

EDITOR'S
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TIMBER RESOURCES OF WEST-CENTRAL OREGON



PACIFIC NORTHWEST
FOREST AND RANGE EXPERIMENT STATION
U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
PORTLAND, OREGON

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The U.S. Forest Service supplied forest resource data for National Forests. The Bureau of Land Management of the U.S. Department of the Interior supplied resource data for Bureau of Land Management lands.

The county assessors and several private timber companies furnished ownership information. The U.S. Forest Service, Bureau of Land Management, and several private timber companies provided maps and information on access to forest lands as well as general information related to forest management practices in Oregon.

METRIC CONVERSION

1,000 acres = 404.69 hectares
1,000 cubic feet = 28.3 cubic meters
1 cubic foot per acre = 0.0700 cubic meters per hectare
1 square foot basal area per acre = 0.2296 square meters per hectare
1 foot = 30.48 centimeters

ERRATA SHEET

In USDA Forest Service Resource Bulletin PNW-76, TIMBER RESOURCES OF WEST-CENTRAL OREGON, by David M. Jacobs, please correct the last item on page 1 of "Highlights" to read:

Average annual mortality

- Totaled 74 million cubic feet (397 million board feet, International 1/4-inch rule).

ALSO, replace tables 19 and 20 with these corrected tables (p. 20, 21):

Table 19--Average annual mortality of growing stock on commercial forest land by species and ownership class, west-central Oregon, 1975/

(In thousand cubic feet)

Species	All ownerships	National Forest	Bureau of Land Management	Other public	Forest industry	Other private
Softwoods:						
Douglas-fir	33,660	18,181	5,779	765	6,282	2,653
White fir	60	60	--	--	--	--
Grand fir	825	825	--	--	--	--
Subalpine fir	548	548	--	--	--	--
Pacific silver fir	3,615	3,615	--	--	--	--
Noble fir	2,055	2,055	--	--	--	--
Sugar pine	277	277	--	--	--	--
Western white pine	8,465	8,465	--	--	--	--
Lodgepole pine	1,234	452	--	--	--	782
Engelmann spruce	91	91	--	--	--	--
Sitka spruce	240	110	--	--	130	--
Mountain hemlock	1,483	1,483	--	--	--	--
Western hemlock	7,878	6,441	353	--	723	361
Incense-cedar	236	65	40	--	73	58
Western reccedar	1,107	769	118	--	170	50
Port-Orford-cedar	86	--	--	--	86	--
Total	61,860	43,437	6,290	765	7,464	3,904
Hardwoods:						
Red alder	8,461	3,461	310	199	2,091	2,400
Oregon ash	682	--	8	--	--	674
Bigleaf maple	1,132	133	301	--	447	251
California black oak	100	--	--	--	--	100
Oregon white oak	440	--	5	--	--	435
Golden chinkapin	1,240	--	73	--	86	1,081
Pacific madrone	196	--	7	--	169	20
Total	12,251	3,594	704	199	2,793	4,961
All species	74,111	47,031	6,994	964	10,257	8,865

1/ See "Definition of Terms" for periods of mortality by ownership.

TIMBER RESOURCES OF WEST-CENTRAL OREGON

REFERENCE ABSTRACT

Jacobs, David M.

1978. Timber resources of west-central Oregon. USDA For. Serv. Resour. Bull. PNW-76, 30 p. Pacific Northwest Forest and Range Experiment Station, Portland, Oregon.

This report presents statistics from a 1975 timber resource inventory of Benton, Lane, Lincoln, and Linn Counties, Oregon. Tables are of forest area, timber volume, growth, and mortality.

KEYWORDS: Forest surveys, statistics (forest), resources (timber), west-central Oregon.

Research Summary

RESOURCE BULLETIN PNW-76

1978

The west-central Oregon resource area (Benton, Lane, Lincoln, and Linn Counties) has a total land area of 5,433,000 acres, of which 4,317,000 acres are forested, and 3,978,000 acres are in commercial forest land. The area has 87 billion board feet (Scribner rule) of standing saw-timber on commercial forest land, with 77 percent in Federal ownership.

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Highlights

In 1975 commercial forest land

- Covered 3,978,000 acres, 92 percent of the forest land area and 73 percent of the total land area.
- Had 67 percent of the area in site classes capable of producing more than 120 cubic feet of annual growth per acre per year.
- Was 63 percent in sawtimber stands.
- Was 65 percent in Douglas-fir type, 16 percent in other softwoods, 16 percent in hardwoods, and 3 percent in non-stocked.

Growing stock volume -

- Totaled 19,044 million cubic feet.
- Was comprised of 94-percent softwoods.
- Was 94-percent sawtimber size trees.

Sawtimber volume -

- Totaled 86,850 million board feet, Scribner rule (109,941 million board feet, International 1/4-inch rule).
- Was 77 percent in Federal ownership.
- Was 75-percent Douglas-fir species.
- Was 96-percent softwood.
- Was 78 percent in trees over 21 inches.

In 1975 ownership was distributed as follows:

<u>Ownership</u>	<u>Commercial forest land area</u>	<u>Growing stock volume</u> (Percent)	<u>Sawtimber volume (Scribner rule)</u>
National Forest	41	61	63
Bureau of Land Management	11	11	13
Other Public	3	3	3
Forest Industry	28	16	14
Other Private	17	9	7

Net annual growth

- Totaled 290 million cubic feet (1,574 billion board feet, International 1/4-inch rule).

Average annual mortality

- Totaled 84 million cubic feet (456 million board feet, International 1/4-inch rule).

Table 1--Area by land class and county, west-central
Oregon, January 1, 1976

(In thousand acres)

Land class	All counties	Benton	Lane	Lincoln	Linn
Forest land:					
Commercial	3,978	265	2,254	553	906
Productive reserved	188	(¹)	127	1	60
Unproductive	151	3	96	1	51
Total	4,317	268	2,477	555	1,017
Nonforest land ²	1,116	160	436	76	444
Total area ³	5,433	428	2,913	631	1,461

¹ Less than 500 acres.

² Includes cropland, pasture and range, swampland, industrial and urban areas, powerline clearings, railroads, and all improved roads and highways, and 22,720 acres classified as water by Renewable Resources Evaluation standards, but defined by the Bureau of Census as land.

³ Source: United States Bureau of the Census, Land and Water area of the United States, 1970.

Table 2--Area of commercial forest land, by ownership class and
county, west-central Oregon, January 1, 1976

(In thousand acres)

Ownership class	All counties ¹	Benton	Lane	Lincoln	Linn
National Forest	1,630	14	1,119	164	333
Bureau of Land Management	441	56	279	23	83
Other public	110	29	28	25	28
Total public ¹	2,181	99	1,426	212	444
Private:					
Forest industry	1,096	52	563	251	229
Farmer-owned	237	54	66	8	109
Other private	464	60	200	81	122
Total private ¹	1,797	166	829	340	460
All ownerships ¹	3,978	265	2,254	553	906

¹Totals may be off because of rounding.

Table 4--Area of commercial forest land, by cubic-foot site and ownership classes, west-central Oregon, January 1, 1976

(In thousand acres)

Site class ¹ (cubic feet)	All ownerships	National Forest	Bureau of Land Management	Other public	Forest industry	Other private
225 or more	77	22	2	--	31	22
165 to 224	670	322	68	29	200	51
120 to 164	1,904	582	294	72	562	394
85 to 119	828	363	51	--	238	176
50 to 84	446	319	26	--	53	48
20 to 49	51	22	--	9	11	9
All classes ²	3,978	1,630	441	110	1,096	701

¹A classification in terms of capacity for cubic-foot annual growth per acre at culmination of mean annual growth in fully stocked stands.

²Totals may be off because of rounding.

Table 6--Area of noncommercial forest land by ownership class and land class
and forest type, west-central Oregon, January 1, 1976

(In thousand acres)

Land class and forest type	All ownerships	National Forest	Bureau of Land Management	Other public	Forest industry	Other private
RESERVED						
Productive:						
Douglas-fir	5	--	--	5	--	--
Pacific silver fir	119	119	--	--	--	--
Lodgepole pine	64	64	--	(1)	--	--
Sitka spruce	(1)	--	--	(1)	--	--
Hemlock	(1)	--	--	(1)	--	--
Red alder	1	--	--	1	--	--
Cottonwood	(1)	--	--	(1)	--	--
Total	189	183	--	6	--	--
Unproductive:						
Pacific silver fir	23	23	--	--	--	--
Brush	--	--	--	--	--	--
Unclassified	3	3	--	(1)	--	--
Total	26	26	--	(1)	--	--
Total reserved ²	215	209	--	6	--	--
UNRESERVED-UNPRODUCTIVE						
Rocky:						
Douglas-fir	5	2	3	--	--	--
Western hemlock	(1)	--	(1)	--	--	--
Unclassified	10	--	--	--	10	--
Total	15	2	3	--	10	--
Low site:						
Sitka spruce	1	--	1	--	--	--
Critical watershed:						
Douglas-fir	4	4	--	--	--	--
Adverse location:						
Douglas-fir	74	74	--	--	--	--
Pacific silver fir	6	6	--	--	--	--
Noble fir	2	2	--	--	--	--
Lodgepole pine	2	2	--	--	--	--
Mountain hemlock	2	2	--	--	--	--
Western hemlock	8	8	--	--	--	--
Total	94	94	--	--	--	--
Oak - madrone	9	--	--	--	--	9
Total unreserved ²	123	100	4	--	10	9

¹Less than 500 acres.

²Totals may be off because of rounding.

Table 8--Volume of growing stock and sawtimber on commercial forest land by ownership class and by softwoods and hardwoods, west-central Oregon, January 1, 1976

Ownership classes	Average volume per acre	All species	Softwoods	Hardwoods
	<u>Cubic feet</u>	- - -	<u>-Million cubic feet-</u>	- - -
Growing stock: ¹				
National Forest	7,117	11,600	11,304	296
Bureau of Land Management	4,803	2,118	1,979	139
Other public	5,609	617	513	104
Forest industry	2,779	3,046	2,804	242
Other private	2,372	1,663	1,285	378
All ownerships	4,787	19,044	17,885	1,159
	<u>Board feet</u>	- - -	<u>-Million board feet-</u>	- - -
Sawtimber (International 1/4-inch rule): ²				
National Forest	42,206	68,796	67,476	1,320
Bureau of Land Management	28,810	12,705	12,216	489
Other public	30,845	3,393	3,062	331
Forest industry	15,287	16,755	16,098	657
Other private	11,829	8,292	6,893	1,399
All ownerships	27,637	109,941	105,745	4,196
Sawtimber (Scribner rule): ³				
National Forest	33,845	55,168	54,264	904
Bureau of Land Management	25,751	11,356	10,894	462
Other public	22,627	2,489	2,227	262
Forest industry	10,992	12,047	11,520	527
Other private	8,260	5,790	4,658	1,132
All ownerships	21,833	86,850	83,563	3,287

¹Includes trees 5.0 inches d.b.h. and larger.

²Includes softwood trees 9.0 inches d.b.h. and larger, and hardwood trees 11.0 inches d.b.h. and larger.

³Includes trees 11.0 inches d.b.h. and larger.

Table 10--Volume of growing stock on commercial forest land by species and ownership class, west-central Oregon, January 1, 1976
(In million cubic feet)

Species	All ownerships	National Forest	Bureau of Land Management	Other public	Forest industry	Other private
Softwoods:						
Douglas-fir	13,208	7,973	1,660	512	2,066	997
White fir	4	2	2	--	--	--
Grand fir	170	127	3	--	17	23
Subalpine fir	12	12	--	--	--	--
Pacific silver fir	456	448	8	--	--	--
Noble fir	228	213	6	--	9	--
Ponderosa pine	16	11	--	1	--	4
Sugar pine	51	51	--	--	--	--
Western white pine	112	111	1	--	--	--
Lodgepole pine	36	24	--	--	--	12
Engelmann spruce	42	42	--	--	--	--
Sitka spruce	180	66	2	--	60	52
Mountain hemlock	340	340	--	--	--	--
Western hemlock	2,471	1,502	243	--	569	157
Incense-cedar	71	51	12	--	8	--
Western redcedar	481	328	40	--	74	39
Port-Orford-cedar	2	--	--	--	1	1
Alaska cedar	5	3	2	--	--	--
Total	17,885	11,304	1,979	513	2,804	1,285
Hardwoods:						
Red alder	753	246	64	82	180	181
Oregon ash	20	--	2	--	--	18
Black cottonwood	8	--	--	--	3	5
Bigleaf maple	215	42	58	15	40	60
California black oak	14	--	--	4	1	9
Oregon white oak	87	--	1	1	2	83
Golden chinkapin	46	7	13	2	6	18
Pacific madrone	16	1	1	--	10	4
Total	1,159	296	139	104	242	378
All species	19,044	11,600	2,118	617	3,046	1,663

Table 12--Volume of sawtimber on commercial forest land, by species and ownership class,
west-central Oregon, January 1, 1976 (Scribner rule)

(In million board feet)

Species	All ownerships	National Forest	Bureau of Land Management	Other public	Forest industry	Other private
Softwoods:						
Douglas-fir	65,465	41,296	9,352	2,224	8,896	3,697
White fir	12	5	7	--	--	--
Grand fir	696	569	11	--	46	70
Subalpine fir	25	25	--	--	--	--
Pacific silver fir	1,475	1,439	36	--	--	--
Noble fir	1,144	1,073	37	--	34	--
Ponderosa pine	78	61	--	3	--	14
Sugar pine	279	279	--	--	--	--
Western white pine	523	521	2	--	--	--
Lodgepole pine	80	46	--	--	--	34
Engelmann spruce	192	192	--	--	--	--
Sitka spruce	832	331	13	--	317	171
Mountain hemlock	1,216	1,214	2	--	--	--
Western hemlock	9,409	5,738	1,179	--	1,942	550
Incense-cedar	273	200	57	--	16	--
Western redcedar	1,841	1,266	189	--	264	122
Port-Orford-cedar	5	--	--	--	5	--
Alaska cedar	18	9	9	--	--	--
Total	83,563	54,264	10,894	2,227	11,520	4,658
Hardwoods:						
Red alder	2,157	785	238	222	371	541
Oregon ash	69	--	6	--	--	63
Black cottonwood	43	--	--	--	17	26
Bigleaf maple	677	117	191	40	125	204
California black oak	33	--	--	--	--	33
Oregon white oak	221	--	2	--	2	217
Golden chinkapin	85	2	23	--	12	48
Pacific madrone	2	--	2	--	--	--
Total	3,287	904	462	262	527	1,132
All species	86,850	55,168	11,356	2,489	12,047	5,790

Table 14--Volume of sawtimber on commercial forest land by species and diameter class,
west-central Oregon, January 1, 1976 (International 1/4-inch rule)
(In million board feet)

Species	Diameter class (inches at breast height)									
	All classes	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9	29.0- 38.9	39.0 and larger
Softwoods:										
Douglas-fir	86,352	1,548	2,320	2,876	3,112	3,764	3,719	15,133	18,741	30,139
White fir	15	2	--	--	--	--	--	7	6	--
Grand fir	951	42	71	63	60	67	101	319	184	44
Subalpine fir	41	6	15	3	--	7	3	7	--	--
Pacific silver fir	2,091	166	177	256	237	259	212	570	180	34
Noble fir	1,422	21	38	56	57	97	111	331	476	235
Ponderosa pine	99	4	2	--	7	--	3	--	46	37
Sugar pine	340	--	2	3	2	2	16	72	83	160
Western white pine	672	6	23	56	51	47	37	257	160	35
Lodgepole pine	161	36	39	28	32	15	6	5	--	--
Engelmann spruce	249	3	5	18	30	31	16	96	42	8
Sitka spruce	1,105	21	60	34	37	96	32	136	252	437
Mountain hemlock	1,637	58	106	116	139	153	187	556	278	44
Western hemlock	12,734	741	799	957	1,015	960	1,012	3,281	2,697	1,272
Incense-cedar	360	11	14	15	10	23	19	81	119	68
Western redcedar	2,487	101	86	104	122	171	162	588	518	635
Port-Orford-cedar	7	--	--	--	--	--	--	--	7	--
Alaska cedar	22	--	1	(1)	(1)	1	3	11	5	1
Total	105,745	2,766	3,758	4,585	4,911	5,693	5,639	21,450	23,794	33,149
Hardwoods:										
Red alder	2,835	--	494	597	488	395	327	495	39	--
Oregon ash	79	--	26	--	16	8	25	4	--	--
Black cottonwood	46	--	--	--	--	--	--	--	46	--
Bigleaf maple	812	--	96	102	119	90	102	202	93	8
California black oak	43	--	10	14	5	14	--	--	--	--
Oregon white oak	274	--	75	34	25	33	46	49	12	--
Golden chinkapin	105	--	37	51	4	5	1	3	--	4
Pacific madrone	2	--	--	--	--	--	--	2	--	--
Total	4,196	--	738	798	657	545	501	755	190	12
All species	109,941	2,766	4,496	5,383	5,568	6,238	6,140	22,205	23,984	33,161

¹Less than 500,000 board feet.

Table 16--*Net annual growth of growing stock and sawtimber on commercial forest land by ownership class and by softwoods and hardwoods, west-central Oregon, 1975*

Ownership classes	Average volume per acre	All species	Softwoods	Hardwoods
	<u>Cubic feet</u>	- - <u>Thousand cubic feet</u> - -		
Growing stock: ¹				
National Forest	42	67,691	65,405	2,286
Bureau of Land Management	86	38,123	34,188	3,935
Other public	145	15,992	12,347	3,645
Forest industry	97	106,280	93,399	12,881
Other private	89	62,165	53,221	8,944
All ownerships	73	290,251	258,560	31,691
	<u>Board feet</u>	- - <u>Thousand board feet</u> - -		
Sawtimber (International 1/4-inch rule): ²				
National Forest	289	470,283	435,675	34,608
Bureau of Land Management	446	196,824	183,261	13,563
Other public	839	92,317	76,249	16,068
Forest industry	458	502,339	476,190	26,149
Other private	445	312,037	268,993	43,044
All ownerships	396	1,573,800	1,440,368	133,432

¹Includes trees 5.0 inches d.b.h. and larger.

²Includes softwood trees 9.0 inches d.b.h. and larger, and hardwood trees 11.0 inches d.b.h. and larger.

Table 18--*Net annual growth of sawtimber on commercial forest land by species and ownership class, west-central Oregon, 1975 (International 1/4-inch rule)*

(In thousand board feet)

Species	All ownerships	National Forest	Bureau of Land Management	Other public	Forest industry	Other private
Softwoods:						
Douglas-fir	1,068,746	334,611	142,621	75,849	313,275	202,390
White fir	-511	-640	129	--	--	--
Grand fir	26,163	9,487	4,975	--	4,825	6,876
Subalpine fir	370	370	--	--	--	--
Pacific silver fir	16,014	15,252	762	--	--	--
Noble fir	13,134	9,586	544	--	3,004	--
Ponderosa pine	1,334	240	--	400	--	694
Sugar pine	2,145	2,145	--	--	--	--
Western white pine	-42,188	-42,224	36	--	--	--
Lodgepole pine	-2,503	-103	--	--	--	-2,400
Engelmann spruce	1,877	1,877	--	--	--	--
Sitka spruce	35,823	8,812	177	--	9,838	16,996
Mountain hemlock	30,069	30,062	7	--	--	--
Western hemlock	242,402	40,388	30,202	--	135,978	35,834
Incense-cedar	5,791	4,340	804	--	647	--
Alaska cedar	217	165	52	--	--	--
Western redcedar	41,698	21,307	2,952	--	8,836	8,603
Port-Orford-cedar	-213	--	--	--	-213	--
Total	1,440,368	435,675	183,261	76,249	476,190	268,993
Hardwoods:						
Red alder	94,306	29,656	7,404	13,780	20,147	23,319
Oregon ash	264	--	157	--	--	107
Black cottonwood	877	--	--	--	439	438
Bigleaf maple	21,934	4,892	5,329	2,288	4,703	4,722
California black oak	1,342	--	--	--	--	1,342
Oregon white oak	8,659	--	46	--	53	8,560
Golden chinkapin	6,666	60	588	--	1,462	4,556
Pacific madrone	-616	--	39	--	-655	--
Total	133,432	34,608	13,563	16,068	26,149	43,044
All species	1,573,800	470,283	196,824	92,317	502,339	312,037

Table 20--Average annual mortality of sawtimber on commercial forest land by species and ownership class, west-central Oregon 1975^{1/} (International 1/4-inch rule)

(In thousand board feet)

Species	All ownerships	National Forest	Bureau of Land Management	Other public	Forest industry	Other private
Softwoods:						
Douglas-fir	221,195	131,403	34,596	4,470	38,364	12,362
White fir	277	277	--	--	--	--
Grand fir	4,908	4,908	--	--	--	--
Subalpine fir	1,862	1,862	--	--	--	--
Pacific silver fir	19,807	19,807	--	--	--	--
Noble fir	16,801	16,801	--	--	--	--
Sugar pine	1,808	1,808	--	--	--	--
Western white pine	66,044	66,044	--	--	--	--
Lodgepole pine	6,048	1,822	--	--	--	4,226
Engelmann spruce	1,752	1,752	--	--	--	--
Sitka spruce	2,443	1,631	--	--	812	--
Mountain hemlock	8,230	8,230	--	--	--	--
Western hemlock	48,339	42,232	2,361	--	2,658	1,088
Incense-cedar	912	350	208	--	354	--
Western redcedar	6,215	4,593	772	--	850	--
Port-Orford-cedar	445	--	--	--	445	--
Total	407,086	303,520	37,937	4,470	43,483	17,676
Hardwoods:						
Red alder	38,234	23,844	1,143	--	7,084	6,163
Oregon ash	4,125	--	26	--	--	4,099
Bigleaf maple	5,136	777	843	--	2,325	1,191
Oregon white oak	1,082	--	7	--	--	1,075
Golden chinkapin	97	--	97	--	--	--
Pacific madrone	662	--	7	--	655	--
Total	49,336	24,621	2,123	--	10,064	12,528
All species	456,422	328,141	40,060	4,470	53,547	30,204

^{1/}See "Definition of Terms" for periods of mortality by ownership.

Reliability of Current Inventory Data

FOREST-LAND AREA AND TIMBER VOLUME

The estimates of forest-land area and timber volume in west-central Oregon for all owners other than National Forest and Bureau of Land Management were derived by sampling and consequently have sampling errors. Area and volume statistics for National Forests and BLM were updated with a stand projection model (Larson and Goforth 1970), and therefore, confidence intervals were not computed. Sampling intensities on BLM and National Forests were four times greater than other lands. Therefore, assuming approximately the same variability, the precision of estimate of these inventories will exceed the precision shown below for the other owners.

Confidence intervals have been computed for the estimates of commercial and noncommercial forest-land area, net cubic-foot volume of growing stock, and net board-foot volume

(International 1/4-inch scale) of sawtimber. These confidence intervals computed at the 68- and 95-percent probability level are presented in table 22 as a percent of the estimated total. They may be interpreted as meaning that the odds are two out of three for 68-percent probability, or 19 out of 20 for 95-percent probability, that the confidence intervals shown include the true value (i.e., the results of a 100-percent inventory). For example, we can expect, with 95-percent confidence, that the estimate of total commercial forest-land area--1,907,000 acres $\pm$ 2.5 percent (47,675 acres)--includes the true value.

In addition to measurable confidence intervals, there may be other nonsampling errors caused by mistakes in judgment, measurement, and compilation. The magnitude of errors from these sources cannot be determined. Such errors are controlled by training, supervising, and field checking of field crews, and complete editing when compiling the data.

The precision of any breakdown of these totals will be substantially less than that for the total. An

Table 22--*Confidence interval of estimate of forest area and timber volume, other than National Forest and Bureau of Land Management ownerships, west-central Oregon, January 1, 1976*

Item	Estimated total	Confidence interval in percent	
		68-percent probability	95-percent probability
Commercial forest land	1,907,000 acres	$\pm$ 1.3	$\pm$ 2.5
Noncommercial forest land	19,000 acres	$\pm$ 70.7	$\pm$ 138.6
Volume:			
Growing stock	5,326 million cubic feet	$\pm$ 6.2	$\pm$ 12.2
Sawtimber (International 1/4-inch rule)	28,440 million board feet	$\pm$ 8.1	$\pm$ 15.9

variable-radius points sampling an acre. Seedlings and saplings were sampled on small fixed-radius plots located at each of the 10 points.

For the Umpqua National Forest inventory, growth and mortality were

updated by stand projection (Larson and Goforth 1970). In addition, all plots cut since inventory were identified and assigned new area classifications based on data furnished by the Bureau of Land Management and the Forest Service.

<u>Inventory</u>	<u>Number of plots</u>	<u>Field plot grid intensity</u>	<u>Inventory date</u>	<u>Updated to</u>
Siuslaw National Forest	337	1.7	1974	--
Willamette National Forest	507	1.7	1971	--
Umpqua National Forest	79	1.7	1968	1975
Salem BLM District	336	1.7	1968	1975
Eugene BLM District	299	1.7	1968	1975
Roseburg BLM District	1	1.7	1968	1975
Private, State, county, and municipal lands	384	3.4	1975	--

INVENTORY OF PRIVATE AND OTHER PUBLIC LANDS

The sampling design used double sampling for stratification (Cochran 1963). Classification on about 6,200 photo points were used to divide the inventory unit into a series of strata based on: (1) owner group; (2) major land class (commercial forest, noncommercial forest, and nonforest); and (3) stand volume class.

The same 10-point field plot design that had been used on the National Forest and Bureau of Land Management inventories were used in this inventory. Unlike those inventories, however, most of the field plots that were originally established in 1961 and 1962 were remeasured for this inventory. Most growth and mortality estimates were made by comparing old and new tallies on remeasured trees. When new trees were tallied, growth data came from increment cores and mortality data came from ocular estimates of time of death.

Definition of Terms

Unless otherwise noted, definitions apply to all inventories referenced in this report.

LAND AREA

Total land area is that reported by the Bureau of the Census. Total land area includes dry land and land temporarily or partially covered by water, such as marshes, swamps, and river flood plains; streams, sloughs, and canals less than one-eighth-mile wide; and lakes, reservoirs, and ponds less than 40 acres in area.

Forest land is land at least 10 percent stocked by live trees or land formerly having such tree cover and not currently developed for nonforest use. Minimum area of forest land recognized is 1 acre.

Nonforest land is land that has never supported forests or land that was formerly forested and is currently developed for nonforest uses. Included are lands used for agricultural crops, improved pasture, residential areas, city parks, improved roads, and operating railroads and their right-of-way clearings, powerline and pipeline clearings, and 1- to 40-acre

Rotten cull trees have excessive defect primarily caused by rot.

Salvable dead trees are standing or down trees of commercial species, 9.0 inches or more in diameter for softwoods and 11.0 inches or more in diameter for hardwoods, containing 25 percent or more of sound volume and at least one merchantable 16-foot log if softwood or one merchantable 8-foot log if hardwood.

Mortality Trees

Commercial species which died from natural causes within a specified period and which were growing stock trees at the time of death.

STAND-SIZE CLASSES

Sawtimber stands are at least 10 percent stocked with growing stock conifer, red alder, and black cottonwood trees, with half or more of this stocking in sawtimber and poletimber trees and with sawtimber stocking equal to or greater than poletimber stocking. In *large sawtimber stands*, the majority of the sawtimber stocking is in trees 21.0 inches and larger at breast height. In *small sawtimber stands*, the majority of the sawtimber stocking is in trees from 9.0 to 20.9 inches at breast height.

Poletimber stands are at least 10 percent stocked with growing stock conifer, red alder, and black cottonwood trees, with half or more of this stocking in sawtimber and poletimber trees, and with poletimber stocking exceeding sawtimber stocking.

Sapling and seedling stands are at least 10 percent stocked with growing stock conifer, red alder, and black cottonwood trees, with more than half of this stocking in saplings, seedlings, or both.

Nonstocked areas of commercial forest land are less than 10 percent

stocked with growing stock conifer, red alder, and black cottonwood trees.

TIMBER VOLUME

Live Sawtimber

Net volume of live sawtimber trees of commercial species is measured in board feet. Net volume equals gross volume less deduction for rot, sweep, crook, and other defects that affect use for lumber.

Scribner rule is the common board-foot log rule used locally in determining volume of sawtimber. Scribner volume is measured in terms of 32-foot logs.

International 1/4-inch rule is the standard board-foot log rule adopted nationally by the Forest Service for the presentation of Renewable Resources Evaluation volume statistics.

Saw-log portion is the bole of sawtimber trees between the stump and the saw-log top.

Upper-stem portion includes the bole of sawtimber trees above the saw-log top of 7.0 inches outside bark for softwoods and 8.0 inches outside bark for hardwoods to a minimum top diameter of 4.0 inches outside bark, or to the point where the central stem breaks into limbs.

Growing Stock

Net volume of growing stock is measured in cubic feet of live sawtimber trees and live poletimber trees from stump to a minimum 4.0-inch top (of central stem) outside bark. Net volume equals gross volume less deduction for rot and missing bole sections.

ALL TIMBER

All timber includes the net volume in cubic feet of live growing-stock poletimber and sawtimber trees

Plant Species

This list includes the important tree species occurring in west-central Oregon. The source for scientific names is Little (1953).

<u>Scientific name</u>	<u>Common name</u>
<i>Abies amabilis</i> (Dougl.) Forbes	Pacific silver fir
<i>Abies concolor</i> (Gord. & Glend.) Lindl.	white fir
<i>Abies grandis</i> (Dougl.) Lindl.	grand fir
<i>Abies lasiocarpa</i> (Hook.) Nutt.	subalpine fir
<i>Abies procera</i> Rehd.	noble fir
<i>Chamaecyparis lawsoniana</i> (A. Murr.) Parl.	Port-Orford-cedar
<i>Chamaecyparis nootkatensis</i> (D. Don) Spach	Alaska-cedar
<i>Libocedrus decurrens</i> Torr.	incense-cedar
<i>Picea engelmannii</i> Parry	Engelmann spruce
<i>Picea sitchensis</i> (Bong.) Carr.	Sitka spruce
<i>Pinus albicaulis</i> Engelm.	whitebark pine
<i>Pinus attenuata</i> Lemm.	knobcone pine
<i>Pinus contorta</i> Dougl.	lodgepole pine
<i>Pinus monticola</i> Dougl.	western white pine
<i>Pinus ponderosa</i> Laws.	ponderosa pine
<i>Pseudotsuga menziesii</i> (Mirb.) Franco	Douglas-fir
<i>Thuja plicata</i> Donn	western redcedar
<i>Tsuga heterophylla</i> (Raf.) Sarg.	western hemlock
<i>Tsuga mertensiana</i> (Bong.) Carr.	mountain hemlock
Hardwood trees:	
<i>Acer macrophyllum</i> Pursh	bigleaf maple
<i>Alnus rhombifolia</i> Nutt.	white alder
<i>Alnus rubra</i> Bong.	red alder
<i>Arbutus menziesii</i> Pursh	Pacific madrone
<i>Castanopsis chrysophylla</i> (Dougl.) A. DC.	golden chinkapin
<i>Fraxinus latifolia</i> Benth.	Oregon ash
<i>Populus trichocarpa</i> Torr. & Gray	black cottonwood
<i>Quercus chrysolepis</i> Leibm.	canyon live oak
<i>Quercus garryana</i> Dougl.	Oregon white oak
<i>Quercus kelloggii</i> Newb.	California black oak
<i>Umbellularia californica</i> (Hook. & Arn.) Nutt.	California-laurel (Oregon-myrtle)

Jacobs, David M.

1978. Timber resources of west-central Oregon. USDA For. Serv. Serv. Resour. Bull. PNW-76, 30 p. Pacific Northwest Forest and Range Experiment Station, Portland, Oregon.

This report presents statistics from a 1975 timber resource inventory of Benton, Lane, Lincoln, and Linn Counties, Oregon. Tables are of forest area, timber volume, growth, and mortality.

KEYWORDS: Forest surveys, statistics (forest), resources (timber), west-central Oregon.

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