
STAND LEVEL INVENTORY

The Stand Level Inventory (SLI) is a forest inventory developed by the Oregon Department of Forestry (ODF) that serves as the information source on forest conditions for all lands managed by the State Forests Division. The information is used for forest management analysis, assessments, activity planning, and status reporting. Field measured sampling occurs in a carefully selected representative portion of forested inventory stands. These inventory cruise results are used to extrapolate inventory information in a supervised way to stands which do not have field-measured data. This provides site-specific information on trees, snags, down woody debris and understory vegetation in the cruised stands, statistically derived information about all stands for forest modeling purposes, and the ability to aggregate the information to report district and state-wide inventory totals for State Forests and lands managed by the Division under agreement.

The ongoing assessment of inventory quality is dependent upon many factors, but inventory investments remain important for efficient and effective forest management decision-making. The long-term goal for SLI is to maintain between 25% and 50% of all stands with relatively recent field measured cruise information. ODF routinely conducts annual inventory cruising projects in order to maintain those targets. After a hiatus of several years due to budgetary constraints, the Division has now made it a priority to reinvest in SLI data acquisition as a Core Business Function. During the period from July 2014 through June 2015, 110 SLI stands were field sampled on the Astoria, Forest Grove, North Cascade, Southwest Oregon, Tillamook, West Oregon, and Western Lane districts. Additionally, the State Forests 2016 fiscal budget includes funding to continue new inventory cruise data collection for over 300 additional stands.

New SLI cruise data acquisition is only one part of the process required for maintaining a current, reliable forest inventory database. Actively managed forests are always changing due to a variety of factors including new harvest operations, natural disturbances, reforestation efforts, and tree growth. Regular inventory database updates are necessary in order to keep up with these changes. At this time, those updates are being completed on an annual cycle. This year, all district updates have been completed, with all forest stand data grown forward through June 2015. For most districts, the database has been updated to account for all operations completed through December 2014. For Tillamook, the database has been updated to account for all operations completed through April 2013. For Klamath-Lake, the database has been updated to account for all operations completed through July 2009.

Due to the dynamic nature of ecological systems and the inherent challenges associated with sampling extensive natural resources, all inventory information, including volume, is an estimate. Annual forest inventory database updates provide snapshots in the form of inventory reports that represent our best estimates of the current forest conditions at a given point in time. Because ODF is constantly working to adjust and improve our inventory system, these annual reports should not be viewed as a monitoring system to report on year-to-year trends. Instead, the changes resulting from the annual update process reflect our change in understanding of the forest as much as actual changes across the landscape. The result is a comprehensive, up-to-date forest inventory that serves as an essential tool for the purposes of stand-level management, landscape-scale planning, and district-wide reporting.

STAND LEVEL INVENTORY DETAILS FOR ALL LAND OWNERSHIP CATEGORIES

Statewide, as of the end of June 2015, there are 14,283 SLI stands, 6,665 of which (47%) have field-based measurements. Inventory data for non-measured stands is extrapolated from the measured stands. Stands are delineated along differences in general timber characteristics – boundaries are drawn to group together areas with similar tree species, size and stocking. SLI boundaries often coincide with administrative boundaries, but individual stands may include more than one land ownership category such as County Forest Trust Lands (CFTL), Common School Fund Lands (CSFL) lands, and Other lands managed by the Division under agreement. The table below shows the total number of SLI stands and acres by ODF District, the number and percentage of stands with field-based measurements, as well as the number of stands (* having one or more acre) of CFTL, CSFL and Other landowner class lands.

District	All Lands with SLI				CFTL		CSFL		Other Lands	
	Total SLI Acres	Total Stands	Measured Stands	Measured Stands %	Acres	Stands*	Acres	Stands*	Acres	Stands*
Astoria	136,826	1,820	1,114	61%	134,821	1,804	2,005	67	--	--
Forest Grove	115,002	1,219	763	62%	114,372	1,208	611	24	16 ¹	2
Tillamook	252,345	6,010	1,740	28%	245,567	5,899	5,035	198	1,743 ²	60
West Oregon	36,626	976	439	44%	29,797	846	6,818	279	10 ¹	1
North Cascade	47,626	784	355	45%	46,691	768	935	32	--	--
Western Lane	25,261	389	226	58%	24,323	377	938	13	--	--
Southwest Oregon	16,793	311	156	50%	9,350	181	7,443	129	--	--
Coos	93,527	2,100	1,457	69%	8,868	282	84,650	1,950	9 ¹	1
Klamath-Lake	82,390	674	415	61%	75,571	593	6,819	81	--	--
Totals	806,396	14,283	6,665	47%	689,360	11,958	115,254	2,773	1,778	64

CSFL and Other landowner class lands, even though fewer in number and acreage in the SLI, benefit significantly with respect to the quality of inventory information by “participating” in the broader inventory effort done for all lands. Potential for the best application of field-measured stand data to the non-field-measured stands is enhanced by the availability of more numerous field-measured stands from the entire dataset – without incurring the additional expense of measuring them (field-measurement costs are shared on a total acres percentage basis by district).

¹ BOF administrative sites

² Tillamook County (Kilchis) Park lands managed under agreement

STAND LEVEL INVENTORY TIMBER VOLUME ESTIMATE FOR CFTL LANDS

The table below shows the SLI-based estimate of merchantable net board foot volume by species for CFTL lands as of June 30, 2015. The acres information is net of area in roads – other non-forested acres are not removed, but the volume estimate does reflect the effect of low or non-stocked acres outside of roads.

Timber Inventory Estimate for State Forests County Forest Trust Lands, June 30, 2015											
District	Net Acres	Total Net Scribner Board Foot Volumes (MBF)									Average MBF/Acre
		Douglas-fir	Cedar	True Fir	Hemlock	Pine	Spruce	Alder	Other	Total	
Astoria	130,090	2,263,121	30,967	51,097	853,903	298	106,230	510,655	59,810	3,876,081	<i>29.8</i>
Coos	8,723	193,428	4,271	30	27,163	0	383	29,322	11,866	266,463	<i>30.5</i>
Forest Grove	111,476	2,620,283	28,283	44,189	154,769	263	593	214,469	51,695	3,114,543	<i>27.9</i>
Klamath-Lake	75,571	12,773	2,866	81,703	0	402,116	0	0	1,813	501,273	<i>6.6</i>
North Cascade	45,313	819,985	20,729	35,344	121,450	147	0	29,795	21,685	1,049,134	<i>23.2</i>
Southwest Oregon	8,995	132,419	5,432	5,413	2,418	2,760	0	918	20,928	170,287	<i>18.9</i>
Tillamook	242,385	2,892,503	40,612	27,349	756,347	127	205,711	1,496,897	71,174	5,490,720	<i>22.7</i>
Western Lane	23,790	589,537	5,091	209	53,978	0	0	59,448	57,388	765,652	<i>32.2</i>
West Oregon	28,717	635,943	2,723	547	13,361	77	307	81,808	24,799	759,564	<i>26.4</i>
Totals	675,060	10,159,992	140,974	245,881	1,983,389	405,788	313,224	2,423,312	321,158	15,993,717	<i>23.7</i>

SLI data is updated annually, typically just prior to the end of June each year – in time for using the updated data for this report. For Astoria, Coos, Forest Grove, North Cascade, Southwest Oregon, Tillamook, Western Lane, and West Oregon, this year's updates have been completed and the information included in this report is up-to-date.

For Klamath-Lake, staffing and workload limitations this year combined to impact completion of the updates. Klamath-Lake's most recent update was completed in July 2009. That data was grown forward for this report using the inventory growth model. No operations updates have been included since July 2009.

STAND LEVEL INVENTORY TIMBER VOLUME ESTIMATE FOR CSFL LANDS

The table below shows the SLI-based estimate of merchantable net board foot volume by species for CSFL lands as of June 30, 2015. The acres information is net of area in roads – other non-forested acres are not removed, but the volume estimate does reflect the effect of low or non-stocked acres outside of roads.

Timber Inventory Estimate for State Forests Common School Fund Lands, June 30, 2015											
District	Net Acres	Total Net Scribner Board Foot Volumes (MBF)									Average MBF/Acre
		Douglas-fir	Cedar	True Fir	Hemlock	Pine	Spruce	Alder	Other	Total	
Astoria	1,935	25,981	321	515	9,118	0	3,643	5,984	193	45,755	<i>23.6</i>
Coos	82,827	2,180,191	18,602	524	214,710	321	12,064	143,532	80,203	2,650,147	<i>32.0</i>
Forest Grove	596	10,205	30	58	227	0	0	1,668	277	12,464	<i>20.9</i>
Klamath-Lake	6,819	62	563	15,755	0	34,562	0	0	106	51,049	<i>7.5</i>
North Cascade	912	21,236	108	14	878	0	0	1,074	1,411	24,720	<i>27.1</i>
Southwest Oregon	7,261	74,753	2,871	4,822	430	7,640	0	235	10,147	100,896	<i>13.9</i>
Tillamook	4,966	57,786	1,320	1,482	41,776	0	14,826	16,388	1,104	134,681	<i>27.1</i>
Western Lane	912	19,128	402	812	2,255	0	0	662	1,694	24,953	<i>27.4</i>
West Oregon	6,629	160,218	962	5	8,772	15	1,440	21,971	7,215	200,598	<i>30.3</i>
Totals	112,857	2,549,560	25,179	23,987	278,166	42,538	31,973	191,514	102,350	3,245,263	<i>28.8</i>

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