000 acres were classified as land on which additional stocking would utilize the site more effectively, and on which such reforestation would be practical.

230,000 acres were classified as being impractical to reforest, because of one or more limiting factors. Specific limiting conditions were:

Primary use grazing	76,000	acres
Brush cover	40,000	"
Miscellaneous	27,000	"
Severe site	24,000	"
Excessively rocky	18,000	"
Roads, streams.	17,000	"
Non-commercial species occupying site	10,000	"
Heavy slash concentrations.	10,000	"
Animal damage	8,000	"
	<u>230,000</u>	"

Finally, of the 230,000 acres on which additional stocking would utilize the site more fully but would be impractical, 135,000 acres are in roads, streams, poor sites, or are primarily used for grazing. The remaining 97,000 acres - brush, miscellaneous, non-commercial species predominant, slash concentration and animal damage - should form the basis for an approach to improvement that can be carried out on a permanent basis.

OBSERVATIONS:

This survey demonstrates the practicability of sampling within an existing framework of data in order to provide needed information, at a relatively low cost in comparison to the cost of a complete enumeration.

The point distance method of measuring stocking density for type islands is both practical and useful; it permits estimates of actual stocking density, an advantage over methods which determine only whether or not stocking density meets a pre-determined standard.

An estimated 542,000 acres of privately owned forest land, 6.7% of the private ownership, was found to be inadequately stocked based on the present standard of 300 established seedlings per acre prescribed by the Oregon Forest Conservation Act. 312,000 acres were classified as land on which additional stocking would be a practical way to utilize the growing space more effectively. Nearly two-thirds of this area is in Douglas (68,620 acres), Lane (51,400 acres), Linn (43,958 acres) and Coos (32,380 acres) counties.

CONCLUSIONS AND RECOMMENDATIONS:

The survey results reveal a good rate of restocking on cutover forest lands in private ownership. Comparison with past surveys yields inconclusive results; it is recommended that plans for periodic re-surveys be made in order to discover trends. Future plans should also include reviews of federally-owned lands, in order to gain a more complete picture.

According to this survey, 312,000 acres can and should be reforested now. An additional 230,000 acres classified as forest land are inadequately stocked and impractical to reforest because of various limiting factors. These factors suggest several areas for further study.

REFERENCES:

Hartley, H.O. and JNK Rao (1962). Sampling with unequal probabilities and without replacement. *Annals of Math. Stat.* 33:350-374.

Horwitz, D.G. and Thompson, D.J. (1952). A generalization of sampling without replacement from a finite universe. *Journal of Amer. Stat. Association.* 47:663-685.

DEFINITION OF TERMS:

Conifer - Live coniferous trees of commercial species that are now or may be expected to become suitable for use as industrial wood. Small trees should have no defects or deformities which would prevent them from becoming merchantable, and should have a reasonable opportunity to reach maturity.

Hardwood - Live hardwood trees of commercial species that are now or may be expected to become suitable for use as industrial wood. Small trees should have no defects or deformities which would prevent them from becoming merchantable, and should have a reasonable opportunity to reach maturity.

Non-Commercial - Live trees, conifer or hardwood, which do not meet the requirements of either conifer or hardwood as stated above because of defects, deformities, or because they are not a commercial species.

Forest Land - Land which has at least 10% of its area stocked with forest trees, or formerly having such tree cover, suitable for production of marketable industrial wood and in use for that purpose.

APPENDIX "A"

Basic Statistical Information

By County

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: BakerCOMMERCIAL FOREST LAND AREA: 628,880

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	502,000	
Bureau of Land Management	19,000	
State Forest	280	
County	1,190	
Municipal	80	
Total Public Forest Land Area		522,550

Private Land

Total Private Forest Land Area 106,330

10,479 Acres of forest land in private ownership stocked below 40% by crown closure estimate.Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

	<u>Acres</u>
0 trees per acre	none
1 - 50 trees per acre	2,986
51 - 100 trees per acre	3,315
101 - 300 trees per acre	4,177
Over 300 trees per acre	none

(thousands of acres)

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	<u>Acres</u>
Additional stocking not needed:	2,362
Additional stocking desirable:	
Planting practical:	5,810
Planting not practical due to:	
Brush	107
Severe site	
Non-commercial species	
Excessive rock	330
Animal damage	486
Deep slash, logs, stumps	
Primary use grazing	1,248
Roads and streams	135
Other	
	<u>10,479</u>

Thousands of Acres

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: BakerTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	4,992	2,139	42.8	2,853	57.2
in small ownerships (under 5,000 acres)	10,697	3,071	28.7	7,626	71.3

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	0
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	10,479

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	59
10.1 to 99.9	293
100 to 999.9	254
1,000 to 1,999.9	17
2,000 to 4,999.9	17
5,000 to 9,999.9	4
10,000 or more	1
Total	645

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: BakerTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>6,131</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>4,348</u>
a. Acres with no trees under 1" DBH per acre	<u>1,653</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>0</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>1,982</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>713</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>10,479</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>4,476</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>6,002</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: BentonCOMMERCIAL FOREST LAND AREA: 239,510

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	10,000	
Bureau of Land Management	56,000	
State Forest	8,750	
County		
Municipal	270	
Total Public Forest Land Area		75,020

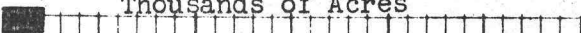
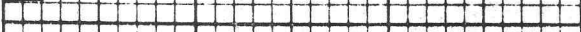
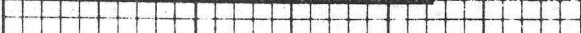
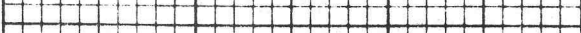
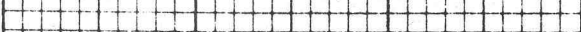
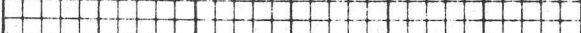
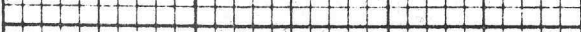
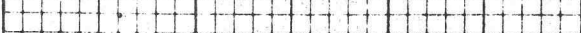
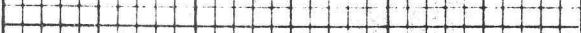
<u>Private Land</u>		
Classified Reforestation land	1,190	
Optional Tax land	1,800	
Ad valorem land	161,500	
Total Private Forest Land Area		164,490

2,740 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

	Thousands of Acres	Acres
0 trees per acre		1,107
1 - 50 trees per acre		none
51 - 100 trees per acre		none
101 - 300 trees per acre		817
Over 300 trees per acre		817

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	Thousands of Acres	Acres
Additional stocking not needed:		204
Additional stocking desirable:		
Planting practical:		2,246
Planting not practical due to:		
Brush		
Severe site		
Non-commercial species		
Excessive rock		
Animal damage		
Deep slash, logs, stumps		
Primary use grazing		
Roads and streams		
Other		290
		<u>2,740</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: BentonTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	6,535	5,718	87.5	817	12.5
in small ownerships (under 5,000 acres)	7,352	5,428	73.8	1,924	26.2

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	817
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	39,448

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	253
10.1 to 99.9	543
100 to 999.9	241
1,000 to 1,999.9	5
2,000 to 4,999.9	0
5,000 to 9,999.9	3
10,000 or more	3
Total	1,048

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: BentonTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>6,131</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>4,348</u>
a. Acres with no trees under 1" DBH per acre	<u>1,107</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>0</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>0</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>0</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>1,924</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>1,924</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>817</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>817</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: ClackamasCOMMERCIAL FOREST LAND AREA: 848,000

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	492,000	
Bureau of Land Management	64,000	
State Forest	9,380	
County	1,750	
Municipal	1,485	
Total Public Forest Land Area		568,615

<u>Private Land</u>	<u>Acres</u>	<u>Acres</u>
Classified Reforestation land	48,095	
Optional Tax land	9,350	
Ad valorem land	222,940	
Total Private Forest Land Area		280,385

45,571 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

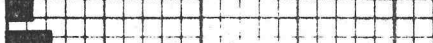
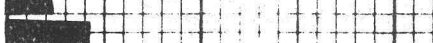
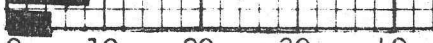
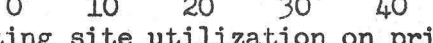
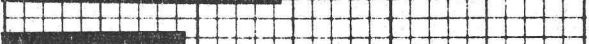
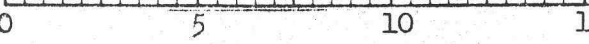
	Thousands of Acres	Acres
0 trees per acre		29,887
1 - 50 trees per acre		2,125
51 - 100 trees per acre		4,249
101 - 300 trees per acre		9,112
Over 300 trees per acre		4,198

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	Thousands of Acres	Acres
Additional stocking not needed:		1,605
Additional stocking desirable:		7,773
Planting practical:		4,500
Planting not practical due to:		106
Brush		1,203
Severe site		53
Non-commercial species		3,258
Excessive rock		16,226
Animal damage		224
Deep slash, logs, stumps		10,623
Primary use grazing		45,571
Roads and streams		
Other		

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: ClackamasTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	36,119	32,337	89.5	3,782	10.5
in small ownerships (under 5,000 acres)	66,927	25,138	37.5	41,989	62.5

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	2,988
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	3,135
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	39,448

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	878
10.1 to 99.9	145
100 to 999.9	12
1,000 to 1,999.9	2
2,000 to 4,999.9	2
5,000 to 9,999.9	0
10,000 or more	3
Total	1,042

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: ClackamasTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>1,925</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>43,646</u>
a. Acres with no trees under 1" DBH per acre	<u>30,947</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>2,125</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>0</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>10,572</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>29,887</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>35,199</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>6,969</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>3,782</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>5,727</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>6,591</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>2,988</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: ClatsopCOMMERCIAL FOREST LAND AREA: 456,780

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest		
Bureau of Land Management	2,000	
State Forest	147,230	
County	660	
Municipal	4,210	
Total Public Forest Land Area		154,100

<u>Private Land</u>	<u>Acres</u>	<u>Acres</u>
Classified Reforestation land	70,730	
Ad valorem land	231,950	
Total Private Forest Land Area		302,680

Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

	<u>Acres</u>
0 trees per acre	
1 - 50 trees per acre	
51 - 100 trees per acre	
101 - 300 trees per acre	
Over 300 trees per acre	

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	<u>Acres</u>
Additional stocking not needed:	
Additional stocking desirable:	
Planting practical:	
Planting not practical due to:	
Brush	
Severe site	
Non-commercial species	
Excessive rock	
Animal damage	
Deep slash, logs, stumps	
Primary use grazing	
Roads and streams	
Other	

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: ColumbiaCOMMERCIAL FOREST LAND AREA: 314,900

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	11,000	
Bureau of Land Management	6,538	
State Forest	907	
County	4,855	
Municipal		
Total Public Forest Land Area		23,300

<u>Private Land</u>		
Classified Reforestation land	129,202	
Optional tax land	1,590	
Ad valorem land	160,808	
Total Private Forest Land Area		291,600

8,113 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

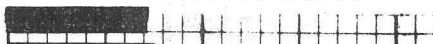
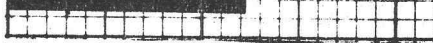
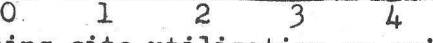
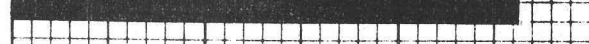
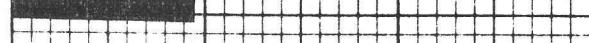
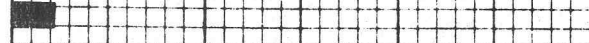
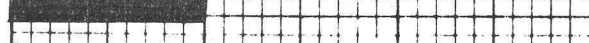
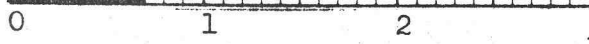
	Thousands of Acres	Acres
0 trees per acre		1,405
1 - 50 trees per acre		1,443
51 - 100 trees per acre		2,809
101 - 300 trees per acre		2,458
Over 300 trees per acre		none

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	Thousands of Acres	Acres
Additional stocking not needed:		2,335
Additional stocking desirable:		
Planting practical:		2,674
Planting not practical due to:		
Brush		984
Severe site		
Non-commercial species		272
Excessive rock		
Animal damage		
Deep slash, logs, stumps		1,077
Primary use grazing		
Roads and streams		70
Other		702
		<u>8,113</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: ColumbiaTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	21,071	18,964	90.0	2,107	10.0
in small ownerships (under 5,000 acres)	19,666	13,659	69.5	6,007	30.5

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	0
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	8,115

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	640
10.1 to 99.9	1,505
100 to 999.9	186
1,000 to 1,999.9	1
2,000 to 4,999.9	1
5,000 to 9,999.9	1
10,000 or more	2
Total	2,336

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: ColumbiaTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>1,405</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>6,710</u>
a. Acres with no trees under 1" DBH per acre	<u>1,405</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>0</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>2,536</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>2,769</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>2,529</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>5,586</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>4,884</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>2,529</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>702</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: CoosCOMMERCIAL FOREST LAND AREA: 864,665

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	71,000	
Bureau of Land Management	166,000	
State Forest	59,040	
County		
Municipal		
Total Public Forest Land Area		296,040

<u>Private Land</u>		
Classified Reforestation land	81,185	
Ad valorem land	487,440	
Total Private Forest Land Area		568,625

69,744 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

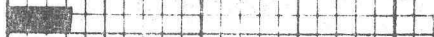
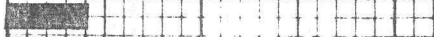
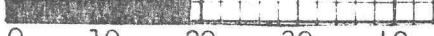
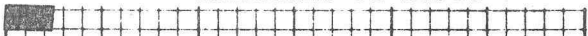
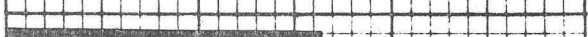
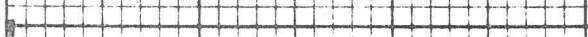
	Thousands of Acres	Acres
0 trees per acre		20,686
1 - 50 trees per acre		6,229
51 - 100 trees per acre		8,274
101 - 300 trees per acre		15,256
Over 300 trees per acre		19,300

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	Thousands of Acres	Acres
Additional stocking not needed:		5,067
Additional stocking desirable:		
Planting practical:		32,380
Planting not practical due to:		
Brush		5,428
Severe site		
Non-commercial species		
Excessive rock		478
Animal damage		527
Deep slash, logs, stumps		
Primary use grazing		16,172
Roads and streams		3,984
Other		5,708
		<u>69,744</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: CoosTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	120,588	89,008	73.8	31,580	26.2
in small ownerships (under 5,000 acres)	120,588	82,423	68.4	38,165	31.6

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	16,734
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	2,566
5. Less than (4)	50,446

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	2,109
10.1 to 99.9	1,889
100 to 999.9	739
1,000 to 1,999.9	17
2,000 to 4,999.9	6
5,000 to 9,999.9	1
10,000 or more	5
Total	4,766

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: CoosTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>10,502</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>59,244</u>
a. Acres with no trees under 1" DBH per acre	<u>21,784</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>0</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>6,735</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>30,725</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>54,554</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>54,554</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>10,199</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>15,192</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>4,993</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: Crook

COMMERCIAL FOREST LAND AREA: 444,450

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	346,000	
Bureau of Land Management	7,000	
State Forest		
County		
Municipal		
Total Public Forest Land Area		353,000

Private Land

Classified Reforestation land	8,285	
Ad valorem land	83,165	
Total Private Forest Land Area		91,450

2,812 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

	<u>Acres</u>	<u>Acres</u>
0 trees per acre		none
1 - 50 trees per acre		712
51 - 100 trees per acre		712
101 - 300 trees per acre		1,425
Over 300 trees per acre		none

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	<u>Acres</u>	<u>Acres</u>
Additional stocking not needed:		1,468
Additional stocking desirable:		
Planting practical:		1,194
Planting not practical due to:		
Brush		
Severe site		
Non-commercial species		
Excessive rock		
Animal damage		
Deep slash, logs, stumps		
Primary use grazing		
Roads and streams		
Other		
		150
		2,812

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: CrookTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	6,412	4,275	66.7	2,137	33.3
in small ownerships (under 5,000 acres)	1,425	712	50.0	712	50.0

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	712
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	0
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	2,137

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	5
10.1 to 99.9	15
100 to 999.9	78
1,000 to 1,999.9	16
2,000 to 4,999.9	3
5,000 to 9,999.9	1
10,000 or more	2
Total	120

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: CrookTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>1,425</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>1,425</u>
a. Acres with no trees under 1" DBH per acre	<u>0</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>712</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>0</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>712</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>2,850</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>712</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>1,425</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>712</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: CurryCOMMERCIAL FOREST LAND AREA: 698,835

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	414,000	
Bureau of Land Management	61,000	
State Forest	2,960	
County		
Municipal		
Total Public Forest Land Area		477,960

Private Land

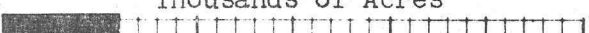
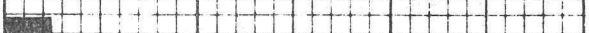
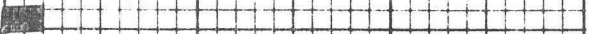
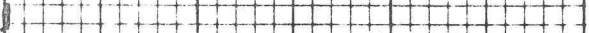
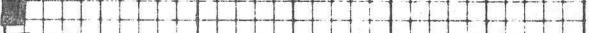
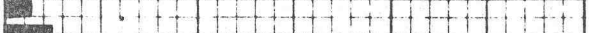
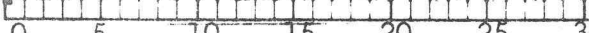
Classified Reforestation land	1,225	
Ad valorem land	219,650	
Total Private Forest Land Area		220,875

28,371 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

	Thousands of Acres	Acres
0 trees per acre		11,536
1 - 50 trees per acre		1,052
51 - 100 trees per acre		2,104
101 - 300 trees per acre		3,156
Over 300 trees per acre		10,522

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	Thousands of Acres	Acres
Additional stocking not needed:		6,292
Additional stocking desirable:		
Planting practical:		2,387
Planting not practical due to:		
Brush		2,038
Severe site		115
Non-commercial species		1,069
Excessive rock		1,283
Animal damage		2,755
Deep slash, logs, stumps		587
Primary use grazing		11,554
Roads and streams		
Other		291
		<u>28,371</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: CurryTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	41,034	29,789	72.6	11,245	27.4
in small ownerships (under 5,000 acres)	71,547	54,421	76.1	17,126	23.9

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	7,365
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	3,156
5. Less than (4)	17,849

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	1,448
10.1 to 99.9	728
100 to 999.9	300
1,000 to 1,999.9	23
2,000 to 4,999.9	8
5,000 to 9,999.9	13
10,000 or more	4
Total	2,521

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: CurryTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>4,209</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>24,162</u>
a. Acres with no trees under 1" DBH per acre	<u>11,536</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>0</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>1,052</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>11,374</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>26,266</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>21,006</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>1,052</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>5,261</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>1,052</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>2,104</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: DeschutesCOMMERCIAL FOREST LAND AREA: 934,860

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	796,000	
Bureau of Land Management	26,000	
State Forest		
County		
Municipal		
Total Public Forest Land Area		822,000

Private Land

Classified Reforestation land	19,945	
Ad valorem land	92,915	
Total Private Forest Land Area		122,860

13,195 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

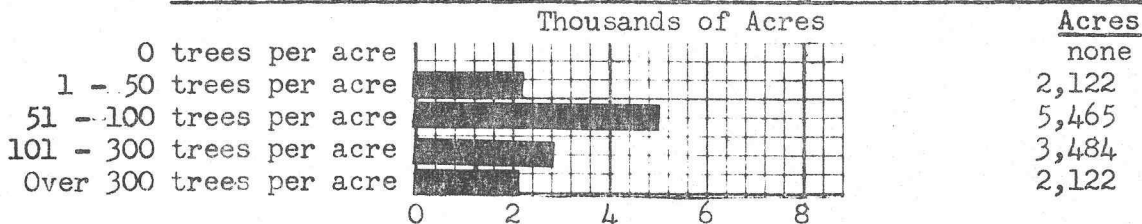
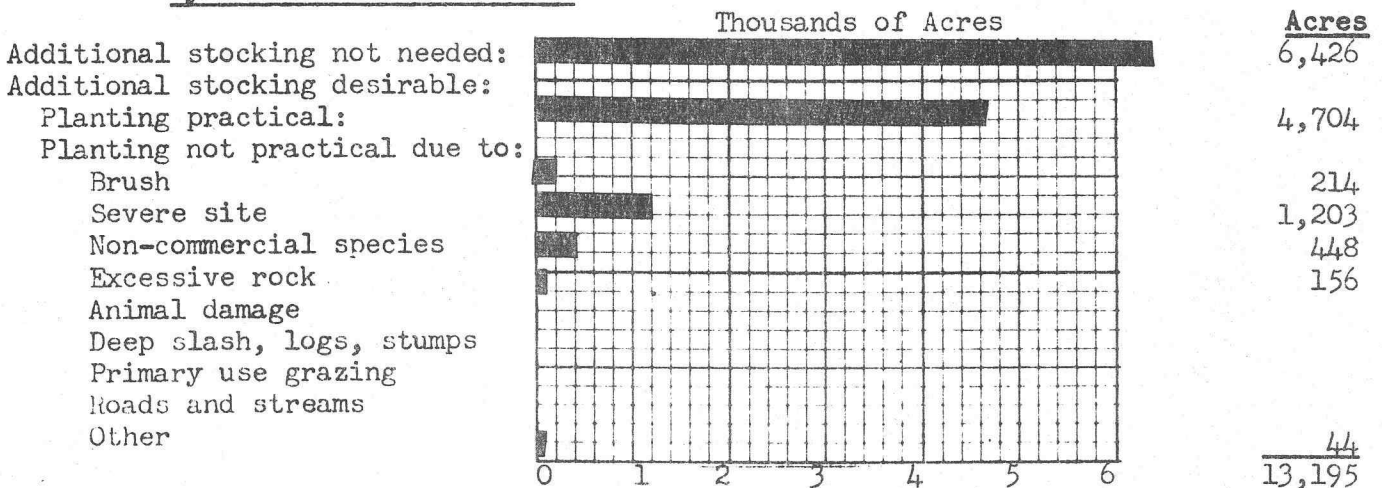


Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:



OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: DeschutesTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	23,347	12,275	52.6	11,072	47.4
in small ownerships (under 5,000 acres)	2,830	707	25.0	2,122	75.0

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	2,122
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	11,072

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	449
10.1 to 99.9	307
100 to 999.9	146
1,000 to 1,999.9	2
2,000 to 4,999.9	2
5,000 to 9,999.9	2
10,000 or more	1
Total	909

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: DeschutesTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>9,852</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>3,343</u>
a. Acres with no trees under 1" DBH per acre	<u>2,122</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>0</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>0</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>1,220</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>13,195</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>3,537</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>9,657</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: DouglasCOMMERCIAL FOREST LAND AREA: 2,680,000

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	868,000	
Bureau of Land Management	640,000	
State Forest	42,900	
County		
Municipal	2,100	
Total Public Forest Land Area		1,553,000

<u>Private Land</u>		
Classified Reforestation land	22,953	
Optional tax land	59	
Ad valorem land	1,103,988	
Total Private Forest Land Area		1,127,000

174,403 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

	Thousands of Acres	Acres
0 trees per acre	16.724	16,724
1 - 50 trees per acre	7.684	7,684
51 - 100 trees per acre	17.200	17,200
101 - 300 trees per acre	45.774	45,774
Over 300 trees per acre	87.022	87,022

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	Thousands of Acres	Acres
Additional stocking not needed:	69.657	69,657
Additional stocking desirable:		
Planting practical:	68.620	68,620
Planting not practical due to:		
Brush	4.369	4,369
Severe site	3.986	3,986
Non-commercial species		
Excessive rock	2.936	2,936
Animal damage	113	113
Deep slash, logs, stumps	6.275	6,275
Primary use grazing	7.709	7,709
Roads and streams	10.353	10,353
Other	335	335
		174,403

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: DouglasTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	288,044	157,762	54.8	130,282	45.2
in small ownerships (under 5,000 acres)	99,795	55,673	55.8	44,122	44.2

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	2,122
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	80,363
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	4,536
5. Less than (4)	87,382

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	2,145
10.1 to 99.9	2,075
100 to 999.9	1,235
1,000 to 1,999.9	40
2,000 to 4,999.9	14
5,000 to 9,999.9	12
10,000 or more	12
Total	5,533

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: DouglasTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>43,318</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>126,086</u>
a. Acres with no trees under 1" DBH per acre	<u>17,343</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>1,361</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>10,722</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>9,661</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>59,679</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>124,839</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>67,978</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>36,472</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>44,625</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>10,825</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>2,122</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>2,268</u>

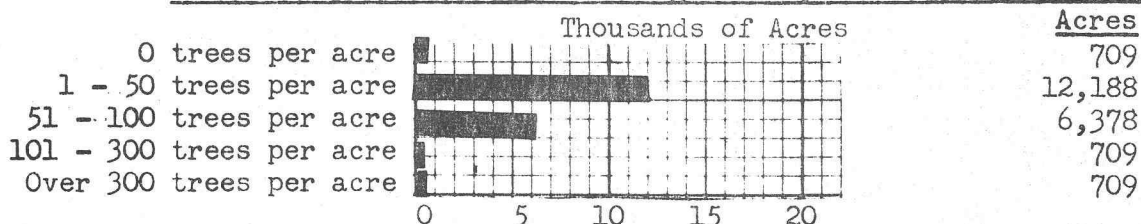
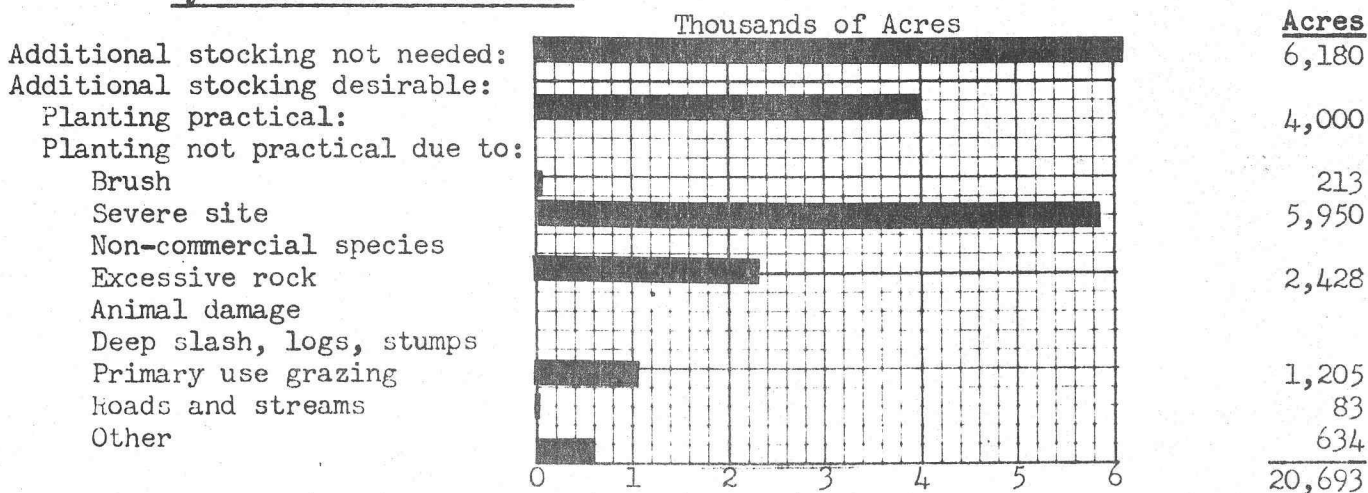
OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: GrantCOMMERCIAL FOREST LAND AREA: 1,615,870

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	1,324,000	
Bureau of Land Management	43,000	
State Forest	2,400	
County		
Municipal	100	
Total Public Forest Land Area		1,369,500

Private Land

Total Private Forest Land Area 246,370

20,693 Acres of forest land in private ownership stocked below 40% by crown closure estimate.Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: GrantTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	24,802	16,299	65.7	8,504	34.3
in small ownerships (under 5,000 acres)	26,928	14,740	54.7	12,188	45.3

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	709
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	19,983

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	32
10.1 to 99.9	188
100 to 999.9	484
1,000 to 1,999.9	93
2,000 to 4,999.9	83
5,000 to 9,999.9	25
10,000 or more	11
Total	916

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: GrantTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>1,417</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>19,275</u>
a. Acres with no trees under 1" DBH per acre	<u>7,795</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>3,543</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>2,976</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>4,960</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>709</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>20,692</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>7,228</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>12,755</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: HarneyCOMMERCIAL FOREST LAND AREA: 405,249

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	364,000	
Bureau of Land Management	18,000	
State Forest	2,480	
County	160	
Municipal		
Total Public Forest Land Area		384,640

Private Land

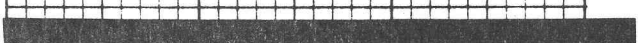
Total Private Forest Land Area	20,609
--------------------------------	--------

679 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

	Thousands of Acres	Acres
0 trees per acre		none
1 - 50 trees per acre		678
51 - 100 trees per acre		none
101 - 300 trees per acre		none
Over 300 trees per acre		none

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	Hundreds of Acres	Acres
Additional stocking not needed:		
Additional stocking desirable:		
Planting practical:		
Planting not practical due to:		
Brush		645
Severe site		
Non-commercial species		
Excessive rock		
Animal damage		
Deep slash, logs, stumps		34
Primary use grazing		
Roads and streams		
Other		
		<u>679</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: HarneyTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	1,357	1,357	100.0	0	0
in small ownerships (under 5,000 acres)	3,392	2,714	80.0	678	20.0

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	0
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	678

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	2
10.1 to 99.9	15
100 to 999.9	45
1,000 to 1,999.9	5
2,000 to 4,999.9	1
5,000 to 9,999.9	1
10,000 or more	0
Total	69

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: HarneyTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>0</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>678</u>
a. Acres with no trees under 1" DBH per acre	<u>0</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>0</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>0</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>0</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: Hood RiverCOMMERCIAL FOREST LAND AREA: 234,550

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	155,000	
Bureau of Land Management		
State Forest	983	
County	27,575	
Municipal	34	
Total Public Forest Land Area		183,592

Private Land

Classified Reforestation land	1,100	
Ad valorem land	49,858	
Total Private Forest Land Area		50,958

6,881 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

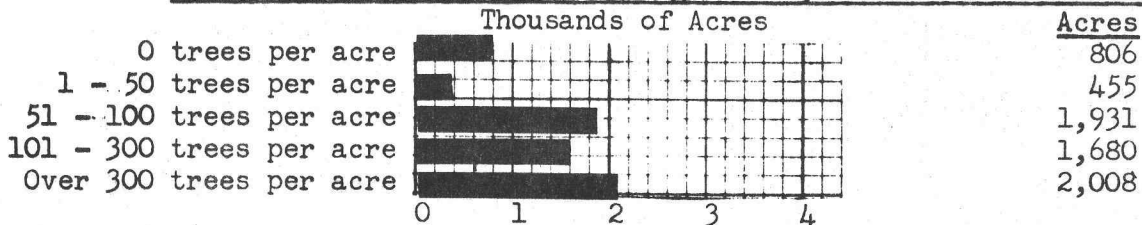
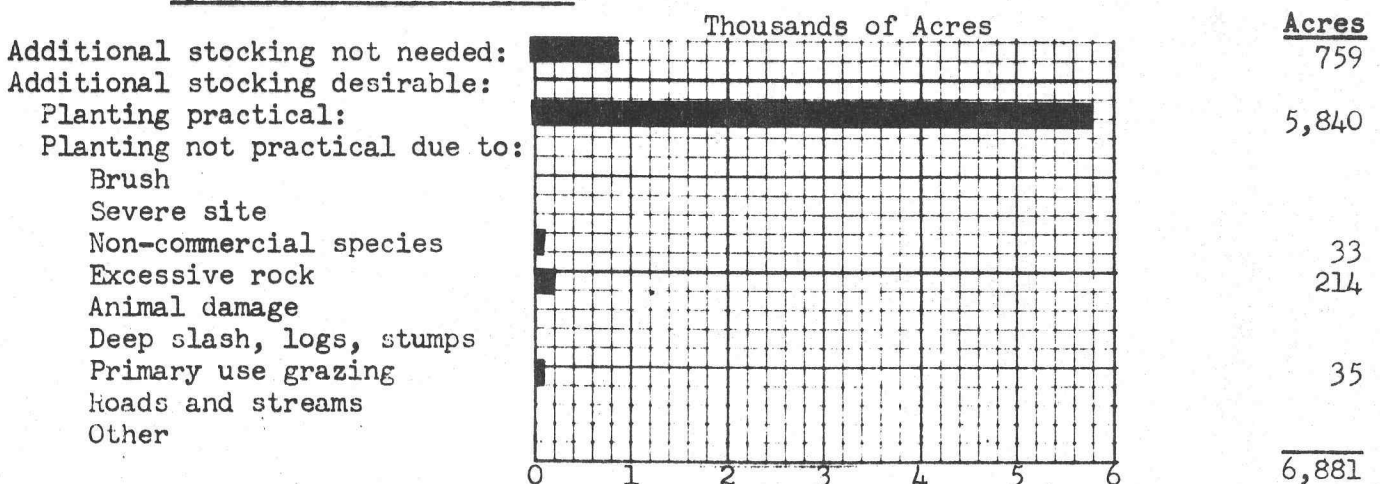


Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:



OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: Hood RiverTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	14,600	10,825	74.0	3,775	26.0
in small ownerships (under 5,000 acres)	9,038	5,932	65.6	3,106	34.4

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	2,008
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	4,873

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	86
10.1 to 99.9	189
100 to 999.9	63
1,000 to 1,999.9	2
2,000 to 4,999.9	0
5,000 to 9,999.9	0
10,000 or more	1
Total	341

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: Hood RiverTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>985</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>5,896</u>
a. Acres with no trees under 1" DBH per acre	<u>806</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>408</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>285</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>4,397</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>2,246</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>5,375</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>4,351</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>1,506</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>285</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: JacksonCOMMERCIAL FOREST LAND AREA: 1,265,690

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	412,000	
Bureau of Land Management	405,000	
State Forest	2,060	
County	800	
Municipal	3,340	
Total Public Forest Land Area		823,200

Private Land

Classified Reforestation land	12,060	
Ad valorem land	430,430	
Total Private Forest Land Area		442,490

Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

	<u>Acres</u>
0 trees per acre	
1 - 50 trees per acre	
51 - 100 trees per acre	
101 - 300 trees per acre	
Over 300 trees per acre	

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	<u>Acres</u>
Additional stocking not needed:	
Additional stocking desirable:	
Planting practical:	
Planting not practical due to:	
Brush	
Severe site	
Non-commercial species	
Excessive rock	
Animal damage	
Deep slash, logs, stumps	
Primary use grazing	
Roads and streams	
Other	

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: JeffersonCOMMERCIAL FOREST LAND AREA: 372,100

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	135,000	
Bureau of Land Management	2,350	
State Forest	200	
County		
Municipal		
Indian land	153,000	
Total Public Forest Land Area		290,550

Private Land

Classified Reforestation land	1,863	
Ad valorem land	79,687	
Total Private Forest Land Area		81,550

5,763 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

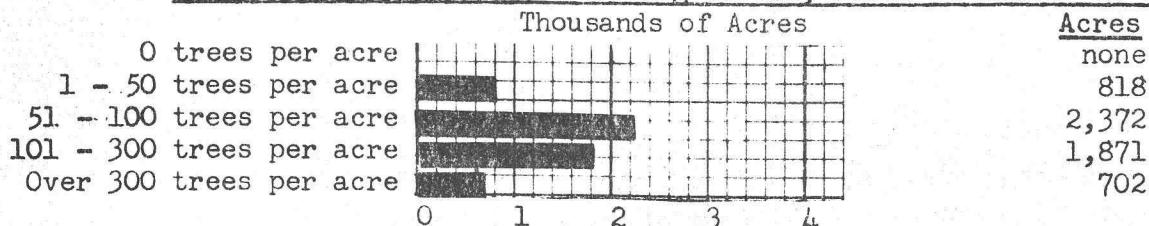
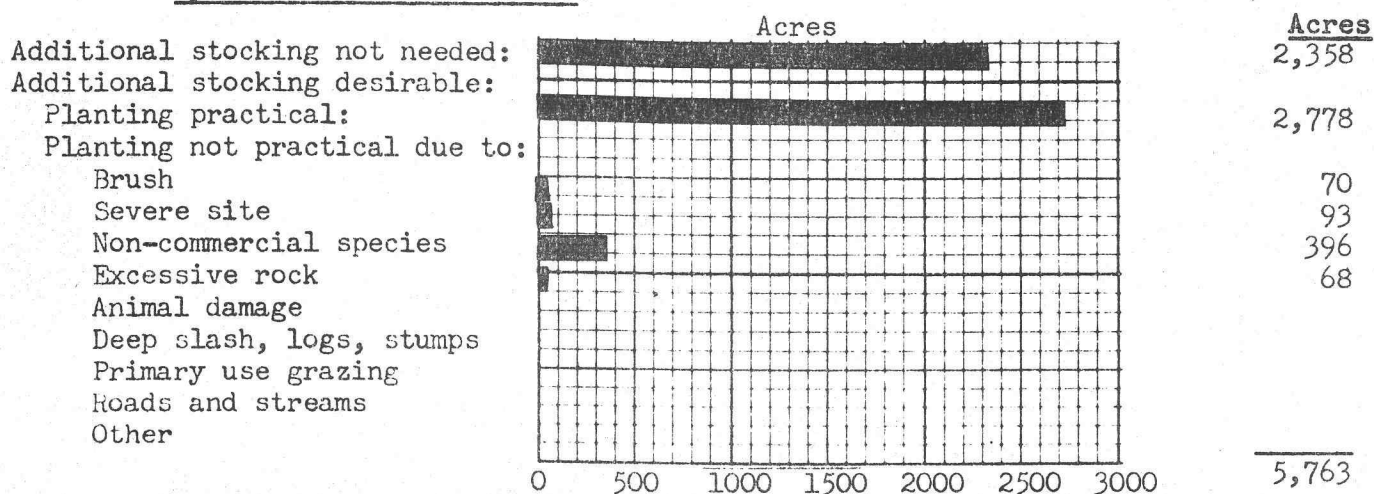


Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:



OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: JeffersonTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	20,344	15,282	75.1	5,061	28.9
in small ownerships (under 5,000 acres)	3,508	2,806	80.0	702	20.0

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	702
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	5,061

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	8
10.1 to 99.9	30
100 to 999.9	27
1,000 to 1,999.9	5
2,000 to 4,999.9	4
5,000 to 9,999.9	2
10,000 or more	<u>1</u>
Total	77

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: JeffersonTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>2,572</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>3,191</u>
a. Acres with no trees under 1" DBH per acre	<u>818</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>702</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>0</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>1,671</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>5,763</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>2,255</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>3,508</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: JosephineCOMMERCIAL FOREST LAND AREA: 903,500

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	296,275	
Bureau of Land Management	409,802	
State Forest	7,209	
County	31,310	
Municipal	6	
Total Public Forest Land Area		744,702

<u>Private Land</u>	<u>Acres</u>	<u>Acres</u>
Classified Reforestation land	2,487	
Optional Tax land	2,607	
Ad valorem land	153,704	
Total Private Forest Land Area		158,798

9,627 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

	Thousands of Acres	Acres
0 trees per acre		none
1 - 50 trees per acre	1.861	1,861
51 - 100 trees per acre	5.620	5,620
101 - 300 trees per acre	2.147	2,147
Over 300 trees per acre		none

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	Thousands of Acres	Acres
Additional stocking not needed:	4.196	4,196
Additional stocking desirable:		
Planting practical:	5.008	5,008
Planting not practical due to:		
Brush	0.368	368
Severe site		
Non-commercial species	0.036	36
Excessive rock	0.019	19
Animal damage		
Deep slash, logs, stumps		
Primary use grazing		
Roads and streams		
Other		
		<u>9,627</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: JosephineTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	18,608	16,461	88.5	2,147	11.5
in small ownerships (under 5,000 acres)	65,129	57,648	88.5	7,481	11.5

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	0
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	9,628

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	4,744
10.1 to 99.9	2,541
100 to 999.9	506
1,000 to 1,999.9	16
2,000 to 4,999.9	4
5,000 to 9,999.9	1
10,000 or more	0
Total	7,812

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: JosephineTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>716</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>8,912</u>
a. Acres with no trees under 1" DBH per acre	<u>0</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>1,622</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>1,607</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>5,683</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>716</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>8,912</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>6,617</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>716</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>2,295</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: KlamathCOMMERCIAL FOREST LAND AREA: 2,368,580

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	1,454,000	
Bureau of Land Management	64,000	
State Forest	32,059	
County	40	
Municipal		
Total Public Forest Land Area		1,550,099

Private Land

Classified Reforestation land	91,095	
Ad valorem	727,386	
Total Private Forest Land Area		818,481

26,994 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

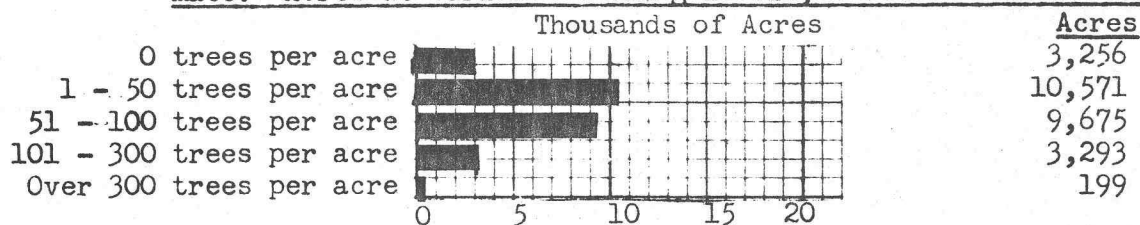
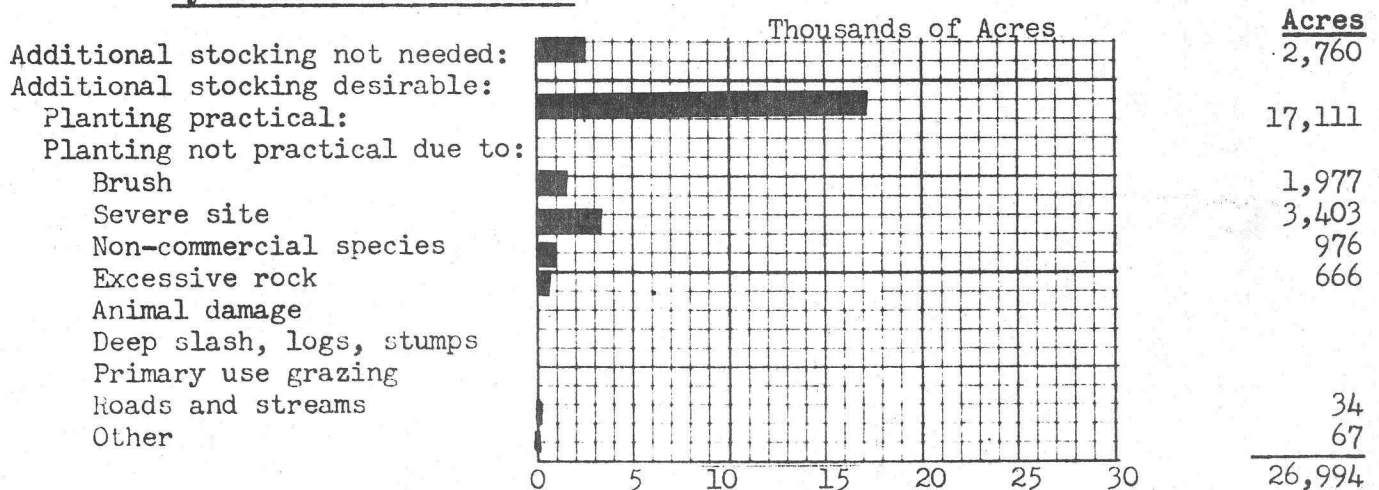


Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:



OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: KlamathTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	63,721	50,564	79.4	13,152	20.6
in small ownerships (under 5,000 acres)	29,513	15,676	53.1	13,837	46.9

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	199
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
	26,795
5. Less than (4)	

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	440
10.1 to 99.9	727
100 to 999.9	415
1,000 to 1,999.9	23
2,000 to 4,999.9	16
5,000 to 9,999.9	5
10,000 or more	6
Total	1,632

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: KlamathTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>8,440</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>18,553</u>
a. Acres with no trees under 1" DBH per acre	<u>9,933</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>5,480</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>671</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>2,470</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>4,729</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>26,323</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>7,789</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>671</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>14,476</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: LakeCOMMERCIAL FOREST LAND AREA: 1,102,140

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	815,000	
Bureau of Land Management	14,000	
State Forest	1,154	
County		
Municipal		830,154

Total Public Forest Land Area

Private Land

Total Private Forest Land Area 271,986

7,499 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

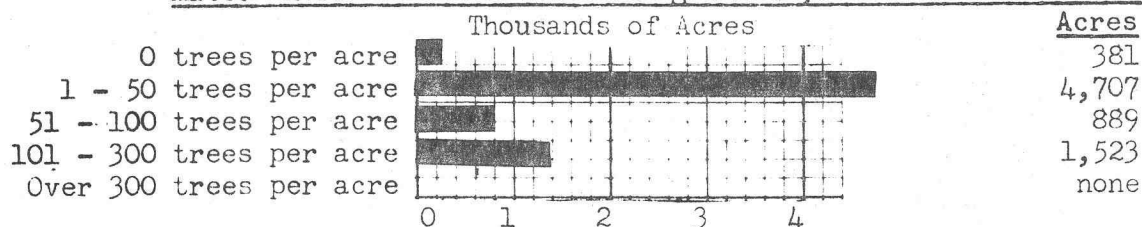
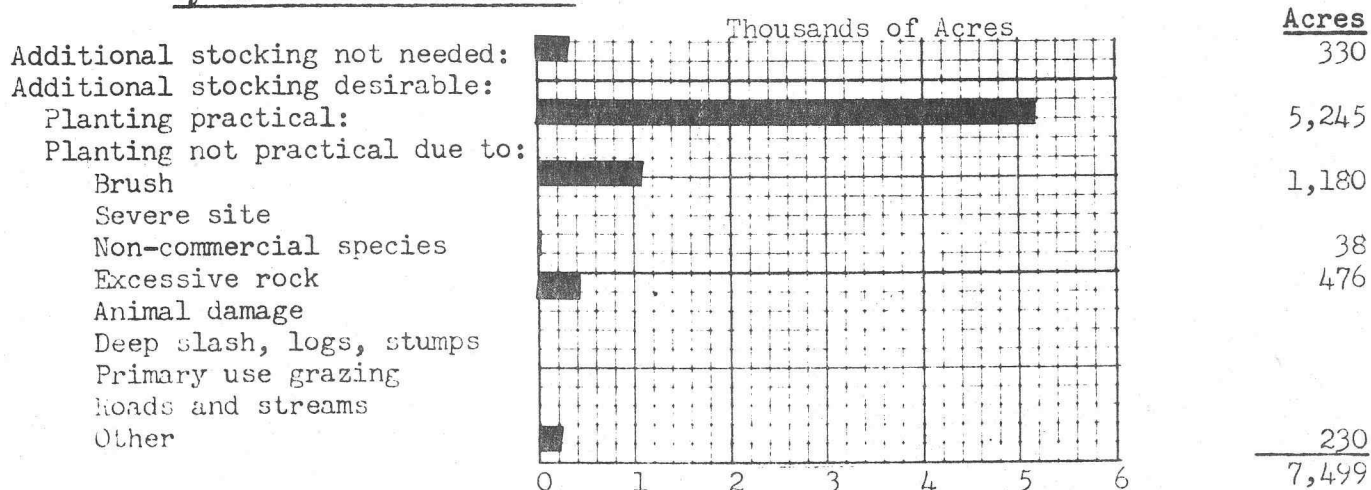


Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:



OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: LakeTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	5,711	3,542	62.0	2,169	38.0
in small ownerships (under 5,000 acres)	5,330	0	0	5,330	100.0

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	0
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	7,499

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	33
10.1 to 99.9	107
100 to 999.9	123
1,000 to 1,999.9	10
2,000 to 4,999.9	7
5,000 to 9,999.9	1
10,000 or more	5
Total	286

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: LakeTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>1,142</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>6,357</u>
a. Acres with no trees under 1" DBH per acre	<u>2,284</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>1,572</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>850</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>1,650</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>761</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>7,119</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>3,896</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>2,842</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>381</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: LaneCOMMERCIAL FOREST LAND AREA: 2,370,640

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	1,208,000	
Bureau of Land Management	285,000	
State Forest	24,116	
County		
Municipal	120	
Total Public Forest Land Area		1,417,236

<u>Private Land</u>	<u>Acres</u>	<u>Acres</u>
Classified Reforestation land	158,963	
Optional tax land	1,749	
Ad valorem land	692,692	
Total Private Forest Land Area		853,404

139,735 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

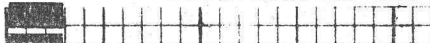
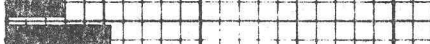
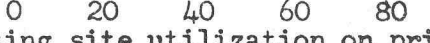
	<u>Thousands of Acres</u>	<u>Acres</u>
0 trees per acre		10,757
1 - 50 trees per acre		10,757
51 - 100 trees per acre		20,588
101 - 300 trees per acre		20,197
Over 300 trees per acre		77,438

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	<u>Thousands of Acres</u>	<u>Acres</u>
Additional stocking not needed:		67,608
Additional stocking desirable:		51,400
Planting practical:		
Planting not practical due to:		
Brush		4,123
Severe site		
Non-commercial species		
Excessive rock		1,588
Animal damage		
Deep slash, logs, stumps		2,825
Primary use grazing		7,171
Roads and streams		717
Other		4,303
		139,735

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: LaneTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	247,400	151,308	61.2	96,091	38.8
in small ownerships (under 5,000 acres)	111,151	67,506	60.7	43,644	39.3

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	3,586
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	73,852
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	62,298

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	1428
10.1 to 99.9	1142
100 to 999.9	353
1,000 to 1,999.9	20
2,000 to 4,999.9	13
5,000 to 9,999.9	4
10,000 or more	17
Total	2977

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: LaneTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>63,195</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>76,541</u>
a. Acres with no trees under 1" DBH per acre	<u>14,432</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>3,586</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>17,928</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>40,686</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>69,668</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>86,670</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>35,138</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>49,480</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>31,344</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>3,586</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>3,586</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: LincolnCOMMERCIAL FOREST LAND AREA: 572,450

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	166,000	
Bureau of Land Management	25,000	
State Forest	19,770	
County	133	
Municipal	1,131	
Total Public Forest Land Area		212,034

<u>Private Land</u>		
Classified Reforestation land	64,280	
Optional tax land	380	
Ad valorem land	295,756	
Total Private Forest Land Area		360,416

18,686 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

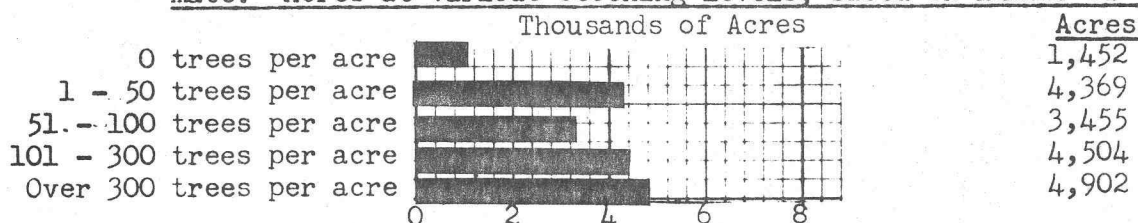
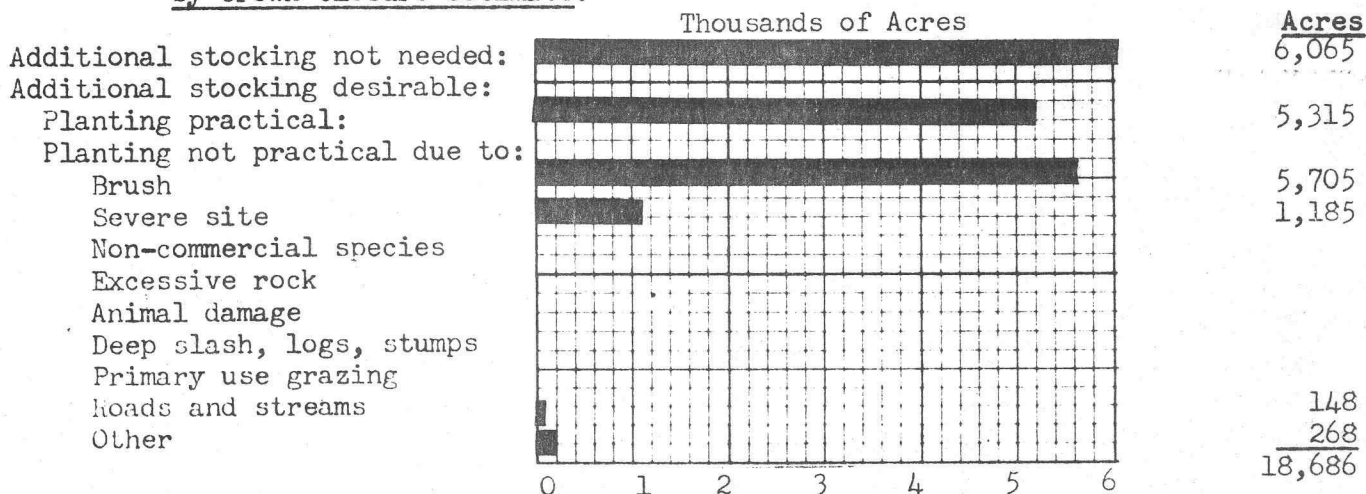


Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:



OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: LincolnTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	90,038	82,982	92.2	7,057	7.8
in small ownerships (under 5,000 acres)	53,313	41,585	78.0	11,628	22.0

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	1,185
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	4,902
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	12,598

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	585
10.1 to 99.9	993
100 to 999.9	295
1,000 to 1,999.9	3
2,000 to 4,999.9	1
5,000 to 9,999.9	6
10,000 or more	3
Total	1,886

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: LincolnTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>6,629</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>12,056</u>
a. Acres with no trees under 1" DBH per acre	<u>2,267</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>1,185</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>1,185</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>7,420</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>7,180</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>12,016</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>5,255</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>2,369</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>6,247</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>4,299</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: LinnCOMMERCIAL FOREST LAND AREA: 935,770

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	357,000	
Bureau of Land Management	83,000	
State Forest	21,241	
County		
Municipal		

Total Public Forest Land Area 461,241

Private Land

Classified Reforestation land	50,271
Optional tax land	1,788
Ad valorem land	422,470

Total Private Forest Land Area 474,529

57,824 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

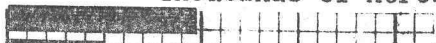
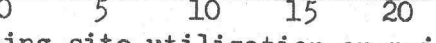
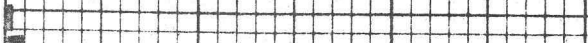
	Thousands of Acres	Acres
0 trees per acre		9,998
1 - 50 trees per acre		5,072
51 - 100 trees per acre		4,503
101 - 300 trees per acre		24,562
Over 300 trees per acre		13,684

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	Thousands of Acres	Acres
Additional stocking not needed:		3,599
Additional stocking desirable:		
Planting practical:		43,958
Planting not practical due to:		
Brush		459
Severe site		1,831
Non-commercial species		915
Excessive rock		
Animal damage		
Deep slash, logs, stumps		
Primary use grazing		6,970
Roads and streams		
Other		
		92
		<u>57,824</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: LinnTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	126,317	88,834	70.3	37,483	29.7
in small ownerships (under 5,000 acres)	43,937	23,596	53.7	20,340	46.3

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	13,684
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	1,831
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	42,308

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	229
10.1 to 99.9	698
100 to 999.9	232
1,000 to 1,999.9	2
2,000 to 4,999.9	2
5,000 to 9,999.9	1
10,000 or more	7
Total	1,171

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: LinnTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>20,900</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>36,928</u>
a. Acres with no trees under 1" DBH per acre	<u>15,075</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>0</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>841</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>21,007</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>31,636</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>46,282</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>18,024</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>6,277</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>8,164</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>3,435</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>1,831</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: MalheurCOMMERCIAL FOREST LAND AREA: 14,440

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	2,000	
Bureau of Land Management	5,000	
State Forest		
County		
Municipal		
Total Public Forest Land Area		7,000

Private Land

Total Private Forest Land Area	7,440
--------------------------------	-------

1,509 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

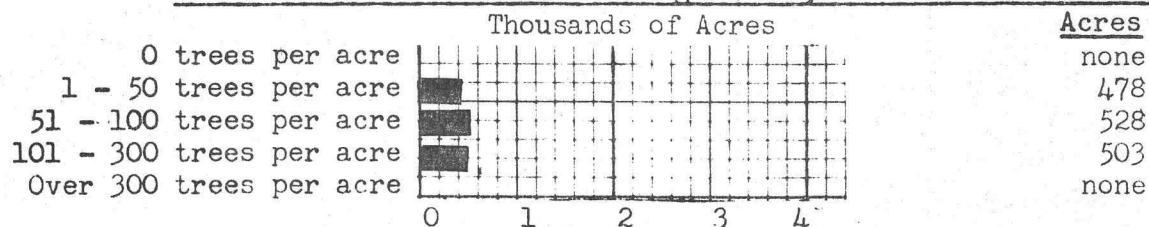
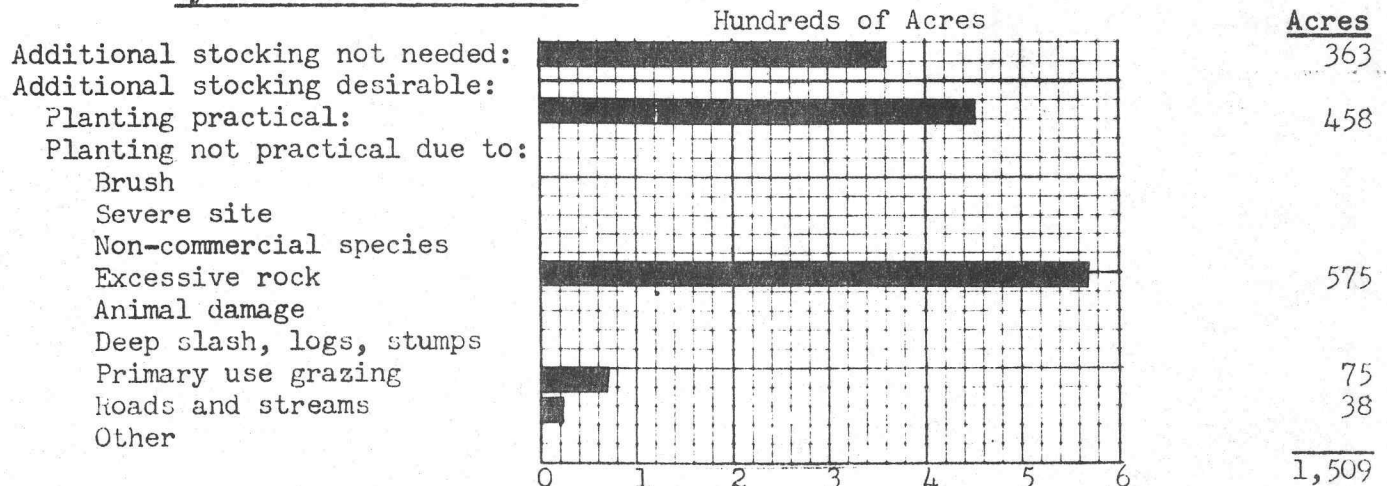


Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:



OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: MalheurTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	0	0	0	0	0
in small ownerships (under 5,000 acres)	1,509	0	0	1,509	100.0

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	377
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	0
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	1,132

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	6
10.1 to 99.9	3
100 to 999.9	4
1,000 to 1,999.9	0
2,000 to 4,999.9	3
5,000 to 9,999.9	0
10,000 or more	0
Total	16

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: MalheurTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>880</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>629</u>
a. Acres with no trees under 1" DBH per acre	<u>101</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>0</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>377</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>151</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>1,509</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>1,132</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>272</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: MarionCOMMERCIAL FOREST LAND AREA: 327,520

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	180,000	
Bureau of Land Management	20,000	
State Forest	18,909	
County	26	
Municipal		
Total Public Forest Land Area		218,935

<u>Private Land</u>	<u>Acres</u>	
Classified Reforestation land	40,060	
Optional tax land	1,100	
Ad valorem land	67,425	
Total Private Forest Land Area		108,585

14,880 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

	Thousands of Acres	Acres
0 trees per acre	11.183	11,183
1 - 50 trees per acre	1.426	1,426
51 - 100 trees per acre	.713	713
101 - 300 trees per acre	1.558	1,558
Over 300 trees per acre	none	

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	Thousands of Acres	Acres
Additional stocking not needed:	.232	232
Additional stocking desirable:		
Planting practical:	1.763	1,763
Planting not practical due to:		
Brush	1.316	1,316
Severe site		
Non-commercial species		
Excessive rock		
Animal damage		
Deep slash, logs, stumps		
Primary use grazing	10.143	10,143
Roads and streams		
Other	1.426	1,426
	14.880	14,880

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: MarionTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	9,981	9,268	92.9	713	7.1
in small ownerships (under 5,000 acres)	35,646	21,480	60.3	14,167	39.7

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	0
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	14,879

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	384
10.1 to 99.9	456
100 to 999.9	110
1,000 to 1,999.9	4
2,000 to 4,999.9	4
5,000 to 9,999.9	0
10,000 or more	1
Total	959

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: MarionTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>224</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>14,655</u>
a. Acres with no trees under 1" DBH per acre	<u>11,896</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>713</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>713</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>1,334</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>11,896</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>13,230</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>2,271</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>713</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>713</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>937</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: MorrowCOMMERCIAL FOREST LAND AREA: 214,280

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	121,000	
Bureau of Land Management	1,000	
State Forest	64	
County		
Municipal		
Total Public Forest Land Area		122,064

Private Land

Total Private Forest Land Area

92,216

4,697 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

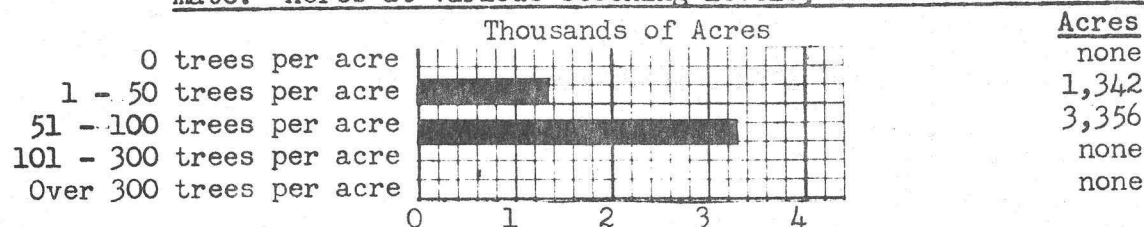
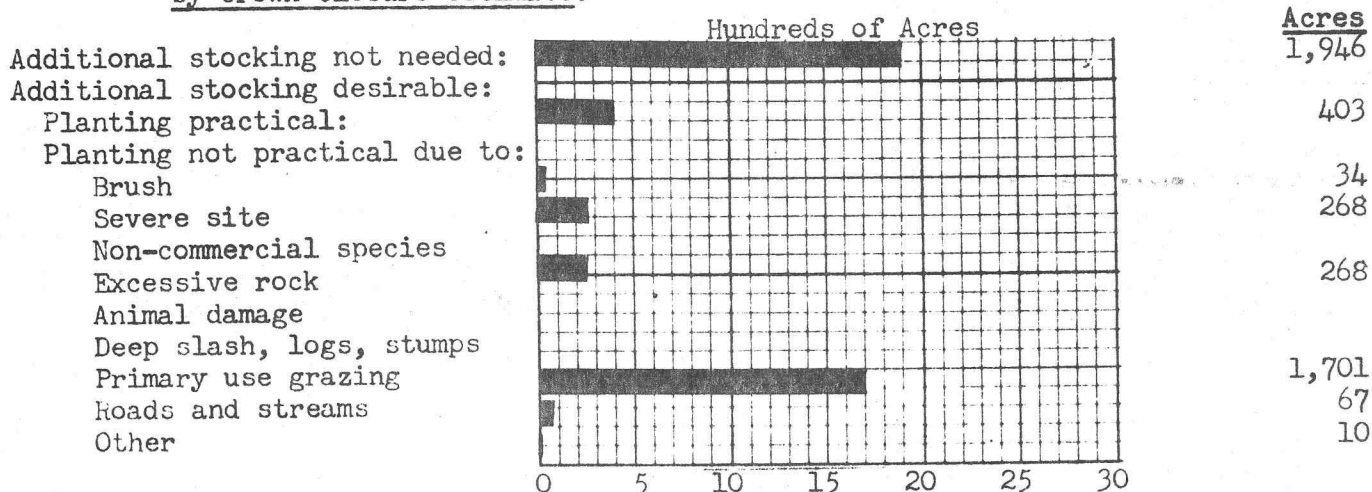


Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:



OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: MorrowTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	5,369	2,685	50.0	2,685	50.0
in small ownerships (under 5,000 acres)	3,356	1,342	40.0	2,014	60.0

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	671
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	0
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	4,027

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	8
10.1 to 99.9	27
100 to 999.9	73
1,000 to 1,999.9	14
2,000 to 4,999.9	7
5,000 to 9,999.9	2
10,000 or more	2
Total	133

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: MorrowTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>570</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>4,128</u>
a. Acres with no trees under 1" DBH per acre	<u>671</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>1,443</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>1,342</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>671</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>4,698</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>1,242</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>2,785</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>671</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: Multnomah

COMMERCIAL FOREST LAND AREA: 83,220

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	36,000	
Bureau of Land Management	4,000	
State Forest		
County		
Municipal		
Total Public Forest Land Area		40,000

<u>Private Land</u>	<u>Acres</u>	
Classified Reforestation land	7,893	
Optional tax land	429	
Ad valorem land	34,898	
Total Private Forest Land Area		43,220

2,752 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

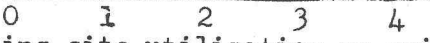
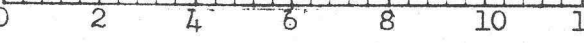
	Thousands of Acres	Acres
0 trees per acre		2,752
1 - 50 trees per acre		none
51 - 100 trees per acre		none
101 - 300 trees per acre		none
Over 300 trees per acre		none

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	Hundreds of Acres	Acres
Additional stocking not needed:		
Additional stocking desirable:		
Planting practical:		
Planting not practical due to:		1,376
Brush		688
Severe site		
Non-commercial species		
Excessive rock		
Animal damage		
Deep slash, logs, stumps		
Primary use grazing		
Roads and streams		
Other		688
		<u>2,752</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: MultnomahTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	2,752	2,752	100.0	0	0
in small ownerships (under 5,000 acres)	6,192	3,440	55.6	2,752	44.4

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	0
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	2,752

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	Data not available
10.1 to 99.9	
100 to 999.9	
1,000 to 1,999.9	
2,000 to 4,999.9	
5,000 to 9,999.9	
10,000 or more	
Total	

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: MultnomahTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>0</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>2,752</u>
a. Acres with no trees under 1" DBH per acre	<u>2,752</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>0</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>0</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>0</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>2,064</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>2,752</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>688</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: PolkCOMMERCIAL FOREST LAND AREA: 247,000

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	4,000	
Bureau of Land Management	43,000	
State Forest	6,227	
County		
Municipal	41	
Total Public Forest Land Area		53,268
<u>Private Land</u>		
Classified Reforestation land	73,362	
Optional tax land	985	
Ad valorem land	119,697	
Total Private Forest Land Area		194,044

17,943 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

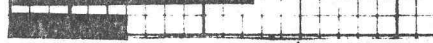
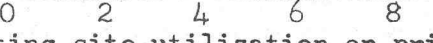
	Thousands of Acres	Acres
0 trees per acre		2,378
1 - 50 trees per acre		3,066
51 - 100 trees per acre		4,991
101 - 300 trees per acre		5,058
Over 300 trees per acre		2,450

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	Thousands of Acres	Acres
Additional stocking not needed:		3,666
Additional stocking desirable:		
Planting practical:		8,624
Planting not practical due to:		
Brush		1,520
Severe site		141
Non-commercial species		111
Excessive rock		657
Animal damage		
Deep slash, logs, stumps		325
Primary use grazing		1,643
Roads and streams		177
Other		1,078
		<u>17,943</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: PolkTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	46,627	35,924	77.0	10,703	23.0
in small ownerships (under 5,000 acres)	24,020	16,780	70.0	7,240	30.0

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	706
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	2,450
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	549
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	14,237

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	104
10.1 to 99.9	347
100 to 999.9	117
1,000 to 1,999.9	0
2,000 to 4,999.9	0
5,000 to 9,999.9	1
10,000 or more	3
Total	572

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: PolkTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>5,788</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>12,155</u>
a. Acres with no trees under 1" DBH per acre	<u>3,791</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>947</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>1,359</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>6,058</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>7,551</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>11,122</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>7,436</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>4,778</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>2,249</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>1,494</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>406</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>549</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: TillamookCOMMERCIAL FOREST LAND AREA: 651,130

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	90,000	
Bureau of Land Management	54,000	
State Forest	309,433	
County	8	
Municipal		
Total Public Forest Land Area		453,441

Private Land

Classified Reforestation land	22,492	
Ad valorem land	175,197	
Total Private Forest Land Area		197,689

14,780 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

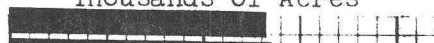
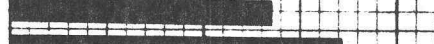
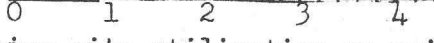
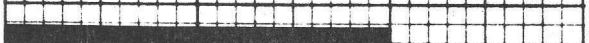
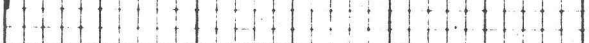
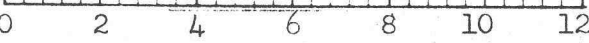
	Thousands of Acres	Acres
0 trees per acre		2,693
1 - 50 trees per acre		2,718
51 - 100 trees per acre		3,452
101 - 300 trees per acre		4,978
Over 300 trees per acre		941

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	Thousands of Acres	Acres
Additional stocking not needed:		3,395
Additional stocking desirable:		8,032
Planting practical:		1,733
Planting not practical due to:		
Brush		872
Severe site		182
Non-commercial species		436
Excessive rock		130
Animal damage		
Deep slash, logs, stumps		
Primary use grazing		
Roads and streams		
Other		
		<u>14,780</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: TillamookTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	48,686	39,966	82.1	8,720	17.9
in small ownerships (under 5,000 acres)	30,519	24,459	80.1	6,060	19.9

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	214
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	727
5. Less than (4)	13,840

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	159
10.1 to 99.9	144
100 to 999.9	558
1,000 to 1,999.9	1
2,000 to 4,999.9	1
5,000 to 9,999.9	3
10,000 or more	2
Total	868

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: TillamookTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>5,301</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>9,480</u>
a. Acres with no trees under 1" DBH per acre	<u>3,957</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>0</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>1,453</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>4,069</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>7,812</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>11,951</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>5,516</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>2,103</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>1,453</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>727</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: Umatilla

COMMERCIAL FOREST LAND AREA: 524,850

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	314,000	
Bureau of Land Management	3,000	
State Forest	1,280	
County	281	
Municipal		
Total Public Forest Land Area		318,561

Private Land

Total Private Forest Land Area 206,289

4,743 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

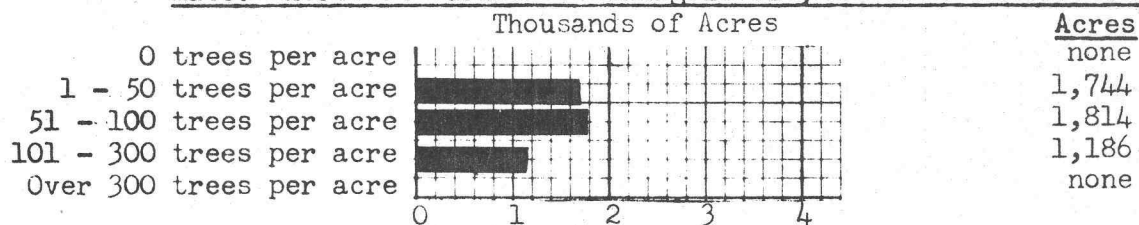
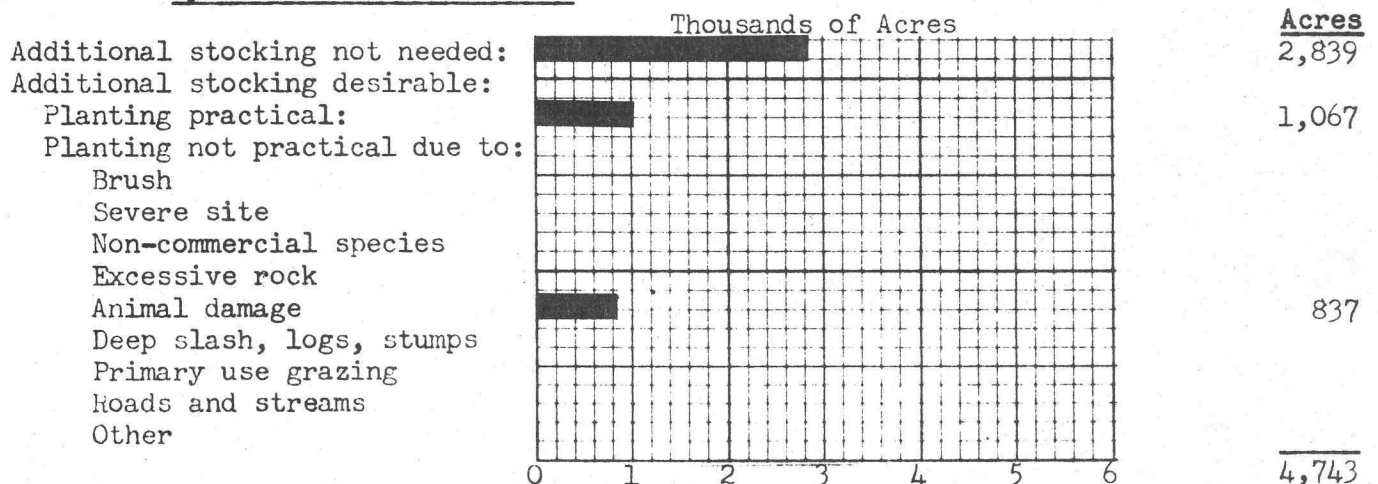


Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:



OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: UmatillaTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	7,115	7,115	100.0	0	0
in small ownerships (under 5,000 acres)	18,974	14,230	75.0	4,743	25.0

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	1,186
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	0
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	3,558

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	89
10.1 to 99.9	403
100 to 999.9	329
1,000 to 1,999.9	46
2,000 to 4,999.9	26
5,000 to 9,999.9	6
10,000 or more	4
Total	903

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: UmatillaTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>2,372</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>2,372</u>
a. Acres with no trees under 1" DBH per acre	<u>558</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>1,186</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>0</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>628</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>4,743</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>1,186</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>2,372</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>1,186</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: UnionCOMMERCIAL FOREST LAND AREA: 748,150

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	493,000	
Bureau of Land Management	4,000	
State Forest	927	
County	311	
Municipal		
Total Public Forest Land Area		498,238

Private Land

Total Private Forest Land Area	249,912
--------------------------------	---------

9,716 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

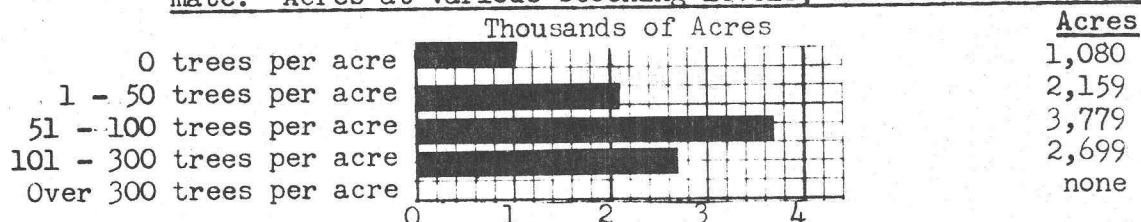
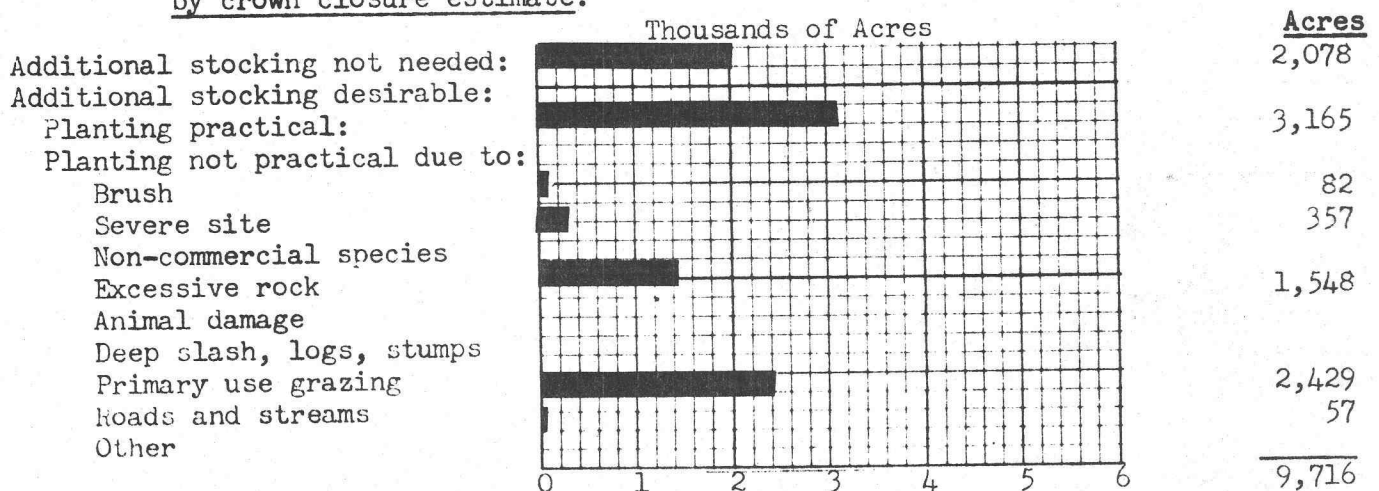


Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:



OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: UnionTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	6,477	2,699	41.7	3,779	58.3
in small ownerships (under 5,000 acres)	7,557	1,619	21.4	5,938	78.6

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	2,159
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	0
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	7,557

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	100
10.1 to 99.9	188
100 to 999.9	365
1,000 to 1,999.9	34
2,000 to 4,999.9	24
5,000 to 9,999.9	4
10,000 or more	3
Total	718

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: UnionTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>4,858</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>4,858</u>
a. Acres with no trees under 1" DBH per acre	<u>2,393</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>1,386</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>0</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>1,080</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>1,080</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>9,716</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>1,313</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>5,704</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>1,619</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: WallowaCOMMERCIAL FOREST LAND AREA: 817,260

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	572,000	
Bureau of Land Management	5,000	
State Forest	764	
County		
Municipal		

Total Public Forest Land Area	577,764
-------------------------------	---------

Private Land

Total Private Forest Land Area	239,496
--------------------------------	---------

17,427 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

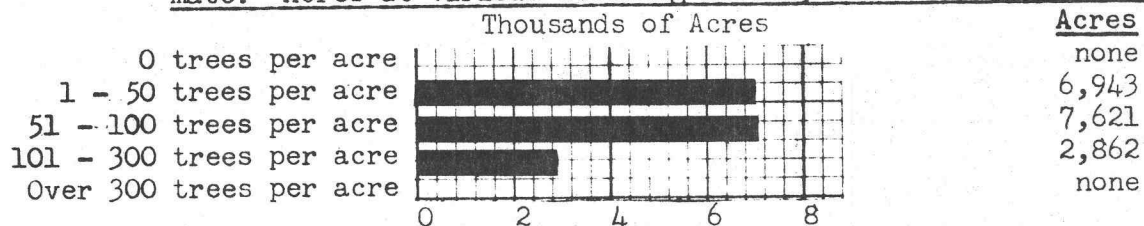
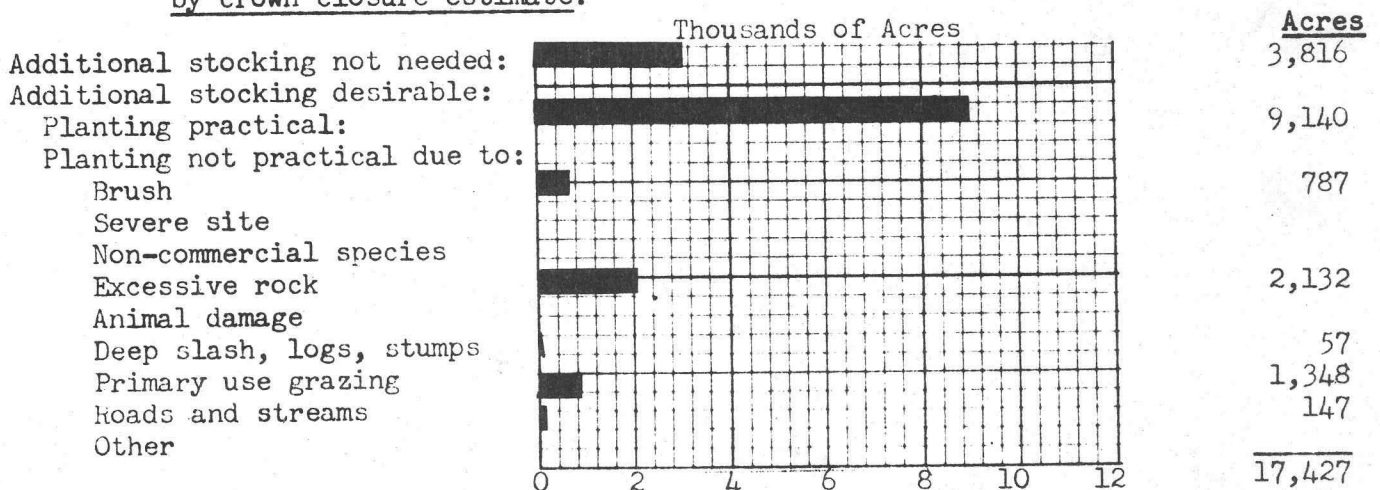


Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:



OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: WallowaTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	7,758	3,370	43.4	4,389	56.6
in small ownerships (under 5,000 acres)	19,827	6,782	34.2	13,038	65.8

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	0
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	17,427

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	226
10.1 to 99.9	245
100 to 999.9	395
1,000 to 1,999.9	47
2,000 to 4,999.9	21
5,000 to 9,999.9	5
10,000 or more	3
Total	942

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: WallowaTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>5,587</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>4,889</u>
a. Acres with no trees under 1" DBH per acre	<u>6,620</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>323</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>0</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>0</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>706</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>16,565</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>3,183</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>862</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>13,538</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: Wasco

COMMERCIAL FOREST LAND AREA: 283,730

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	202,000	
Bureau of Land Management	3,000	
State Forest	240	
County		
Municipal	3,160	
Total Public Forest Land Area		208,000

Private Land

Total Private Forest Land Area 75,330

10,477 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

	Thousands of Acres	Acres
0 trees per acre		none
1 - 50 trees per acre	3.492	3,492
51 - 100 trees per acre	4.889	4,889
101 - 300 trees per acre	2.095	2,095
Over 300 trees per acre		none

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	Acres
Additional stocking not needed:	2,274
Additional stocking desirable:	
Planting practical:	5,413
Planting not practical due to:	
Brush	
Severe site	489
Non-commercial species	1,438
Excessive rock	524
Animal damage	
Deep slash, logs, stumps	
Primary use grazing	339
Roads and streams	
Other	
	10,477

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: WascoTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	3,492	2,095	60.0	1,397	40.0
in small ownerships (under 5,000 acres)	12,571	3,492	27.8	9,079	72.2

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	0
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	10,476

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	111
10.1 to 99.9	239
100 to 999.9	232
1,000 to 1,999.9	14
2,000 to 4,999.9	8
5,000 to 9,999.9	2
10,000 or more	1
Total	607

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: WascoTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>5,587</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>4,889</u>
a. Acres with no trees under 1" DBH per acre	<u>3,492</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>698</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>0</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>698</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>2,095</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>10,476</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>5,587</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>2,794</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>339</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: Washington

COMMERCIAL FOREST LAND AREA: 233,300

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	12,000	
Bureau of Land Management	50,334	
State Forest	423	
County	5,548	
Municipal		
Total Public Forest Land Area		68,305

<u>Private Land</u>	<u>Acres</u>	<u>Acres</u>
Classified Reforestation land	17,350	
Optional tax land	6,635	
Ad valorem land	141,010	
Total Private Forest Land Area		164,995

2,675 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

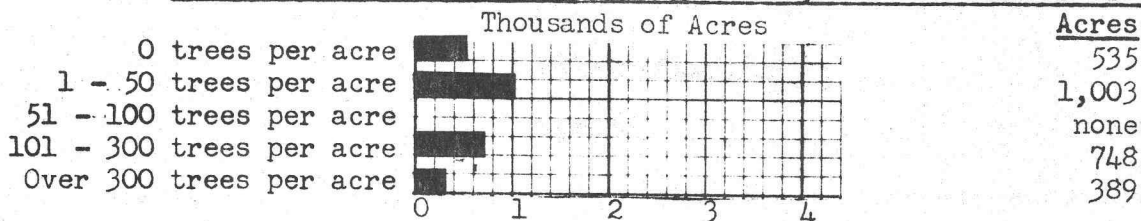
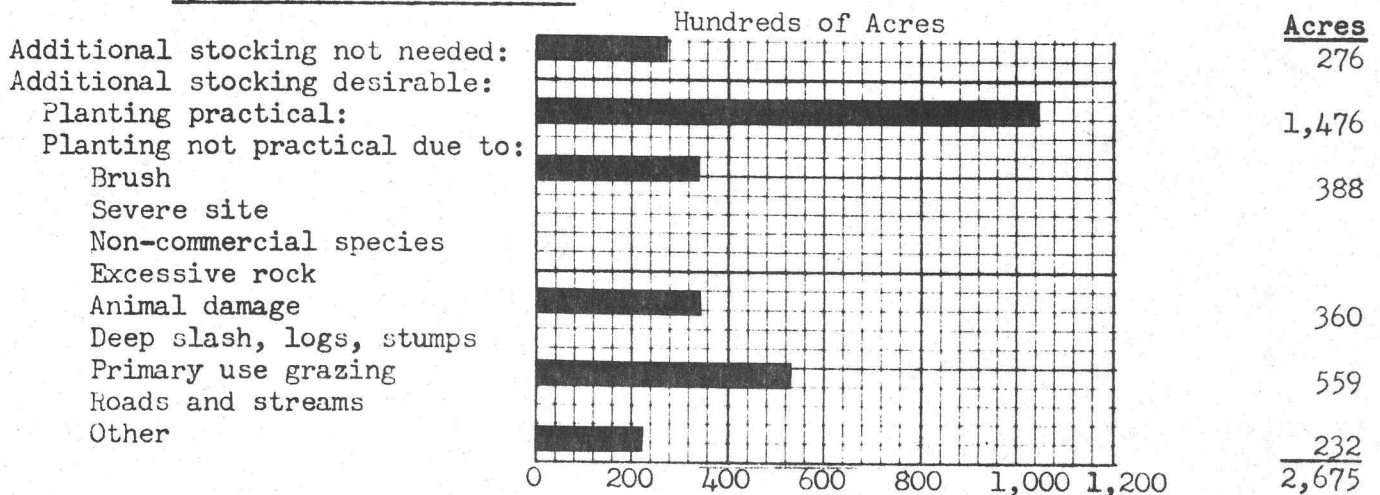


Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:



OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: WashingtonTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	25,182	25,182	100.0	0	0
in small ownerships (under 5,000 acres)	46,868	44,193	94.3	2,675	5.7

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	0
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	10,341

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	225
10.1 to 99.9	665
100 to 999.9	157
1,000 to 1,999.9	6
2,000 to 4,999.9	1
5,000 to 9,999.9	2
10,000 or more	2
Total	1,058

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: WashingtonTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>423</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>2,252</u>
a. Acres with no trees under 1" DBH per acre	<u>535</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>713</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>290</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>713</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>2,095</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>10,476</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>5,587</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>2,794</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>339</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: WheelerCOMMERCIAL FOREST LAND AREA: 329,110

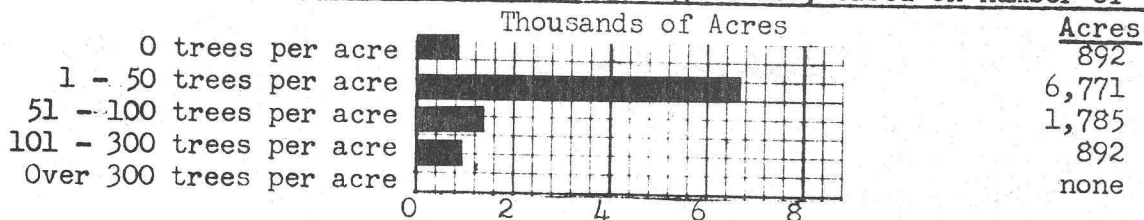
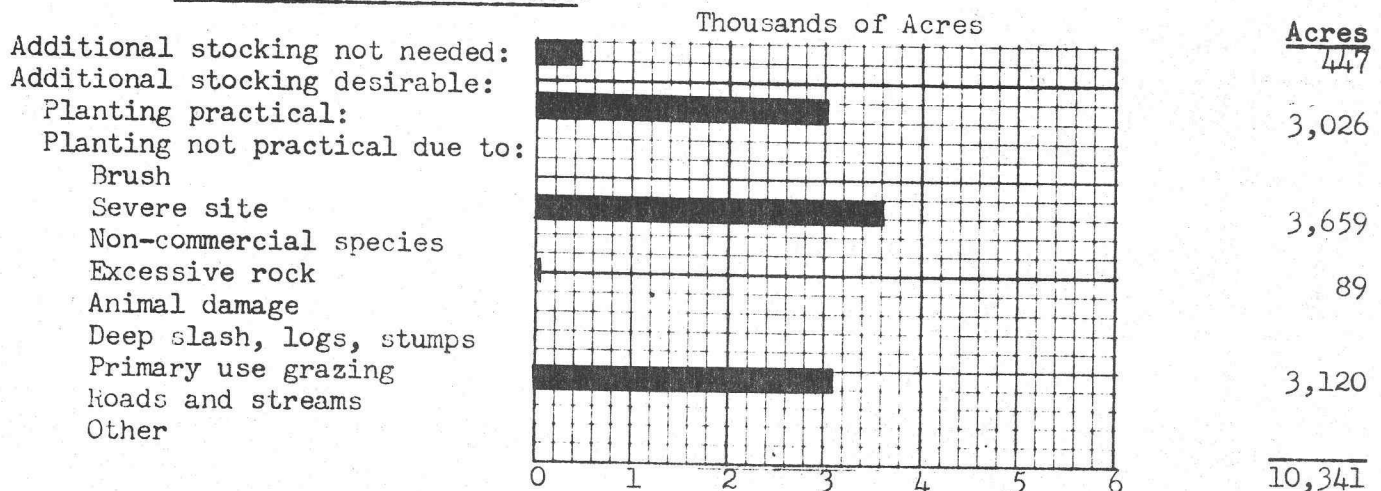
<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	143,000	
Bureau of Land Management	9,000	
State Forest	760	
County		
Municipal		

Total Public Forest Land Area	152,760
-------------------------------	---------

Private Land

Classified Reforestation land	48,880
Ad valorem land	127,470

Total Private Forest Land Area	176,350
--------------------------------	---------

10,341 Acres of forest land in private ownership stocked below 40% by crown closure estimate.Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: WheelerTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	14,280	5,724	40.0	8,556	60.0
in small ownerships (under 5,000 acres)	5,355	3,590	67.0	1,785	33.0

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	0
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	0
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	10,341

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	19
10.1 to 99.9	27
100 to 999.9	82
1,000 to 1,999.9	28
2,000 to 4,999.9	25
5,000 to 9,999.9	4
10,000 or more	5
Total	190

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: WheelerTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>892</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>9,448</u>
a. Acres with no trees under 1" DBH per acre	<u>4,450</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>3,213</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>892</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>892</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>892</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>10,341</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>6,771</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>2,677</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: YamhillCOMMERCIAL FOREST LAND AREA: 146,010

<u>Public Land</u>	<u>Acres</u>	<u>Acres</u>
National Forest	28,000	
Bureau of Land Management	39,000	
State Forest	80	
County		
Municipal	5,548	
Total Public Forest Land Area		72,628

<u>Private Land</u>	<u>Acres</u>	<u>Acres</u>
Classified Reforestation land	18,425	
Optional tax land	1,407	
Ad valorem land	53,550	
Total Private Forest Land Area		73,382

5,272 Acres of forest land in private ownership stocked below 40% by crown closure estimate.

Table 1. Present condition of private land stocked below 40% by crown closure estimate: Acres at various stocking levels, based on number of trees per acre:

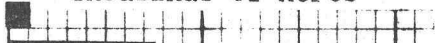
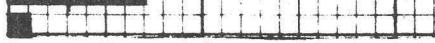
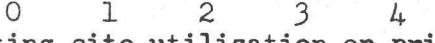
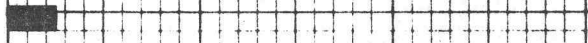
	Thousands of Acres	Acres
0 trees per acre		232
1 - 50 trees per acre		1,538
51 - 100 trees per acre		1,774
101 - 300 trees per acre		1,440
Over 300 trees per acre		288

Table 2. Problems affecting site utilization on private land stocked below 40% by crown closure estimate:

	Thousands of Acres	Acres
Additional stocking not needed:		613
Additional stocking desirable:		
Planting practical:		2,676
Planting not practical due to:		
Brush		832
Severe site		
Non-commercial species		
Excessive rock		
Animal damage		360
Deep slash, logs, stumps		
Primary use grazing		559
Roads and streams		
Other		232
		<u>5,272</u>

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: YamhillTable 3. Forest land classed as cutover or class "C" reproduction by STC inventory by ownership size class and present stocking level:

Ownership class	Total Acres	Stocking level			
		above 40%		below 40%	
		Acres	%	Acres	%
in large ownerships (over 5,000 acres)	29,522	28,082	95.1	1,440	4.9
in small ownerships (under 5,000 acres)	33,843	30,010	88.7	3,833	11.3

Table 4. Condition of acres stocked at less than 40%, based on combinations of conifer or hardwood basal area 7" DBH or larger and number of trees per acre:

Condition class	Acres
1. 50 sq. ft. or more conifer basal area	0
2. Less than (1) but classed as conifer type stocked at 300 or more trees per acre	288
3. Less than (2) but 50 sq. ft. or more non-conifer basal area	720
4. Less than (3) but classed as non-conifer type stocked at 300 or more trees per acre	0
5. Less than (4)	4,265

Table 5. Number of private forest land owners in county by size class of ownership, July 1968:

<u>Size class (acres)</u>	<u>Number of owners</u>
0 to 10	104
10.1 to 99.9	254
100 to 999.9	123
1,000 to 1,999.9	1
2,000 to 4,999.9	0
5,000 to 9,999.9	1
10,000 or more	1
Total	484

OREGON RESOURCE SURVEY OF CUTOVER FOREST LANDS: May 1968

County: YamhillTable 6. Acres at various stocking levels based on number of trees per acre by size class on private forest land stocked below 40% by crown closure estimate:

Acres with more than 50 trees per acre 1" DBH or larger	<u>2,160</u>
Acres with less than 50 trees per acre 1" DBH or larger	<u>3,113</u>
a. Acres with no trees under 1" DBH per acre	<u>1,050</u>
b. Acres with 1-50 trees under 1" DBH per acre	<u>0</u>
c. Acres with 51-100 trees under 1" DBH per acre	<u>1,054</u>
d. Acres with over 100 trees under 1" DBH per acre	<u>1,008</u>

Table 7. Acres at various stocking levels of residual basal area in trees 7" DBH or larger on private land stocked below 40% by crown closure estimate:

Acres with no residual basal area in conifer trees 7" DBH or larger	<u>232</u>
Acres with no residual basal area in non-conifer trees 7" DBH or larger	<u>2,680</u>
Acres with 1-10 sq. ft. basal area in conifer trees 7" DBH or larger	<u>3,168</u>
Acres with 1-10 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>1,872</u>
Acres with 10-50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>1,872</u>
Acres with 10-50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in conifer trees 7" DBH or larger	<u>0</u>
Acres with over 50 sq. ft. basal area in non-conifer trees 7" DBH or larger	<u>720</u>

APPENDIX "B"

Statistical Summaries

By Condition

STATISTICAL SUMMARIES

Explanation of Tables 1 - Y47

Table 1. Total acres XO and C Reproduction.

Area inventoried by State Department of Revenue as clearcut area, non-stocked (XO), and class "C" reproduction stands.

Classifications of X, recent clear cut area (logged within the last five years) and XO (old clear cut area logging more than five years old) are included in this class.

Class "C" Reproduction includes medium stocked stands averaging less than five inches DBH and light stocking of stands up to ten inches DBH. In stands of smaller trees, a minimum of forty trees per acre well-distributed over the area is required. Classification of D2-, D2-, 1-, D1-, D1= are included in this class.

The acres listed for each county were compiled from State Department of Revenue inventory records.

Table Y1. Acres above 40% stocking by crown closure.

Density of stocking is based primarily on the degree of crown closure as seen on aerial photo, modified by ground observation of stem spacing in small reproduction, some hardwood stands and other unusual circumstances. For small reproduction stands (generally up to approximately 1" DBH and/or 7 to 8' total height), it is based on the degree of crown closure the present stand would have when the smallest trees now present reach 1" DBH or 7 to 8' height. For large crowned, low stem density hardwoods, it is based more on basal area and stem spacing than crown cover.

Stands classed as "A" or "B" reproduction in the State Department of Revenue inventory have 40% or more stocking. Table Y2 shows the acres classified by the State Department of Revenue as Class "C" reproduction or cutover that should now be classed as Class "A" or "B" reproduction stands.

Table Y2. Acres stocked below 40%.

These acres are based on degree of crown closure using the procedure described in the explanation of Table Y2. Forest types examined that fell into this classification were further examined and classified according to the information obtained from point sampling.

Table Y5. Acres stocked below 40% based on degree of crown closure, which are stocked at the rate of 1,000 trees per acre based on point sampling.

An explanation for this discrepancy between the two systems is in order. Baker County, as an example, has 10,479 acres stocked below 40% based on crown closure estimate. Some of these areas actually had more than 1,000 trees per acre that were not observable on aerial photographs, or were obscured by other vegetation (since no plots were taken by the State Department of Revenue to determine

stocking density in the cutover and reproduction stands). Recent cutover were automatically placed in the below 40% category, even though they may have been stocked immediately after logging. The 1338 acres shown in Table Y5 shows the portion of the 10,479 acres in Table Y2 that is actually stocked at the 1,000 tree per acre level. This is based on mean distance to the closest tree for each type island.

Table Y6. Acres stocked at 300 trees per acre.

This table is based on the mean distance to the closest tree for each type island. The acreage represents the area in type islands that were estimated to have less than 40% stocking by crown closure method, which are actually stocked at the 300 tree per acre level or better.

Tables Y7 to Y17.

The acres are based on answers to the following questions: 1. Would an additional tree at this point contribute significantly to more effective utilization of the site? 2. If answer to question 1 is yes, would it be practical to plant a tree at or near this point (within 7.45')? 3. If answer to question 2 is no, why? There are nine possible answers to question 3.

Table Y7 shows the acres for which the answer to question 1 is no.

Table Y8 shows the acres for which the answers to questions 1 and 2 are both yes.

Tables Y9 to Y17 show the acres for which the answer to question 1 is yes, question 2, no. Each of the nine tables shows the acreage for which planting would be impractical because of a specific reason.

Tables Y18 to Y25. Basal Area of trees 7" DBH and larger.

Some type islands classed as cutover or class C reproduction stands had larger size classes of merchantable timber on them. These were usually residual stands left after logging. Table Y18 shows the acres with no coniferous trees 7" DBH or larger.

Table Y19 shows acres having no non-coniferous trees 7" DBH or larger.

Tables Y20 and Y21 give the acres, respectively, which have 1-10 square feet of conifer or hardwood basal area per acre 7" DBH or larger.

Tables Y22 and Y23 give the acres having 10-50 square feet of basal area per acre of conifer or hardwoods 7" DBH or larger.

Tables Y24 and Y25 give the acres having over 50 square feet of basal area per acre in conifer or hardwood 7" DBH or larger.

Table Y26. Average number of trees per acre.

Of the area below 40% stocking based on crown closure, the average number of trees per acre determined on the basis of the point sample distance to the closest tree.

Tables Y27 to Y31. Acres at specific stocking levels.

These tables are based on the point sample distance to the closest tree. The average number of trees per acre was computed for each type island examined, and acres in type islands having 0, 1-50, 50-100, 100-300 and over 300 trees per acre shown in tables Y27-Y31.

Tables Y32 to Y37. Stocking combinations.

Tables Y32 and Y33 show the acres having more or less than 50 trees per acre greater than 1" DBH; tables Y34 to Y37 show the acres having fewer than 50 trees per acre 1" DBH or larger, stratified into 4 stocking levels of trees less than 1" DBH.

Tables Y38 to Y43. Ownership class.

These tables divide the State Department of Revenue inventory lands classed as Cutover or Reprod. "C" into large (over 5,000 acres) and small ownerships, and list the area above and below the 40% stocking level by crown closure.

Tables Y44 to Y48. Supplementary analysis.

This was added to the original program to produce more specific information about species composition of stocking. These tables are only an example of what might be compiled from data processing. Further refinements are possible, should they be warranted. The series takes the total acres found to be below 40% stocking by crown closure estimate and classifies type island acres into successively less desirable conditions.

Table Y44 screens out the area having 50 square feet or more of conifer basal area per acre.

Table Y45 shows how many of the remaining acres have 300 or more conifer seedlings per acre.

Table Y46 shows the area that has neither the 50 square foot conifer basal area minimum nor the 300 conifer seedlings per acre, but does have 50 square feet of non-conifer basal area per acre. This would include alder, maple, etc.

Table Y47 shows the area that does not meet the standards for Table Y46, but has at least 300 non-conifer seedlings per acre.

Table Y48 contains all the remaining acreage that is below the level of Table Y47.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table 1

County	Total Acres XO & Reprod. C	County	Total Acres XO & Reprod. C
Baker	15,689.	Lake	11,041.
Benton	13,886.	Lane	358,551.
Clackamas	103,046.	Lincoln	143,352.
Clatsop		Linn	170,254.
Columbia	40,737.	Malheur	1,509.
Coos	241,178.	Marion	45,627.
Crook	7,837.	Morrow	8,725.
Curry	112,582.	Multnomah	8,944.
Deschutes	26,177.	Polk	70,647.
Douglas	387,840.	Sherman	
Gilliam		Tillamook	79,205.
Grant	51,730.	Umatilla	26,089.
Harney	4,749.	Union	14,035.
Hood River	23,638.	Wallowa	27,585.
Jackson		Wasco	16,063.
Jefferson	23,851.	Washington	72,050.
Josephine	83,737.	Wheeler	19,635.
Klamath	93,233.	Yamhill	63,365.
		TOTAL	2,366,582.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y1

County	Acres above 40% stocking by Crown Closure	County	Acres above 40% stocking by Crown Closure
Baker	5,211.	Lake	3,542.
Benton	11,146.	Lane	218,815.
Clackamas	57,475.	Lincoln	124,665.
Clatsop		Linn	112,430.
Columbia	36,623.	Malheur	0.
Coos	171,431.	Marion	30,748.
Crook	4,987.	Morrow	4,027.
Curry	84,210.	Multnomah	6,192.
Deschutes	12,982.	Polk	52,704.
Douglas	213,435.	Sherman	
Gilliam		Tillamook	64,424.
Grant	31,038.	Umatilla	21,345.
Harney	4,071.	Union	4,318.
Hood River	16,757.	Wallowa	10,158.
Jackson		Wasco	5,587.
Jefferson	18,088.	Washington	69,374.
Josephine	74,109.	Wheeler	9,294.
Klamath	66,239.	Yamhill	58,092.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y2

County	Acres stocked Below 40%	County	Acres stocked Below 40%
Baker	10,479.	Lake	7,499.
Benton	2,740.	Lane	139,736.
Clackamas	45,571.	Lincoln	18,685.
Clatsop		Linn	57,824.
Columbia	8,115.	Malheur	1,509.
Coos	69,745.	Marion	14,879.
Crook	2,850.	Morrow	4,698.
Curry	28,371.	Multnomah	2,752.
Deschutes	13,195.	Polk	17,943.
Douglas	174,403.	Sherman	
Gilliam		Tillamook	14,781.
Grant	20,692.	Umatilla	4,743.
Harney	678.	Union	9,716.
Hood River	6,881.	Wallowa	17,427.
Jackson		Wasco	10,476.
Jefferson	5,763.	Washington	2,675.
Josephine	9,628.	Wheeler	10,341.
Klamath	26,994.	Yamhill	5,273.
		TOTAL	767,062.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y5

County	Below 40% C.C. Acres Stocked 1,000 per acre	County	Below 40% C.C. Acres Stocked 1,000 per acre
Baker	1,338.	Lake	567.
Benton	374.	Lane	52,950.
Clackamas	4,630.	Lincoln	4,192.
Clatsop		Linn	15,352.
Columbia	1,345.	Malheur	298.
Coos	11,922.	Marion	492.
Crook	756.	Morrow	559.
Curry	7,271.	Multnomah	0.
Deschutes	3,003.	Polk	3,570.
Douglas	71,408.	Sherman	
Gilliam		Tillamook	2,265.
Grant	2,055.	Umatilla	761.
Harney	25.	Union	2,279.
Hood River	1,629.	Wallowa	3,104.
Jackson		Wasco	1,497.
Jefferson	1,214.	Washington	356.
Josephine	1,621.	Wheeler	504.
Klamath	2,216.	Yamhill	697.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y6

County	Acres stocked at 300 trees per acre	County	Acres stocked at 300 trees per acre
Baker	3,370.	Lake	1,464.
Benton	971.	Lane	82,595.
Clackamas	6,973.	Lincoln	8,512.
Clatsop		Linn	26,114.
Columbia	2,674.	Malheur	569.
Coos	23,885.	Marion	838.
Crook	1,058.	Morrow	1,438.
Curry	10,528.	Multnomah	0.
Deschutes	5,306.	Polk	7,460.
Douglas	109,773.	Sherman	
Gilliam		Tillamook	4,759.
Grant	4,686.	Umatilla	1,635.
Harney	68.	Union	2,732.
Hood River	3,146.	Wallowa	3,685.
Jackson		Wasco	3,286.
Jefferson	2,402.	Washington	828.
Josephine	3,489.	Wheeler	1,398.
Klamath	5,360.	Yamhill	1,711.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y7

County	Acres Additional Trees Not Desirable	County	Acres Additional Trees Not Desirable
Baker	2,362.	Lake	330.
Benton	204.	Lane	67,608.
Clackamas	1,605.	Lincoln	6,065.
Clatsop		Linn	3,599.
Columbia	2,335.	Malheur	363.
Coos	5,067.	Marion	232.
Crook	1,468.	Morrow	1,946.
Curry	6,292.	Multnomah	0.
Deschutes	6,426.	Polk	3,666.
Douglas	69,657.	Sherman	
Gilliam		Tillamook	3,395.
Grant	6,180.	Umatilla	2,839.
Harney	0.	Union	2,078.
Hood River	759.	Wallowa	3,816.
Jackson		Wasco	2,274.
Jefferson	2,358.	Washington	276.
Josephine	4,196.	Wheeler	447.
Klamath	2,760.	Yamhill	613.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y8

County	Acres Add. trees Desirable & Practical	County	Acres Add. trees Desirable & Practical
Baker	5,810.	Lake	5,245.
Benton	2,246.	Lane	51,400.
Clackamas	7,773.	Lincoln	5,315.
Clatsop		Linn	43,958.
Columbia	2,674.	Malheur	458.
Coos	32,380.	Marion	1,763.
Crook	1,194.	Morrow	403.
Curry	2,387.	Multnomah	0.
Deschutes	4,704.	Polk	6,624.
Douglas	68,620.	Sherman	
Gilliam		Tillamook	8,032.
Grant	4,000.	Umatilla	1,067.
Harney	0.	Union	3,165.
Hood River	5,840.	Wallowa	9,140.
Jackson		Wasco	5,413.
Jefferson	2,778.	Washington	1,476.
Josephine	5,008.	Wheeler	3,026.
Klamath	17,111.	Yamhill	2,676.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y9

County	Desirable, but not Practical a/c Brush	County	Desirable, but not Practical a/c Brush
<u>Baker</u>	107.	<u>Lake</u>	1,180.
<u>Benton</u>	0.	<u>Lane</u>	4,123.
<u>Clackamas</u>	4,500.	<u>Lincoln</u>	5,705.
<u>Clatsop</u>		<u>Linn</u>	459.
<u>Columbia</u>	984.	<u>Malheur</u>	0.
<u>Coos</u>	5,428.	<u>Marion</u>	1,316.
<u>Crook</u>	0.	<u>Morrow</u>	34.
<u>Curry</u>	2,038.	<u>Multnomah</u>	1,376.
<u>Deschutes</u>	214.	<u>Polk</u>	1,520.
<u>Douglas</u>	4,369.	<u>Sherman</u>	
<u>Gilliam</u>		<u>Tillamook</u>	1,733.
<u>Grant</u>	213.	<u>Umatilla</u>	0.
<u>Harney</u>	0.	<u>Union</u>	82.
<u>Hood River</u>	0.	<u>Wallowa</u>	787.
<u>Jackson</u>		<u>Wasco</u>	0.
<u>Jefferson</u>	0.	<u>Washington</u>	388.
<u>Josephine</u>	368.	<u>Wheeler</u>	0.
<u>Klamath</u>	1,977.	<u>Yamhill</u>	832.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y10

County	Desirable but Not Practical On a/c Severe Site	County	Desirable but Not Practical On a/c Severe Site
Baker	0.	Lake	0.
Benton	0.	Lane	0.
Clackamas	106.	Lincoln	1,185.
Clatsop		Linn	1,831.
Columbia	0.	Malheur	0.
Coos	0.	Marion	0.
Crook	0.	Morrow	268.
Curry	115.	Multnomah	688.
Deschutes	1,203.	Polk	141.
Douglas	3,986.	Sherman	
Gilliam		Tillamook	0.
Grant	5,950.	Umatilla	0.
Harney	645.	Union	357.
Hood River	0.	Wallowa	0.
Jackson		Wasco	489.
Jefferson	70.	Washington	0.
Josephine	0.	Wheeler	3,659.
Klamath	3,403.	Yamhill	0.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y11

County	Desirable but Not Practical on a/c Non- Commercial Species	County	Desirable but Not Practical on a/c Non- Commercial Species
<u>Baker</u>	0.	<u>Lake</u>	38.
<u>Benton</u>	0.	<u>Lane</u>	0.
<u>Clackamas</u>	1,203.	<u>Lincoln</u>	0.
<u>Clatsop</u>		<u>Linn</u>	0.
<u>Columbia</u>	272.	<u>Malheur</u>	0.
<u>Coos</u>	0.	<u>Marion</u>	0.
<u>Crook</u>	0.	<u>Morrow</u>	0.
<u>Curry</u>	115.	<u>Multnomah</u>	0.
<u>Deschutes</u>	1,203.	<u>Polk</u>	111.
<u>Douglas</u>	3,986.	<u>Sherman</u>	
<u>Gilliam</u>		<u>Tillamook</u>	872.
<u>Grant</u>	0.	<u>Umatilla</u>	0.
<u>Harney</u>	0.	<u>Union</u>	0.
<u>Hood River</u>	33.	<u>Wallowa</u>	0.
<u>Jackson</u>		<u>Wasco</u>	1,438.
<u>Jefferson</u>	93.	<u>Washington</u>	0.
<u>Josephine</u>	36.	<u>Wheeler</u>	0.
<u>Klamath</u>	976.	<u>Yamhill</u>	0.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table y12

County	Desirable but Not practical on a/c rock	County	Desirable but Not practical on a/c rock
<u>Baker</u>	330.	<u>Lake</u>	476.
<u>Benton</u>	0.	<u>Lane</u>	1,588.
<u>Clackamas</u>	53.	<u>Lincoln</u>	0.
<u>Clatsop</u>		<u>Linn</u>	915.
<u>Columbia</u>	0.	<u>Malheur</u>	575.
<u>Coos</u>	478.	<u>Marion</u>	0.
<u>Crook</u>	0.	<u>Morrow</u>	268.
<u>Curry</u>	1,283.	<u>Multnomah</u>	0.
<u>Deschutes</u>	157.	<u>Polk</u>	657.
<u>Douglas</u>	2,986.	<u>Sherman</u>	
<u>Gilliam</u>		<u>Tillamook</u>	182.
<u>Grant</u>	2,428.	<u>Umatilla</u>	0.
<u>Harney</u>	0.	<u>Union</u>	1,548.
<u>Hood River</u>	214.	<u>Wallowa</u>	2,132.
<u>Jackson</u>		<u>Wasco</u>	524.
<u>Jefferson</u>	396.	<u>Washington</u>	0.
<u>Josephine</u>	19.	<u>Wheeler</u>	89.
<u>Klamath</u>	666.	<u>Yamhill</u>	0.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y13

County	Desirable but Not practical on a/c animal Damage	County	Desirable but Not practical on a/c animal Damage
Baker	486.	Lake	0.
Benton	0.	Lane	0.
Clackamas	3,258.	Lincoln	0.
Clatsop		Linn	0.
Columbia	0.	Malheur	0.
Coos	527.	Marion	0.
Crook	0.	Morrow	0.
Curry	2,755.	Multnomah	0.
Deschutes	0.	Polk	0.
Douglas	113.	Sherman	
Gilliam		Tillamook	0.
Grant	0.	Umatilla	837.
Harney	0.	Union	0.
Hood River	0.	Wallowa	0.
Jackson		Wasco	0.
Jefferson	68.	Washington	0.
Josephine	0.	Wheeler	0.
Klamath	0.	Yamhill	360.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y14

County	Desirable but Not practical on a/c deep slash, logs and stumps	County	Desirable but Not practical on a/c deep slash, logs and stumps
Baker	0.	Lake	0.
Benton	0.	Lane	2,825.
Clackamas	0.	Lincoln	0.
Clatsop		Linn	0.
Columbia	0.	Malheur	0.
Coos	0.	Marion	0.
Crook	0.	Morrow	0.
Curry	587.	Multnomah	0.
Deschutes	0.	Polk	325.
Douglas	6,275.	Sherman	
Gilliam		Tillamook	0.
Grant	0.	Umatilla	0.
Harney	0.	Union	0.
Hood River	0.	Wallowa	57.
Jackson		Wasco	0.
Jefferson	0.	Washington	0.
Josephine	0.	Wheeler	0.
Klamath	0.	Yamhill	0.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y15

County	Desirable but not practical on a/c primary Use Grazing	County	Desirable but not practical on a/c primary Use Grazing
Baker	1,248.	Lake	0.
Benton	0.	Lane	7,171.
Clackamas	106.	Lincoln	0.
Clatsop		Linn	6,970.
Columbia	1,077.	Malheur	75.
Coos	16,172.	Marion	10,143.
Crook	0.	Morrow	1,701.
Curry	11,554.	Multnomah	688.
Deschutes	0.	Polk	1,643.
Douglas	7,709.	Sherman	
Gilliam		Tillamook	436.
Grant	1,205.	Umatilla	0.
Harney	34.	Union	2,429.
Hood River	0.	Wallowa	1,348.
Jackson		Wasco	339.
Jefferson	0.	Washington	0.
Josephine	0.	Wheeler	3,120.
Klamath	0.	Yamhill	559.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y16

County	Desirable But Not practical on a/c roads and streams	County	Desirable but not practical on a/c roads and streams
Baker	135.	Lake	0.
Benton	0.	Lane	717.
Clackamas	224.	Lincoln	148.
Clatsop		Linn	0.
Columbia	70.	Malheur	38.
Coos	3,984.	Marion	0.
Crook	150.	Morrow	67.
Curry	0.	Multnomah	0.
Deschutes	0.	Polk	177.
Douglas	10,353.	Sherman	
Gilliam		Tillamook	130.
Grant	83.	Umatilla	0.
Harney	0.	Union	57.
Hood River	35.	Wallowa	147.
Jackson		Wasco	0.
Jefferson	0.	Washington	0.
Josephine	0.	Wheeler	0.
Klamath	34.	Yamhill	0.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y17

County	Desirable but Not Practical on a/c other	County	Desirable But Not Practical on a/c Other
Baker	0.	Lake	230.
Benton	290.	Lane	4,303.
Clackamas	10,623.	Lincoln	268.
Clatsop		Linn	92.
Columbia	702.	Malheur	0.
Coos	5,708.	Marion	1,426.
Crook	0.	Morrow	10.
Curry	0.	Multnomah	688.
Deschutes	44.	Polk	1,078.
Douglas	335.	Sherman	
Gilliam		Tillamook	0.
Grant	634.	Umatilla	0.
Harney	0.	Union	0.
Hood River	0.	Wallowa	0.
Jackson		Wasco	0.
Jefferson	0.	Washington	535.
Josephine	0.	Wheeler	0.
Klamath	67.	Yamhill	232.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y18

County	No Residual Basal Area in Conifer 7" DBH and Larger	County	No Residual Basal Area in Conifer 7" DBH and Larger
Baker	0.	Lake	761.
Benton	1,924.	Lane	69,668.
Clackamas	29,887.	Lincoln	7,180.
Clatsop		Linn	31,636.
Columbia	2,529.	Malheur	0.
Coos	54,554.	Marion	11,896.
Crook	0.	Morrow	0.
Curry	26,266.	Multnomah	2,064.
Deschutes	0.	Polk	7,551.
Douglas	59,679.	Sherman	
Gilliam		Tillamook	7,812.
Grant	709.	Umatilla	0.
Harney	0.	Union	1,080.
Hood River	2,246.	Wallowa	706.
Jackson		Wasco	2,095.
Jefferson	0.	Washington	535.
Josephine	716.	Wheeler	892.
Klamath	4,729.	Yamhill	232.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y19

County	Acres with no Residual Hardwood Basal Area 7" DBH and Larger	County	Acres with no Residual Hardwood Basal Area 7" DBH and Larger
<u>Baker</u>	10,479	<u>Lake</u>	7,119.
<u>Benton</u>	1,924.	<u>Lane</u>	86,670.
<u>Clackamas</u>	35,199.	<u>Lincoln</u>	12,016.
<u>Clatsop</u>		<u>Linn</u>	46,282.
<u>Columbia</u>	5,586.	<u>Malheur</u>	1,509.
<u>Coos</u>	54,554.	<u>Marion</u>	13,230.
<u>Crook</u>	2,850.	<u>Morrow</u>	4,698.
<u>Curry</u>	21,006.	<u>Multnomah</u>	2,752.
<u>Deschutes</u>	13,195.	<u>Polk</u>	11,122.
<u>Douglas</u>	124,839.	<u>Sherman</u>	
<u>Gilliam</u>		<u>Tillamook</u>	11,951.
<u>Grant</u>	20,692.	<u>Umatilla</u>	4,743.
<u>Harney</u>	678.	<u>Union</u>	9,716.
<u>Hood River</u>	5,375.	<u>Wallowa</u>	16,565.
<u>Jackson</u>		<u>Wasco</u>	10,476.
<u>Jefferson</u>	5,763.	<u>Washington</u>	1,149.
<u>Josephine</u>	8,912.	<u>Wheeler</u>	10,341.
<u>Klamath</u>	26,323.	<u>Yamhill</u>	2,680.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y20

County	7" DBH or Larger - 1 to 10 sq. ft. Conifer	County	7" DBH or Larger - 1 to 10 sq. ft. Conifer
Baker	4,476.	Lake	3,896.
Benton	817.	Lane	35,138.
Clackamas	6,969.	Lincoln	5,255.
Clatsop		Linn	18,024.
Columbia	4,884.	Malheur	0.
Coos	10,199.	Marion	2,271.
Crook	712.	Morrow	1,242.
Curry	1,052.	Multnomah	688.
Deschutes	3,537.	Polk	7,436.
Douglas	67,978.	Sherman	
Gilliam		Tillamook	5,516.
Grant	7,228.	Umatilla	1,186.
Harney	678.	Union	1,313.
Hood River	4,351.	Wallowa	3,183.
Jackson		Wasco	5,587.
Jefferson	2,255.	Washington	1,328.
Josephine	6,617.	Wheeler	6,771.
Klamath	7,789.	Yamhill	3,168.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y21

County	7" DBH or Larger - 1 to 10 sq. ft. Hardwood	County	7" DBH or Larger - 1 to 10 sq. ft. Hardwood
Baker	0.	Lake	0.
Benton	817.	Lane	49,480.
Clackamas	3,782.	Lincoln	2,369.
Clatsop		Linn	6,277.
Columbia	2,529.	Malheur	0.
Coos	15,192.	Marion	713.
Crook	0.	Morrow	0.
Curry	5,261.	Multnomah	0.
Deschutes	0.	Polk	4,778.
Douglas	36,472.	Sherman	
Gilliam		Tillamook	2,103.
Grant	0.	Umatilla	0.
Harney	0.	Union	0.
Hood River	1,506.	Wallowa	862.
Jackson		Wasco	0.
Jefferson	0.	Washington	1,102.
Josephine	716.	Wheeler	0.
Klamath	671.	Yamhill	1,872.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y22

County	7" DBH or Larger - 10 to 50 sq. ft. Conifer	County	7" DBH or Larger - 10 to 50 sq. ft. Conifer
Baker	6,002.	Lake	2,842.
Benton	0.	Lane	31,344.
Clackamas	5,727.	Lincoln	6,249.
Clatsop		Linn	8,164.
Columbia	702.	Malheur	1,132.
Coos	4,993.	Marion	713.
Crook	1,425.	Morrow	2,785.
Curry	1,052.	Multnomah	0.
Deschutes	9,657.	Polk	2,249.
Douglas	44,625.	Sherman	
Gilliam		Tillamook	1,453.
Grant	12,755.	Umatilla	2,372.
Harney	0.	Union	5,704.
Hood River	285.	Wallowa	13,538.
Jackson		Wasco	2,794.
Jefferson	3,508.	Washington	812.
Josephine	2,295.	Wheeler	2,677.
Klamath	14,476.	Yamhill	1,872.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y23

County	7" DBH or Larger - 10 to 50 sq. ft. Hardwood	County	7" DBH or Larger - 10 to 50 sq. ft. Hardwood
Baker	0.	Lake	381.
Benton	0.	Lane	3,586.
Clackamas	6,591.	Lincoln	4,299.
Clatsop		Linn	3,435.
Columbia	0.	Malheur	0.
Coos	0.	Marion	937.
Crook	0.	Morrow	0.
Curry	2,104.	Multnomah	0.
Deschutes	0.	Polk	1,494.
Douglas	10,825.	Sherman	
Gilliam		Tillamook	727.
Grant	0.	Umatilla	0.
Harney	0.	Union	0.
Hood River	0.	Wallowa	0.
Jackson		Wasco	0.
Jefferson	0.	Washington	423.
Josephine	0.	Wheeler	0.
Klamath	0.	Yamhill	0.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y24

County	7" DBH or Larger-over 50 Conifer	County	7" DBH or Larger-over 50 Conifer
Baker	0.	Lake	0.
Benton	0.	Lane	3,586.
Clackamas	6,591.	Lincoln	0.
Clatsop		Linn	0.
Columbia	0.	Malheur	377.
Coos	0.	Marion	0.
Crook	0.	Morrow	671.
Curry	2,104.	Multnomah	0.
Deschutes	0.	Polk	706.
Douglas	10,825.	Sherman	
Gilliam		Tillamook	0.
Grant	0.	Umatilla	1,186.
Harney	0.	Union	1,619.
Hood River	0.	Wallowa	0.
Jackson		Wasco	0.
Jefferson	0.	Washington	0.
Josephine	0.	Wheeler	0.
Klamath	0.	Yamhill	0.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y25

County	7" DBH or Larger -over 50 Hardwood	County	7" DBH or Larger - over 50 Hardwood
Baker	0.	Lake	0.
Benton	0.	Lane	0.
Clackamas	0.	Lincoln	0.
Clatsop		Linn	1,831.
Columbia	0.	Malheur	0.
Coos	0.	Marion	0.
Crook	0.	Morrow	0.
Curry	0.	Multnomah	0.
Deschutes	0.	Polk	549.
Douglas	2,268.	Sherman	
Gilliam		Tillamook	0.
Grant	0.	Umatilla	0.
Harney	0.	Union	0.
Hood River	0.	Wallowa	0.
Jackson		Wasco	339.
Jefferson	0.	Washington	0.
Josephine	0.	Wheeler	0.
Klamath	0.	Yamhill	720.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y26

County	Average Trees per Acre	County	Average Trees per Acre
Baker	92.	Lake	52.
Benton	256.	Lane	465.
Clackamas	64.	Lincoln	246.
Clatsop		Linn	264.
Columbia	101.	Malheur	90.
Coos	193.	Marion	26.
Crook	80.	Morrow	54.
Curry	277.	Multnomah	0.
Deschutes	152.	Polk	170.
Douglas	529.	Sherman	
Gilliam		Tillamook	97.
Grant	55.	Umatilla	77.
Harney	12.	Union	85.
Hood River	232.	Wallowa	69.
Jackson		Wasco	68.
Jefferson	130.	Washington	122.
Josephine	92.	Wheeler	37.
Klamath	55.	Yamhill	100.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y27

County	Acres with No trees Per Acre	County	Acres with No trees Per Acre
Baker	0.	Lake	381.
Benton	1,107.	Lane	10,757.
Clackamas	29,887.	Lincoln	1,452.
Clatsop		Linn	9,998.
Columbia	1,405.	Malheur	0.
Coos	20,686.	Marion	11,183.
Crook	0.	Morrow	0.
Curry	11,536.	Multnomah	2,752.
Deschutes	0.	Polk	2,378.
Douglas	16,724.	Sherman	
Gilliam		Tillamook	2,693.
Grant	709.	Umatilla	0.
Harney	0.	Union	1,080.
Hood River	806.	Wallowa	0.
Jackson		Wasco	0.
Jefferson	0.	Washington	535.
Josephine	0.	Wheeler	892.
Klamath	3,256.	Yamhill	232.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y28

County	Acres With 1 to 50 Trees Per Acre	County	Acres With 1 to 50 Trees Per Acre
Baker	2,986.	Lake	4,707.
Benton	0.	Lane	10,757.
Clackamas	2,125.	Lincoln	4,369.
Clatsop		Linn	5,077.
Columbia	1,442.	Malheur	478.
Coos	6,229.	Marion	1,426.
Crook	712.	Morrow	1,342.
Curry	1,052.	Multnomah	0.
Deschutes	2,122	Polk	3,066.
Douglas	7,684.	Sherman	
Gilliam		Tillamook	2,718.
Grant	12,188.	Umatilla	1,744.
Harney	678.	Union	2,159.
Hood River	455.	Wallowa	6,943.
Jackson		Wasco	3,492.
Jefferson	818.	Washington	1,003.
Josephine	1,861.	Wheeler	6,771.
Klamath	10,571.	Yamhill	1,538.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y29

County	Acres with 50 to 100 Trees per Acre	County	Acres with 50 to 100 Trees per Acre
Baker	3,315.	Lake	889.
Benton	0.	Lane	20,588.
Clackamas	4,249.	Lincoln	3,455.
Clatsop		Linn	4,503.
Columbia	2,809.	Malheur	528.
Coos	8,274.	Marion	713.
Crook	712.	Morrow	3,356.
Curry	2,104.	Multnomah	0.
Deschutes	5,465.	Polk	4,991.
Douglas	17,200.	Sherman	
Gilliam		Tillamook	3,452.
Grant	6,378.	Umatilla	1,814.
Harney	0.	Union	3,779.
Hood River	1,931.	Wallowa	7,621.
Jackson		Wasco	4,889.
Jefferson	2,372.	Washington	0.
Josephine	5,620.	Wheeler	1,785.
Klamath	9,675.	Yamhill	1,774.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y30

County	Acres with 100 to 300 Trees per Acre	County	Acres with 100 to 300 Trees per Acre
Baker	4,177.	Lake	1,523.
Benton	817.	Lane	20,197.
Clackamas	9,112.	Lincoln	4,504.
Clatsop		Linn	24,562.
Columbia	2,458.	Malheur	503.
Coos	15,256.	Marion	1,558.
Crook	1,425.	Morrow	0.
Curry	3,156.	Multnomah	0.
Deschutes	3,484.	Polk	5,058.
Douglas	45,774.	Sherman	
Gilliam		Tillamook	4,978.
Grant	709.	Umatilla	1,186.
Harney	0.	Union	2,699.
Hood River	1,680.	Wallowa	2,862.
Jackson		Wasco	2,095.
Jefferson	1,871.	Washington	748.
Josephine	2,147.	Wheeler	892.
Klamath	3,293.	Yamhill	1,440.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y31

County	Acres with More than 300 Trees Per Acre	County	Acres with More than 300 Trees Per Acre
Baker	0.	Lake	0.
Benton	817.	Lane	77,438.
Clackamas	4,198.	Lincoln	4,902.
Clatsop		Linn	13,684.
Columbia	0.	Malheur	0.
Coos	19,300.	Marion	0.
Crook	0.	Morrow	0.
Curry	10,522.	Multnomah	0.
Deschutes	2,122.	Polk	2,450.
Douglas	87,022.	Sherman	
Gilliam		Tillamook	941.
Grant	709.	Umatilla	0.
Harney	0.	Union	0.
Hood River	2,008.	Wallowa	0.
Jackson		Wasco	0.
Jefferson	702.	Washington	389.
Josephine	0.	Wheeler	0.
Klamath	199.	Yamhill	288.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y32

County	Acres with More than 50 Trees Per acre Over 1" DBH	County	Acres with More than 50 Trees Per acre Over 1" DBH
Baker	6,131.	Lake	1,142.
Benton	1,634.	Lane	63,195.
Clackamas	1,925.	Lincoln	6,629.
Clatsop		Linn	20,900.
Columbia	1,405.	Malheur	880.
Coos	10,502.	Marion	224.
Crook	1,425.	Morrow	570.
Curry	4,209.	Multnomah	0.
Deschutes	9,852.	Polk	5,788.
Douglas	43,318.	Sherman	
Gilliam		Tillamook	5,301.
Grant	1,417.	Umatilla	2,372.
Harney	0.	Union	4,858.
Hood River	985.	Wallowa	10,483.
Jackson		Wasco	5,587.
Jefferson	2,572.	Washington	423.
Josephine	716.	Wheeler	892.
Klamath	8,440.	Yamhill	2,160.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y33

County	Acres with Less than 50 trees Per acre Over 1" DBH	County	Acres with Less than 50 trees Per Acre Over 1" DBH
Baker	4,348.	Lake	6,357.
Benton	1,107.	Lane	76,541.
Clackamas	43,646.	Lincoln	12,056.
Clatsop		Linn	36,923.
Columbia	6,710.	Malheur	629.
Coos	59,244.	Marion	14,655.
Crook	1,425.	Morrow	4,128.
Curry	24,162.	Multnomah	2,752.
Deschutes	3,343.	Polk	12,155.
Douglas	126,086.	Sherman	
Gilliam		Tillamook	9,480.
Grant	19,275.	Umatilla	2,372.
Harney	678.	Union	4,858.
Hood River	5,896.	Wallowa	6,943.
Jackson		Wasco	4,889.
Jefferson	3,191.	Washington	2,252.
Josephine	8,912.	Wheeler	9,448.
Klamath	18,553.	Yamhill	3,113.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y34

County	Acres w/less Than 50 trees Per acre over 1" DBH and no Trees less than 1" DBH	County	Acres w/less Than 50 trees Per Acre over 1" DBH and no Trees less than 1" DBH
Baker	1,653.	Lake	2,284.
Benton	1,107.	Lane	14,342.
Clackamas	30,949.	Lincoln	2,267.
Clatsop		Linn	15,075.
Columbia	1,405.	Malheur	101.
Coos	21,784.	Marion	11,896.
Crook	0.	Morrow	671.
Curry	11,536.	Multnomah	2,752.
Deschutes	2,122.	Polk	3,791.
Douglas	17,343.	Sherman	
Gilliam		Tillamook	3,957.
Grant	7,795.	Umatilla	558.
Harney	0.	Union	2,393.
Hood River	806.	Wallowa	6,620.
Jackson		Wasco	3,492.
Jefferson	818.	Washington	535.
Josephine	0.	Wheeler	4,450.
Klamath	9,933.	Yamhill	1,050.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y35

County	Acres w/less that 50 trees per acre over 1" DBH and 1-50 trees less than 1" DBH	County	Acres w/less than 50 trees per acre over 1" DBH and 1-50 trees less than 1" DBH
Baker	0.	Lake	1,572.
Benton	0.	Lane	3,586.
Clackamas	2,125.	Lincoln	1,185.
Clatsop		Linn	0.
Columbia	0.	Malheur	0.
Coos	0.	Marion	713.
Crook	712.	Morrow	1,443.
Curry	0.	Multnomah	0.
Deschutes	0.	Polk	947.
Douglas	1,361.	Sherman	
Gilliam		Tillamook	0.
Grant	3,543.	Umatilla	1,186.
Harney	678.	Union	1,386.
Hood River	408.	Wallowa	323.
Jackson		Wasco	698.
Jefferson	702.	Washington	713.
Josephine	1,622.	Wheeler	3,213.
Klamath	5,480.	Yamhill	0.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y36

County	Acres w/less than 50 trees per acre Over 1" DBH and 50- 100 trees less Than 1" DBH	County	Acres with less than 50 trees per acre Over 1" DBH and 50- 100 trees less than 1" DBH
Baker	1,982.	Lake	850.
Benton	0.	Lane	17,928.
Clackamas	0.	Lincoln	1,185.
Clatsop		Linn	841.
Columbia	2,536.	Malheur	377.
Coos	6,735.	Marion	713.
Crook	0.	Morrow	1,342.
Curry	1,052.	Multnomah	0.
Deschutes	0.	Polk	1,359.
Douglas	10,722.	Sherman	
Gilliam		Tillamook	1,453.
Grant	2,976.	Umatilla	0.
Harney	0.	Union	0.
Hood River	285.	Wallowa	0.
Jackson		Wasco	0.
Jefferson	0.	Washington	290.
Josephine	1,607.	Wheeler	892.
Klamath	671.	Yamhill	1,054.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y37

County	Acres w/less than 50 trees per acre Over 1" DBH and more Than 100 trees less Than 1" DBH	County	Acres w/less than 50 trees per acre Over 1" DBH and more Than 100 trees less Than 1" DBH
Baker	713.	Lake	1,650.
Benton	0.	Lane	40,686.
Clackamas	10,572.	Lincoln	7,420.
Clatsop		Linn	21,007.
Columbia	2,769.	Malheur	151.
Coos	30,725.	Marion	1,334.
Crook	712.	Morrow	671.
Curry	11,574.	Multnomah	0.
Deschutes	1,220.	Polk	6,058.
Douglas	9,661.	Sherman	
Gilliam		Tillamook	4,069.
Grant	4,960.	Umatilla	628.
Harney	0.	Union	1,080.
Hood River	4,397.	Wallowa	0.
Jackson		Wasco	698.
Jefferson	1,671.	Washington	713.
Josephine	5,683.	Wheeler	892.
Klamath	2,470.	Yamhill	1,008.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y38

County	Small Ownerships Less than 5,000 Acre total Holdings	County	Small Ownerships Less than 5,000 Acre total Holdings
Baker	10,697.	Lake	5,330.
Benton	7,352.	Lane	111,151.
Clackamas	66,927.	Lincoln	53,313.
Clatsop		Linn	43,937.
Columbia	19,666.	Malheur	1,509.
Coos	120,588.	Marion	35,646.
Crook	1,425.	Morrow	3,356.
Curry	71,547.	Multnomah	6,192.
Deschutes	2,830.	Polk	24,020.
Douglas	99,795.	Sherman	
Gilliam		Tillamook	30,519.
Grant	26,928.	Umatilla	18,974.
Harney	3,392.	Union	7,557.
Hood River	9,038.	Wallowa	19,827.
Jackson		Wasco	12,571.
Jefferson	3,508.	Washington	46,868.
Josephine	65,129.	Wheeler	5,355.
Klamath	29,513.	Yamhill	33,843.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y39

County	Small Ownerships Stocked above 40% Crown Closure	County	Small Ownerships Stocked above 40% Crown Closure
Baker	3,071.	Lake	0.
Benton	5,428.	Lane	67,506.
Clackamas	25,138.	Lincoln	41,685.
Clatsop		Linn	23,596.
Columbia	13,659.	Malheur	0.
Coos	82,423.	Marion	21,480.
Crook	712.	Morrow	1,342.
Curry	54,421.	Multnomah	3,440.
Deschutes	707.	Polk	16,780.
Douglas	55,673.	Sherman	
Gilliam		Tillamook	24,459.
Grant	14,740.	Umatilla	14,230.
Harney	2,714.	Union	1,619.
Hood River	5,932.	Wallowa	6,788.
Jackson		Wasco	3,492.
Jefferson	2,806.	Washington	44,193.
Josephine	57,648.	Wheeler	3,540.
Klamath	15,676.	Yamhill	30,010.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y40

County	Small Ownerships Stocked Below 40% Crown Closure	County	Small Ownerships Stocked Below 40% Crown Closure
Baker	7,626.	Lake	5,330.
Benton	1,924.	Lane	43,644.
Clackamas	41,789.	Lincoln	11,628.
Clatsop		Linn	20,340.
Columbia	6,009.	Malheur	1,509.
Coos	38,165.	Marion	14,167.
Crook	712.	Morrow	2,014.
Curry	17,126.	Multnomah	2,752.
Deschutes	2,122.	Polk	7,240.
Douglas	44,122.	Sherman	
Gilliam		Tillamook	6,016.
Grant	12,188.	Umatilla	4,743.
Harney	678.	Union	5,938.
Hood River	3,106.	Wallowa	13,038.
Jackson		Wasco	9,079.
Jefferson	702.	Washington	2,675.
Josephine	7,481.	Wheeler	1,785.
Klamath	13,837.	Yamhill	3,833.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y41

County	Large ownerships Greater than 5,000 acres Total Holdings	County	Large ownerships Greater than 5,000 acres Total Holdings
Baker	4,992.	Lake	5,711.
Benton	6,535.	Lane	247,400.
Clackamas	36,119.	Lincoln	90,038.
Clatsop		Linn	126,317.
Columbia	21,071.	Malheur	0.
Coos	120,588.	Marion	9,981.
Crook	6,412.	Morrow	5,369.
Curry	41,034.	Multnomah	2,752.
Deschutes	23,347.	Polk	46,627.
Douglas	288,044.	Sherman	
Gilliam		Tillamook	48,686.
Grant	24,802.	Umatilla	7,115.
Harney	1,357.	Union	6,477.
Hood River	14,600.	Wallowa	7,758.
Jackson		Wasco	3,492.
Jefferson	20,344.	Washington	25,182.
Josephine	18,608.	Wheeler	14,280.
Klamath	63,721.	Yamhill	29,522.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y42

County	Large Ownerships Stocked above 40% Crown Closure	County	Large Ownerships Stocked above 40% Crown Closure
Baker	2,139.	Lake	3,542.
Benton	5,718.	Lane	151,308.
Clackamas	32,337.	Lincoln	82,982.
Clatsop		Linn	88,834.
Columbia	18,964.	Malheur	0.
Coos	89,009.	Marion	9,268.
Crook	4,275.	Morrow	2,685.
Curry	29,789.	Multnomah	2,752.
Deschutes	12,275.	Polk	35,924.
Douglas	157,762.	Sherman	
Gilliam		Tillamook	39,966.
Grant	16,299.	Umatilla	7,115.
Harney	1,357.	Union	2,699.
Hood River	10,825.	Wallowa	3,370.
Jackson		Wasco	2,095.
Jefferson	15,282.	Washington	25,182.
Josephine	16,461.	Wheeler	5,724.
Klamath	50,564.	Yamhill	28,082.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y43

County	Large ownerships Stocked below 40% Crown Closure	County	Large ownerships Stocked below 40% Crown Closure
Baker	2,853.	Lake	2,169.
Benton	817.	Lane	96,091.
Clackamas	3,782.	Lincoln	7,057.
Clatsop		Linn	37,483.
Columbia	2,107.	Malheur	0.
Coos	31,580.	Marion	713.
Crook	2,137.	Morrow	2,685.
Curry	11,245.	Multnomah	0.
Deschutes	11,072.	Polk	10,703.
Douglas	130,282.	Sherman	
Gilliam		Tillamook	8,720.
Grant	8,504.	Umatilla	0.
Harney	0.	Union	3,779.
Hood River	3,775.	Wallowa	4,389.
Jackson		Wasco	1,397.
Jefferson	5,061.	Washington	0.
Josephine	2,147.	Wheeler	8,556.
Klamath	13,157.	Yamhill	1,440.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y44

County	Acres w/50 or more Sq. ft. conifer Basal Area 7" and Over per acre	County	Acres w/50 or more Sq. ft. Conifer Basal Area 7" and Over per acre
Baker	0.	Lake	0.
Benton	0.	Lane	3,586.
Clackamas	2,988.	Lincoln	1,185.
Clatsop		Linn	0.
Columbia	0.	Malheur	377.
Coos	0.	Marion	0.
Crook	712.	Morrow	671.
Curry	0.	Multnomah	0.
Deschutes	0.	Polk	706.
Douglas	2,122.	Sherman	
Gilliam		Tillamook	0.
Grant	0.	Umatilla	1,186.
Harney	0.	Union	2,159.
Hood River	0.	Wallowa	0.
Jackson		Wasco	0.
Jefferson	0.	Washington	0.
Josephine	0.	Wheeler	0.
Klamath	0.	Yamhill	0.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y45

County	Acres w/50 or more Sq. ft. Conifer Basal Area 7" and Over per acre but 300 trees per acre	County	Acres w/50 or more Sq. ft. Conifer Basal Area 7" and Over per acre but 300 trees per acre
Baker	0.	Lake	0.
Benton	817.	Lane	73,852.
Clackamas	3,135.	Lincoln	4,902.
Clatsop		Linn	13,684.
Columbia	0.	Malheur	0.
Coos	16,734.	Marion	0.
Crook	0.	Morrow	0.
Curry	7,365.	Multnomah	0.
Deschutes	2,122.	Polk	2,450.
Douglas	80,363.	Sherman	
Gilliam		Tillamook	214.
Grant	709.	Umatilla	0.
Harney	0.	Union	0.
Hood River	2,008.	Wallowa	0.
Jackson		Wasco	0.
Jefferson	702.	Washington	389.
Josephine	0.	Wheeler	0.
Klamath	199.	Yamhill	288.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y46

County	Less than (Y45) but 50 sq. ft. Hardwood Basal Area	County	Less than (Y45) but 50 sq. ft. Hardwood Basal Area
<u>Baker</u>	0.	<u>Lake</u>	0.
<u>Benton</u>	0.	<u>Lane</u>	0.
<u>Clackamas</u>	0.	<u>Lincoln</u>	0.
<u>Clatsop</u>		<u>Linn</u>	1,831.
<u>Columbia</u>	0.	<u>Malheur</u>	0.
<u>Coos</u>	0.	<u>Marion</u>	0.
<u>Crook</u>	0.	<u>Morrow</u>	0.
<u>Curry</u>	0.	<u>Multnomah</u>	0.
<u>Deschutes</u>	0.	<u>Polk</u>	549.
<u>Douglas</u>	0.	<u>Sherman</u>	
<u>Gilliam</u>		<u>Tillamook</u>	0.
<u>Grant</u>	0.	<u>Umatilla</u>	0.
<u>Harney</u>	0.	<u>Union</u>	0.
<u>Hood River</u>	0.	<u>Wallowa</u>	0.
<u>Jackson</u>		<u>Wasco</u>	0.
<u>Jefferson</u>	0.	<u>Washington</u>	0.
<u>Josephine</u>	0.	<u>Wheeler</u>	0.
<u>Klamath</u>	0.	<u>Yamhill</u>	720.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y47

County	Less than (Y46) but Hardwood type with 300 trees Per Acre	County	Less than (Y46) but Hardwood type with 300 trees Per acre
Baker	0.	Lake	0.
Benton	0.	Lane	0.
Clackamas	0.	Lincoln	0.
Clatsop		Linn	0.
Columbia	0.	Malheur	0.
Coos	2,566.	Marion	0.
Crook	0.	Morrow	0.
Curry	3,156.	Multnomah	0.
Deschutes	0.	Polk	0.
Douglas	4,536.	Sherman	
Gilliam		Tillamook	727.
Grant	0.	Umatilla	0.
Harney	0.	Union	0.
Hood River	0.	Wallowa	0.
Jackson		Wasco	0.
Jefferson	0.	Washington	0.
Josephine	0.	Wheeler	0.
Klamath	0.	Yamhill	0.

STATE OF OREGON
DEPARTMENT OF FORESTRY

1967 RESOURCE SURVEY STATISTICAL SUMMARY

Table Y48

County	Less than (Y47)	County	Less than (Y47)
<u>Baker</u>	<u>10,479.</u>	<u>Lake</u>	<u>7,499.</u>
<u>Benton</u>	<u>1,924.</u>	<u>Lane</u>	<u>62,298.</u>
<u>Clackamas</u>	<u>39,448.</u>	<u>Lincoln</u>	<u>12,598.</u>
<u>Clatsop</u>		<u>Linn</u>	<u>42,308.</u>
<u>Columbia</u>	<u>8,115.</u>	<u>Malheur</u>	<u>1,132.</u>
<u>Coos</u>	<u>50,446.</u>	<u>Marion</u>	<u>14,879.</u>
<u>Crook</u>	<u>2,137.</u>	<u>Morrow</u>	<u>4,027.</u>
<u>Curry</u>	<u>17,849.</u>	<u>Multnomah</u>	<u>2,752.</u>
<u>Deschutes</u>	<u>11,072.</u>	<u>Polk</u>	<u>14,237.</u>
<u>Douglas</u>	<u>87,382.</u>	<u>Sherman</u>	
<u>Gilliam</u>		<u>Tillamook</u>	<u>13,840.</u>
<u>Grant</u>	<u>19,983.</u>	<u>Umatilla</u>	<u>3,558.</u>
<u>Harney</u>	<u>678.</u>	<u>Union</u>	<u>7,557.</u>
<u>Hood River</u>	<u>4,873.</u>	<u>Wallowa</u>	<u>17,427.</u>
<u>Jackson</u>		<u>Wasco</u>	<u>10,476.</u>
<u>Jefferson</u>	<u>5,061.</u>	<u>Washington</u>	<u>2,286.</u>
<u>Josephine</u>	<u>9,628.</u>	<u>Wheeler</u>	<u>10,341.</u>
<u>Klamath</u>	<u>26,795.</u>	<u>Yamhill</u>	<u>4,265.</u>

APPENDIX "C"

General Sampling Plan

A general sampling plan for Forest resources,
based on a frame composed of Tax Commission Records

W. Scott Overton *

Introduction:

The detailed records maintained by State Tax Commission, under standardized procedures established by that Commission, constitute a valuable body of source materials from which to construct efficient sampling plans for objective studies of state forest resources. The present report describes such a plan in some detail with an example of its application to a sampling survey of reproduction. As a matter of format, each section of this report will be developed in general, and then the example elaborated. This treatment is designed to facilitate application of the general plan to additional problems.

The questions posed relate to some measurable property of the forests of the entire state, or to a part of the state, as for example, a stocking index, arbitrarily defined. Such a question can be conveniently broken down into a set of identical questions about each of a set of subdivisions of the region of interest, say the counties in the region. We consider the problem at the county level; it is a simple matter to expand to any group of counties, and one can even apply some sampling scheme at the county level if desired.

Given, then, a county to be characterized, it is desired to select a sample of land units in the county, to visit those units, and to measure the properties of interest of the selected units. Then the properties of the county are estimated by expanding the sample data according to the theory of finite sampling. Even in the most primitive sampling scheme, one must obtain a frame - a list of land units of size such that one can conveniently measure the property of interest, with appropriate materials to ensure accurate location of a selected land unit in the field. There are several very desirable refinements:

* Dr. W. Scott Overton is Professor of Forest Biometrics, Oregon State University, Corvallis, Oregon.

1) one would like to rule out of consideration all land units that are of no interest in the survey (in a forest reproduction study, one rules out urban developments, mature timber, grassland, etc.) , 2) one would like to take advantage of any existing information relative to the properties of interest in the form of stratification, or other sampling technique which effectively "uses" the prior information to provide a more efficient estimation scheme.

It is difficult to imagine a source of materials which meet these requirements more satisfactorily than do the tax records, when they exist in usable form. All land classified on the tax rolls as forest land is characterized in the record; all non forest land is automatically excluded. Small land units are defined, with the basic unit size set at 40 acres, with a very few larger and a fair number smaller due to small ownership. Each unit is type-mapped with the acreage and tax classification of each type island readily available. Further, detailed materials are available to allow the tax field men to locate the units in the field, which materials can be used equally well by survey personnel. In addition, these records are on IBM cards in many counties, which allows for easy construction of a frame tape from which descriptive tabulations may be made, and samples drawn.

In summary, then, the tax records not only provide a convenient physical frame from which to sample, but also provide much descriptive material which can be utilized in the construction of efficient sampling methods and estimators. In effect, the tremendous effort and cost of developing these materials which has been expended by the tax commission can be exploited for little additional effort and cost.

The general model

Let the Universe, U , be the collection of all land units in the county tax rolls which contain land classed as forest land. (It is apparent that this definition may be changed to include other classifications if so desired.)

Then, for each element (unit) $u \in U$, define a number, $x(u)$ such that $x(u)$ is designated prior to sampling (i. e., $x(u)$ may be a constant, assigned as a part of the sampling scheme, a variable, assigned as a part of the sampling scheme, or a characteristic of the land unit as recorded in the tax records). Note that $x(u)$ may be vector valued - there may be many numbers so designated for a given unit. However, we will usually specify a univariate x , and perhaps change the specification from one occasion to another.

In the example, $x(u)$ is defined as the number of acres in the unit u which are classified on the tax rolls as either cutover or reproduction - C. Further, the units will be called plots, and each plot will have one or more recognized type islands. Acreage of each of these type islands is known as is the reproduction status, as characterized by the Tax Commission.

Also, for each element $u \in U$, define a vector valued number, $y(u)$ such that $y(u) = [y_1(u), y_2(u), \dots, y_k(u)]$ is a vector of k unknown characteristics of the element u which are to be determined for each of the sample units. Further, define

$$T_{yi} = \sum_U y_i(u), \quad i = 1, 2, \dots, k,$$

as the parameters of interest and specify that any other parameters will be functions of these totals.

Example 1. Let the parameter of interest be the total acres of those type islands such that the type island crown closure is 40% or greater. Then, define for each unit (plot) the quantity y to be the acres of type islands in that unit which fit the criterion. Then $\sum_U y = T_y$, the specified parameter.

Example 2. Let the parameter of interest be P , the stocking percentage, defined as the percent of quadrats of size a in the entire universe of interest which are stocked, according to some definition of stocking. Then we can write

$$P = \frac{100 T_{y1}}{T_{y2}}$$

where y_1 is the number of stocked quadrats in a unit and y_2 is the number of quadrats in a unit,

and where for a particular unit of area x and stocking percentage p , $y_1 = xp/100a$ and $y_2 = x/a$. Thus, $T_{y2} = T_x/a$ and

$$P = \frac{100 a T_{y1}}{T_x} = \frac{T_{y3}}{T_x}$$

where $y_3 = xp$.

The purpose of phrasing all questions so that they may be decomposed into questions regarding functions of population totals is to allow use of the general theorems of unbiased estimation of population totals. Functions of these estimates will be consistent for the appropriate parameters but not necessarily unbiased.

A total of 48 parameters were specified and estimated in the example survey. These are defined in an appendix to this report. For purpose of illustration, we need only use a typical parameter.

The sampling procedure

The sampling procedure used may be designated as a two stage sample with inclusion probability proportional to size, π_{px} , at the first stage and arbitrary sampling for unit characterization at the second stage. The theory at the first stage level is clean; at the second stage level, assumptions are made that are not quite justified by the field sampling procedures. For example,

it is assumed that sample points are random, whereas they are essentially systematic in form and require an element of judgement. Since the most important sampling error is involved at the first stage, and since the second stage is primarily a problem of "adequately" characterizing the unit, it is considered that the problem is adequately modeled by this approach.

Selection of the first stage sampling units is according to the scheme discussed by Hartley and Rao (1962) (and recognized by them to be well known and widely used) who provide formulae for variance estimates. In essence, the scheme can be described as follows: The Universe is ordered in some manner and the order index $i = 1, 2, \dots, N$ assigned to the elements (plots). Then partial sums, $X_i = \sum_{j=1}^i x(u_j)$, are defined. Let the desired sample size be n and calculate $k = T_x/n$. Then select a number r at random between 1 and k and generate the set of numbers, $\{r, r+k, r+2k, \dots, r+k(n-1)\}$, which define the sample. Then identify an element u_i as a member of the sample if

$$X_{i-1} < v \leq X_i; v = r, r+k, \dots, r+k(n-1).$$

Operationally this is done in a slightly different manner, as indicated in an appendix.

As a result of this sampling procedure, a sample S of n elements is selected, without replacement, such that the inclusion probability π_u of element u is proportional to $x(u)$. Specifically, $\pi_u = \frac{nx(u)}{T_x}$. It follows from the Horvitz-Thompson theorem that

$$\hat{T}_y = \sum_S y/\pi = \frac{T_x}{n} \sum_S y/x \quad (1)$$

is unbiased for T_y , for any y defined in the manner indicated in the paragraph on the model.

The approximate variance of $\hat{T}_y$ is given by Hartley and Rao (their formula 5.17),

$$V_1(\hat{T}_y) \doteq \sum_U \pi \left[1 - \left(\frac{n-1}{n} \right) \pi \right] \left(\frac{y}{\pi} - \left(\frac{T_y}{n} \right) \right)^2, \quad (2)$$

and an estimator of this variance is given by their formula 5.20,

$$\hat{V}_1(\hat{T}_y) \doteq \frac{1}{(n-1)} \sum_{i < i'}^n \left[1 - (\pi_i + \pi_{i'}) + \left(\sum_U \pi_j^2 / n \right) \right] \left(\frac{y_i}{\pi_i} - \frac{y_{i'}}{\pi_{i'}} \right)^2 \quad (3)$$

Another estimator of (1) is obtained directly by applying the Horvitz-Thompson Theorem and substituting $\hat{T}_y$ for T_y ,

$$\hat{V}_2(\hat{T}_y) \doteq \sum_S \left[1 - \left(\frac{n-1}{n} \right) \pi \right] \left(\frac{y}{\pi} - \frac{\hat{T}_y}{n} \right)^2 \quad (4)$$

This expression (4) is the basic expression to be used in the present survey. Translation into the following form facilitates use.

$$\hat{V}(\hat{T}_y) = \sum_S A_i B_i^2 - 2C \sum_S A_i B_i + C^2 \sum_S A_i$$

where

$$A_i = \left[1 - \frac{n-1}{n} \pi_i \right]$$

$$B_i = y_i / \pi_i$$

$$C = \hat{T}_y / n.$$

The approximation (2) is derived from the variance expression given by Horvitz and Thompson under the restriction that the Universe is randomly ordered with respect to the variables of interest. The assumption that this condition holds appears to be acceptable in the present example.

It is noted that formulae (1), (2), and (4) apply to a one stage sample, so that they must be elaborated for the present application. The two stage formula for $\hat{T}_y$ is

$$\hat{T}_y = \frac{T_x}{n} \sum_S \hat{y}/x \quad (5)$$

where $\hat{y}$ is an estimate of y for the selected sampling units as determined by the second stage sampling scheme. It follows that

$$V_2(\hat{T}_y) \doteq V_1(\hat{T}_y) + \frac{T_x^2}{n^2} \sum_S \frac{1}{x^2} V(\hat{y}) \quad (6)$$

The first term of (6) is estimated by (4) and the appropriate $V(\hat{y})$ in the second term are estimated according to the nature of the variables and the second stage sampling procedure. For simplicity, simple random sampling is assumed at this stage. Further details of $\hat{y}$ and $\hat{V}(\hat{y})$ are given under the description of the various kinds of variables.

Parameter and variable definition

The parameters of interest are of several distinct kinds, requiring to some extent unique treatment. It is important that the conceptual basis of these parameters be understood by the user of the survey results, so that some discussion is indicated.

First, recall that $X(u)$ is the total acreage of the u^{th} plot with which the survey is concerned. In the example, a particular parcel (say 40 acres) contains 15 acres of grassland and mature timber and 25 acres of cutover and reproduction - C, then $X(u)$ is 25. This 25 acres may be defined in several type-islands, each of which is to be characterized in the field survey if this plot is chosen in the sample. Thus

$$X(u) = \sum x$$

with summation over type-islands in the plot.

The first kind of observation is a classification of type island. This leads to a binary indicator variable, Z , where Z is vector valued if the classification contains more than two categories. Thus, $Z_h = 1$ if the type island is classified in category h , and $Z_h = 0$ otherwise.

Then, the specification of the variable appropriate to any parameter defined conditionally with regard to a particular category is

$$y_h = \sum Z_h y$$

where summation is over the type islands in the plot.

To illustrate let $Z_2 = 1$ if a type island is judged to be stocked, on the average, below 40 percent according to crown closure, and $Z_2 = 0$ otherwise. Then, let $Z_1 = 1 - Z_2$.

Then $y_2 = \sum Z_2 X$ is the total acres in type islands of a particular unit which are stocked below 40 percent by this criterion and

$$y_1 = \sum (1 - Z_2) X$$

is the acres in type island which are stocked above 40 percent. It follows

that $\hat{T}_{y2} = \sum_S (y_2 / \pi)$

estimates the total acres in type islands stocked below 40 percent and

$$\hat{T}_{y1} = \sum_S (y_1 / \pi)$$

estimates the total acres in type islands stocked above 40 percent.

Further, note that $T_{y1} = \sum_U y_1$,

$$T_{y2} = \sum_U y_2.$$

The point here is that an estimator constructed in this manner is an estimator of a parameter which is expressed, "total acres in type-islands such that the entire type island is classified in such and such a category." Examples: Parameters 1, 2, 18-25, 27-37, 38-43.

Another group of parameters is expressed in equivalent acres, in which case the variable y for a plot is given by the summation over all type islands in the plot of the product of type island acreage X , the appropriate classification variable Z , and a variable p representing the proportion of quadrats having a certain characteristic;

$$y(u) = \sum Z X p$$

Examples of parameters defined by this kind of variable are: parameters 5-17.

The preceding examples will be seen as special cases of the general variable,

$$y(u) = \sum Z y$$

for which the estimator is

$$\hat{y}(u) = \sum Z \hat{y}$$

with summation over the estimated values for the appropriate quantities in the type islands and where the variable Z defined a conditionality criterion. (e.g., conditional on the classification, as below 40% stocked by crown closure). It follows that

$$V[\hat{y}(u)] = \sum Z V(\hat{y})$$

so long as estimates within type islands are independent, and Z is not a random variable.

Now $V(\hat{y})$, the variance of an estimated type island total, is estimated by

$$\hat{V}(\hat{y}) = \frac{X^2}{m a^2} s_y^2$$

where X is again the acreage of the type island,

m is the number of sample points or quadrats

a is the area of a quadrat (in acres), or a conversion factor if point sampling is used.

and s_y^2 is an appropriate measure of variation among the quadrat or point measurements.

It is noted that s_y^2 varies according to the nature of the observation.

Three forms are recognized.

1. Let the observation be incidence of stocking, according to some criterion. For example, consider the incidence of stocking of quadrats of $1/300^{\text{th}}$ of an acre. Then each sample point is rated

stocked or not stocked if a tree (however defined) lies within a circular plot centered at the sample point and of over $1/300^{\text{th}}$ of an acre. Then if y' is the number of stocked points out of m random points examined in the Type Island, y' is binomial with parameters m and P , where P is the true mean proportion of stocking in the Type Island. It follows that the appropriate form of s_y^2 is

$$\frac{y'}{m} \left(1 - \frac{y'}{m}\right).$$

This will be called the proportion variance.

2. Let the observation be basal area, obtained by an angle gauge. Then s_y^2 is the common sample variance among the number of trees seen at the m sample points,

$$s_y^2 = \frac{1}{m-1} \left\{ \sum t^2 - \frac{(\sum t)^2}{m} \right\}.$$

This will be called the simple random sample variance.

3. Let the observation be number of trees, determined by a procedure utilizing the distance, r , to, say, the nearest tree from each point in a series of random points. It is appropriate to use a jack-knife estimate of variance in such a case. To illustrate,

$$\text{let } \hat{y} = \frac{X(m-1)}{a \sum r^2}$$

where $a = (\pi/43,560)$.

This form of $\hat{y}$ yields an estimate of total trees in a Type Island.

(In practice, modification is made to account for a truncated observation)

Then,

$$s_y^2 = \frac{1}{m-1} \sum_{i=1}^m (\hat{y}_{(m-1)i} - \hat{y}_m)^2$$

$$\text{where } \hat{y}_m = \frac{(m-1)}{\sum_{i=1}^m r_i^2}$$

$$\text{and } \hat{y}_{(m-1)i} = \frac{(m-2)}{\sum_{\substack{j=1 \\ j \neq i}}^m r_j^2} .$$

Specification of data collected at a sample point.

It is possible to collect data at a sample point in such a manner that many decisions regarding the form of estimation may be made after collection, or may even be changed at a later date. An important example is collection of data on incidence of stocking. Let the measurement be made of distance, r , to the nearest "tree" to the sample point, where "tree" must be defined according to the specification of interest. Then, at any later date, it can be determined if this point is "stocked" at the density of, say, a tree per mil acre plot by noting if the measurement r is less than 3.725 feet. That is, if $r < 3.725$, then the circular mil acre plot centered at the sample point is stocked according to the definition of a "tree".

Thus a single measurement under a given definition of a tree will provide the data for any stocking index of this form and of this tree definition. In addition, such a measurement will provide an estimate of density in trees per acre over the sampled area,

$$\hat{d} = \frac{m-1}{\pi \sum r^2} .$$

This estimator is unbiased for the tree density if trees are distributed randomly. For the non-random case, consider a heuristic treatment: the numerator represents the total number of trees counted less one (one per sample point) and the denominator represents the total area defined by those trees.

In practical application, it is necessary to truncate this procedure: if no trees are within some distance of the point, one must indicate this, rather than continuing to search for the missed tree. Adjustment may be made for this contingency by simply subtracting the number of such points, m' , from the numerator and assigning the value $R = r_{\max}$ for these measurements in the denominator.

Appendix 1.

An algorithm for selecting a sample by the Hartley-Rao scheme.

1. Make a list of the $X(u)$, and calculate $T_x = \sum_{u \in U} X(u)$.

We will imagine that the list is on magnetic tape, but it can be in any form.

2. Choose a sample size, n , and calculate $k = T_x/n$. Note that k will not be integer valued in general.
3. Let the index I refer to the index of the sampling unit. The algorithm is best expressed in Fortran format, though one step has been left in words, as the simplest form of communication.

```

      Z=0
      I=1
10  Z=Z+X(I)
      IF(Z ≥ K) 20, 30
20  CONTINUE
C    Insert statements which record the sampling unit I as a member of sample.

21  CONTINUE
      Z=Z-k
30  I=I+1
      IF(I > N) 40, 10
40  END

```

References

Hartley, H.O. and JNK Rao (1962). Sampling with unequal probabilities and without replacement. *Annals of Math. Stat.* 33:350-374.

Horwitz, D.G. and Thompson, D.J. (1952). A generalization of sampling without replacement from a finite universe. *Journal of Amer. Stat. Association.* 47:663-685.