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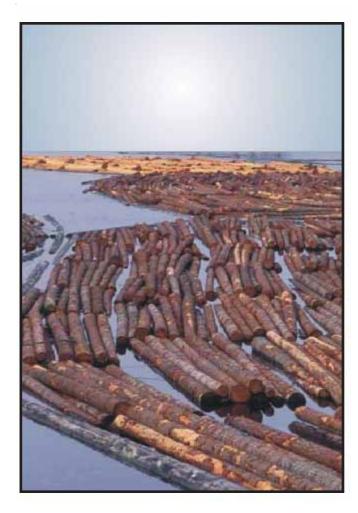
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Washington Mill Surveys 2002

Series Report #16

May 2005



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Washington Mill Survey 2002 Series Report #16

May 2005

Prepared by: Dorian Smith Public Information Officer

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Introduction

Based on questionnaires conducted by the Department of Natural Resources, this report includes statistics on wood use and the characteristics of primary wood processing mills, during the calendar year 2002. It is the 16th biennial survey that documents mill characteristics, wood volume and the input of raw materials into the state's seven primary wood-using industries:

- Sawmills
- Pulp mills
- Shake & Shingle
- Whole log chipping
- Veneer & Plywood mills
- Post, Pole & Piling operations
- Log export operations

Since this survey covers the entire industry sampling errors are not a factor However, when some data was not provided by mill owners or managers, estimates were calculated from data in previous years. In total, this report provides the most reliable estimates of the state's woodproducts industries in Washington.

Information about individual mills or companies has been kept confidential. In recent decades as the industry downsized in some sectors, it has been necessary to combine table data to avoid revealing mill identity or ownership. In this edition nearly all tables list data from five geographic/economic regions instead of the state's 39 counties. Though the data is less detailed, we believe it is easier to grasp.

Abbreviations and Conversions

Lumber volume

board foot: a piece of wood 12 inches x 12 inches x 1 inch

mbf: one thousand board feet (this report uses Scribner log rule method).

mmbf: one million board feet

Plywood / V eneer

msf: thousand square feet 3/8 inch basis

Pulp

ton: 2,000 pounds

bone dry tons (BDT): 1.2 tons or 2,400 pounds

air dry metric tons (ADMT): 2,200 pounds; with 10% water content

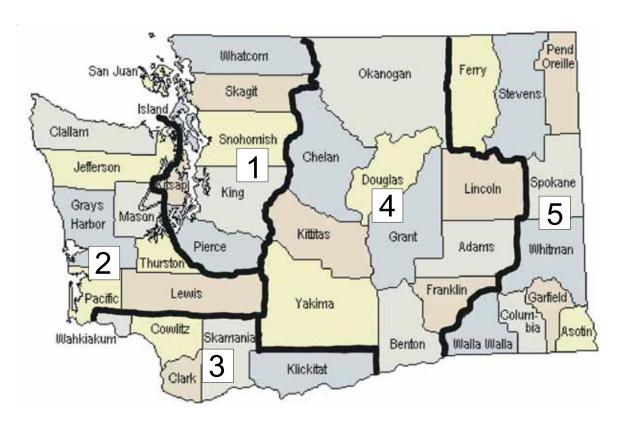
Shake and Shingle:

square: 10 square feet (5 squares makes a cord)

bundle: 5 bundles makes a square

cord: 1 mbf; 128 cubic feet (stacked); 80 cubic feet of solid wood

Figure 1: The S tate's Economic and Production Regions where mills are located



Throughout this report these regions are used to indicate the location of processing — not the harvesting — of wood products:

- 1. Puget Sound
- 2. Olympic Peninsula
- 3. Lower Columbia
- 4. Central Washington
- 5. Inland Empire

Washington Statewide Summary: Tables 1-9

Table 1: Number of mills by industry

Production region	All		Veneer and	Pulp and	Shake and	Log	Post, Pole	Roundwood
and county	Industries	Lumber	Plywood	Board	Shingle		and piling	Chipping
Puget Sound								
King	1	1	_	_	_	_	_	_
Pierce	16	6	1	1	_	5	1	2
Skagit	9	3	_	_	2	3	_	1
Snohomish	18	9	_	1	2	5	1	_
Whatcom	3	2	1	_	_	_	_	_
Total	47	21	2	2	4	13	2	3
Olympic Peninsula								
Clallam	13	4	1	1	4	2	_	1
Grays Harbor	25	5	3	1	12	3	_	1
Jefferson	1	_	_	1	_	_	_	_
Lewis	15	10	1	_	2	_	1	1
Mason	8	5	1	_	_	_	1	1
Pacific	2	2	_	_	_	_	_	_
Thurston	12	2	_	_	_	9	1	_
Total	76	28	6	3	18	14	3	4
Lower Columbia								
Clark	2	2	_	_	_	_	_	_
Cowlitz	25	5	_	4	_	12	_	4
Klickitat	2	1	1	_	_	_	_	_
Skamania	1	1	_	_	_	_	_	_
Wahkiakum	1	_	_	_	1	_	_	_
Total	31	9	1	4	1	12	_	4
Central Washington								
Chelan	2	2	_	_	_	_	_	_
Okanogan	1	1	_	_	_	_	_	_
Yakima	5	4	1	_	_	_	_	_
Total	8	7	1	_	_	_	_	_
Inland Empire Asotin	3	1	_	_	_	_	_	2
Pend Orielle	2	1	_	1	_	_	_	_
Spokane	1	_	_	1	_	_	_	_
Stevens	10	8	1	_	_	_	1	_
Total	16	10	1	2	_	_	1	2
State Total	178	75	11	11	23	39	6	13

Table 2: **Primary wood use by mills'location**

	All roundwood	Sound logs	Utility logs	Other	Residue				
Production region	thou	thousand board feet, Scribner rule							
Puget Sound	784,157	768,692	15,465	3,740	1,160,260				
Olympic Peninsula	1,546,926	1,269,681	277,245	6,294	843,898				
Lower Columbia	954,900	936,788	18,112	300	2,624,330				
Central Washington	280,355	259,801	20,554	0	0				
Inland Empire	469,576	464,560	5,016	250	385,651				
State Total	4,035,914	3,699,522	336,392	10,584	5,014,139				

Table 3: Locations of mills and sources of logsthousand board feet, Scribner rule)

		Origin									
Production region	All	Washington	Oregon	Idaho	Montana	British Columbia	Other				
Puget Sound	784,157	686,677	290	2,320	_	90,847	4,023				
Olympic Peninsula	1,546,926	1,442,009	32,792	1,800	_	60,014	10,311				
Lower Columbia	954,900	570,851	371,439	2,250	_	10,360	_				
Central Washington	280,355	279,844	_	_	_	511	_				
Inland Empire	469,576	339,676	15,068	92,616	11,555	10,660	_				
State Total	4.035.914	3.319.058	419.589	98.986	11.555	172.392	14.334				

Table 4: Locations of mills using logs from national forest (thousand board feet, Scribner rule)

Post, pole & piling Roundwood chipping	Post, pole &		Pulp & board	Veneer & plywood	Lumber	Industry	State Total	Inland Empire	Central Washington	Lower Columbia	Olympic Peninsula	Puget Sound	GTON	Production region	
chipping		oiling		wood					ington	bia	nsula			egion	
	8,091	364	2,810	5,272	27,776		44,313	25,727	4,341	4,091	9,371	782	Forests	National	AII
	1,231	47	2,810	3,053	789		7,930	0	0	0	7,480	450	Olympic		
	0	0	0	123	1,691		1,814	0	0	431	1,260	123	Pinchot	Gifford	
	151	74	0	0	616		840	0	0	0	631	209	Snoqualmie	Baker/	Mount
	1,936	0	0	0	3,061		4,997	0	3,061	1,936	0	0	Wenatchee		
	0	0	0	1,444	1,223		2,667	1,386	1,281	0	0	0	Okanogan		
	0	244	0	652	14,967		15,863	15,863	0	0	0	0	Colville		
	955	0	0	0	834		1,788	1,788	0	0	0	0	Umatilla		
8 413	3,818	0	0	0	4,595		8,413	6,689	0	1,724	0	0	Other		

Table 5: Mills' dependency on sources for logs(number of mills)

		National Forest				State-owned				Bureau of Land Mgmt.			
Production area	0%	1-33%	34-66%	67-100%	0%	1-33%	34-66%	67-100%	0%	1-33%	34-66%	67-100%	
Puget Sound	43	4	0	0	28	13	5	1	47	0	0	0	
Olympic Peninsula	67	9	0	0	45	23	6	2	74	2	0	0	
Lower Columbia	29	2	0	0	22	9	0	0	31	0	0	0	
Central Washington	5	3	0	0	6	2	0	0	8	0	0	0	
Inland Empire	6	9	0	1	8	8	0	0	15	1	0	0	
State Total	151	27	0	1	110	55	11	3	176	3	0	0	

Table continued below

			— — — — Forest Industry — — — —									
		Other	Public		Ov	vn Wo	od Supp	ly	Oth	ner Wo	od Supp	oly
Economic area	0	1-33	34-66	67-100	0	1-33	34-66	67-100	0	1-33	34-66	67-100
Puget Sound	39	8	_	_	39	5	_	3	19	7	9	12
Olympic Peninsula	66	10	_	_	61	3	6	6	29	12	14	21
Lower Columbia	28	3	_	_	20	2	5	4	8	6	6	11
Central Washington	8	_	_	_	4	2	1	1	6	2	_	_
Inland Empire	14	2	_	_	10	5	1	_	7	6	1	2
State Total	156	23	_	_	135	17	13	14	70	33	30	46

	I	Native American				Farmer, miscellaneous private			
Production region	0%	1-33%	34-66%	67-100%	0%	1-33%	34-66%	67-100%	
Puget Sound	40	7	_	_	14	20	1	12	
Olympic Peninsula	57	18	1	_	34	31	6	5	
Lower Columbia	28	2	_	1	10	16	4	1	
Central Washington	1	2	2	3	3	4	1	_	
Inland Empire	10	5	_	1	3	6	4	3	
State Total	137	34	3	5	65	77	16	21	

Table 6: Logs by ownership source(thousand board feet, Scribner rule)

Production region	All Owners	State	National Forest	Bureau of Land Management	Other Public
Puget Sound	784,157	158,775	782	_	6,996
Olympic Peninsula	1,546,926	198,032	9,371	2,687	15,060
Lower Columbia	954,900	40,174	4,091	_	1,794
Central Washington	280,355	10,815	4,341	_	_
Inland Empire	469,576	38,012	23,938	1,629	6,700
State Total	4,035,914	445,808	42,525	4,316 Table (30,551 continued below

Forest Industry Farmer, Own Wood Other Wood Native miscellaneous **Production region** American private Supply Supply Puget Sound 108,304 288,688 3,748 216,864 Olympic Peninsula 661,194 156,761 474,623 29,199 Lower Columbia 380,730 411,550 2,331 114,229 Central Washington 79,147 35,558 142,950 7,544 Inland Empire 92,606 75,140 29,375 202,176 State Total 1,117,943 1,489,596 207,603 697,573

Table 7: Wood species (thousand board feet, Scribner rule)

					P	onderosa
Production region	All species	Douglas-fir	Hemlock	True firs	Spruce	pine
Puget Sound	784,157	429,624	213,694	5,266	3,525	194
Olympic Peninsula	1,546,926	612,663	707,380	5,943	22,624	_
Lower Columbia	954,900	781,733	57,532	5,816	_	1,708
Central Washington	280,355	105,169	18,045	37,980	_	109,034
Inland Empire	469,576	157,154	19,459	78,978	5,715	124,389
State Total	4,035,914	2,086,342	1,016,109	133,983	31,864	235,325
					Table	continued below

Production region	Lodgepole pine	Western redcedar	Other softwoods	Red alder	Other hardwoods
Puget Sound	_	53,077	802	66,569	11,406
Olympic Peninsula	3,292	63,963	_	106,063	24,999
Lower Columbia	1,139	57,550	_	44,836	4,586
Central Washington	9,768	_	360	_	_
Inland Empire	43,927	22,381	17,574	_	_
State Total	58,126	196,971	18,736	217,468	40,991

Table 8: Production and distribution of wood and bark residues (tons, dry weight)

Wood Residue

Used ΑII ΑII **Production region** Other residues Wood Total Pulp **Board** Fuel Unused Puget Sound 1,179,414 879,415 878,321 480,530 77,002 114,078 206,711 1,094 Olympic Peninsula 2,206,764 1,658,699 1,642,760 784,214 62,451 545,117 250,978 15,939 Lower Columbia 905,520 703,624 504,835 61,344 703,624 122,521 14,924 Central Washington 316,003 77,864 0 400,855 316,003 186,550 24,345 27,244 Inland Empire 585,798 468,900 468,900 304,132 80,045 66,935 17,788 State Total 5,278,351 4,026,641 4,009,608 2,260,261 358,706 872,996 517,645 17,033 Table continued below

Bark Residue

Used ΑII **Production region** Bark Total Pulp **Board** Fuel Other Unused **Puget Sound** 299,999 299,873 0 0 52,887 246,986 126 Olympic Peninsula 548,065 543,778 56,421 6,800 342,524 138,033 4,287 Lower Columbia 2 65,790 201,896 201,896 0 136,104 0 Central Washington 84,852 84,852 0 0 75,386 9,466 0 113,465 Inland Empire 116,898 116,898 0 32 0 3,401 State Total 1,251,710 1,247,297 6,800 720,366 463,676 4,413 56,455

Table 9: Log use by diameter (thousand board feet, Scribner rule)

		— — — Log diameter in inches — — — —				
Production region	Total	less than 5	5 to 10	10 to 20	21 +	
Puget Sound	784,157	13,280	340,293	363,198	67,386	
Olympic Peninsula	1,546,926	212,777	722,297	524,552	87,299	
Lower Columbia	954,900	24,689	295,484	535,747	77,080	
Central Washington	280,355	1,167	130,320	122,842	26,026	
Inland Empire	469,576	29,937	262,886	145,747	31,006	
State Total	4,035,914	281,851	1,751,280	1,692,086	288,797	

Sawmills: Tables 10-23

Table 10: Number of sawmills by size

		Mill size class					
	All						
Production region	Classes	D	С	В	Α		
Puget Sound	21	5	2	4	10		
Olympic Peninsula	28	5	4	3	16		
Lower Columbia	9	0	0	1	8		
Central Washington	7	1	0	0	6		
Inland Empire	10	4	2	0	4		
State Total	75	15	8	8	44		

Mill size classes are determined by the capacity to process lumber(measured in thousand board feet) during an 8-hour shift.

 Class A: More than 120,000 mbf
 Class C: 40,000-80,000 mbf

 Class B: 80,000-120,000 mbf
 Class D: less than 40,000 mbf

Table 11: Eight-hour single shift capacity (thousand board feet, Scribner rule)

	Total		Mill-size				
Production region	Capacity	D		В			
Puget Sound	2,952	74	100	392	2,386		
Olympic Peninsula	4,685	73	220	310	4,082		
Lower Columbia	2,585	_	_	80	2,505		
Central Washington	1,237	30	_	_	1,207		
Inland Empire	1,004	39	135	_	830		
State Total	12,463	216	455	782	11,010		

Table 12: Number of sawmills with selected equipment

Production region	Barker	Chipper	Planner	Burner	Kiln
Puget Sound	18	18	15	0	13
Olympic Peninsula	23	24	17	2	15
Lower Columbia	8	6	6	0	5
Central Washington	7	6	7	1	7
Inland Empire	7	8	7	3	6
State Total	63	62	52	6	46

Table 13: Number of sawmills by headrig type and size

		•							Chipping	
Production region and	C	ircula	r Saw		В	andsav	V	Gang Saw	Saw	Scragg
mill-size class	2ft	4ft	6ft	8ft	2ft	4ft	6ft	2ft	2ft	2ft
Puget Sound										
D	0	3	0	0	0	3	0	0	0	0
C	0	0	0	0	1	1	0	1	0	0
В	0	0	0	0	0	3	1	1	0	0
A	0	0	0	0	1	4	4	3	2	0
Total	0	3	0	0	2	11	5	5	2	0
Olympic Peninsula										
D	0	1	0	1	1	2	0	0	0	0
С	0	0	1	0	1	1	1	1	1	1
В	0	0	0	0	0	2	0	1	1	1
A	0	1	0	0	1	8	2	4	4	2
Total	0	2	1	1	3	13	3	6	6	4
Lower Columbia										
В	0	0	0	0	0	0	1	0	0	0
A	0	0	0	0	2	3	3	0	1	1
Total	0	0	0	0	2	3	4	0	1	1
Central Washington	0	0	0	0	0	0	0	0	0	4
D	0	0	0	0	0	0	0	0	0	1
A	0	0	1	0	0	4	1	1	2	0
Total	0	0	1	0	0	4	1	1	2	1
Inland Empire	4	•	•	•				•		
D	1	2	0	0	0	1	0	0	1	1
C	0	0	0	0	0	2	0	0	0	0
A	0	0	0	0	0	2	0	0	3	0
Total	1	2	0	0	0	5	0	0	4	1
State Total	4		•		4			•		
D	1	6	0	1	1	6	0	0	1	2
С	0	0	1	0	2	4	1	2	1	1
В	0	0	0	0	0	5	2	2	1	1
A	0	1	1	0	4	21	10	8	12	3
Total	1	7	2	1	7	36	13	12	15	7

Mill size classes are determined by the capacity to process lumber(measured in thousand board feet) during an 8-hour shift.

 Class A: More than 120,000 mbf
 Class C: 40,000-80,000 mbf

 Class B: 80,000-120,000 mbf
 Class D: less than 40,000 mbf

Table 14: Wood type (thousand board feet, Scribner rule)

	F	Roundwood		Other		
	All	Sound	Utility	Peeler		
Production region	roundwood	logs	logs	cores	Other	
	— — so	ribner Log Rule		— — Lumb	per Tally ——	
Puget Sound	584,344	569,778	14,838	0	200	
Olympic Peninsula	993,712	916,573	77,139	10,000	0	
Lower Columbia	370,636	369,126	1,510	70	0	
Central Washington	216,326	195,772	20,554	0	0	
Inland Empire	314,617	309,601	5,016	0	250	
State Total	2,479,907	2,360,850	119,057	10,070	450	

Table 15: Average number of operating days

Production region	Average operating days per year
Puget Sound	221
Olympic Peninsula	226
Lower Columbia	244
Central Washington	191
Inland Empire	197

Table 16: Log use by diameter(thousand board feet, Scribner rule)

		— — — Log diameter in inches — — —						
Production region	Total	Less than 5	5 - 10	10 - 20	21 +			
Puget Sound	584,616	7,898	289,351	237,275	50,092			
Olympic Peninsula	993,712	63,342	568,102	323,695	38,574			
Lower Columbia	370,636	1,350	161,303	177,724	30,259			
Central Washington	216,326	1,167	105,989	86,986	22,184			
Inland Empire	314,617	17,950	186,341	94,134	16,192			
State Total	2,479,907	91,707	1,311,086	919,814	157,300			

Table 17: Origin of logs (thousand board feet, Scribner rule)

				Bureau of		
	AII		National	Land	Other	
Production region	Owners	State	Forest	Management	Public	
Puget Sound	584,616	151,625	450	0	6,183	
Olympic Peninsula	993,712	140,682	2,215	2,687	11,795	
Lower Columbia	370,636	38,383	2,155	0	1,656	
Central Washington	216,326	4,413	3,061	0	0	
Inland Empire	314,617	24,176	19,061	0	6,700	
State Total	2,479,907	359,278	26,942	2,687	26,334	

Table continued below

	Forest	ndustry		Farmer and		
	Own Wood	Other Wood	Native	miscellaneous		
Production region	Supply	Supply	American	private		
Puget Sound	12,869	231,061	978	178,863		
Olympic Peninsula	276,526	439,964	20,406	99,437		
Lower Columbia	127,706	144,680	1,627	54,429		
Central Washington	61,859	18,911	123,101	4,982		
Inland Empire	46,625	29,793	20,909	167,352		
State Total	525,586	864,408	169,609	505,063		

SAWMILLS

Table 18: Sources of logs for sawmills (number of mills grouped by percentage of dependency)

Production region	National Forest				State-owned			Bureau of Land Mgmt.				
	0	1-33%	34-66%	67-100%	0	1-33%	34-66%	67-100%	0	1-33%	34-66%	67-100%
Puget Sound	20	1	0	0	7	10	2	1	21	0	0	0
Olympic Peninsula	24	4	0	0	7	15	5	1	26	2	0	0
Lower Columbia	8	1	0	0	3	6	0	0	9	0	0	0
Central Washington	5	2	0	0	6	1	0	0	7	0	0	0
Inland Empire	4	6	0	0	5	5	0	0	10	0	0	0
State Total	61	14	0	0	28	37	8	2	73	2	0	0
	Table continued below							below				

					_			Forest In	dustry			
Due de etien ne nien	_	Other	Public _		C)wn Woo	od Supply			Other W	ood Supp	ly
Production region	0%	1-33%	34-66%	67-100%	0%	1-33%	34-66%	67-100%	0%	1-33%	34-66%	67-100%
Puget Sound	15	6	0	0	18	2	0	1	8	4	7	2
Olympic Peninsula	21	7	0	0	20	2	3	3	6	4	12	6
Lower Columbia	7	2	0	0	4	1	3	1	1	3	3	2
Central Washington	7	0	0	0	4	1	1	1	6	1	0	0
Inland Empire	8	2	0	0	5	5	0	0	4	5	0	1
State Total	58	17	0	0	51	11	7	6	25	17	22	11

					Farmer and						
		Native	e Americ	an	miso	ellaneo	us priva	te			
Production region	0%	1-33%	34-66%	67-100%	0%	1-33%	34-66%	67-100%			
Puget Sound	16	5	0	0	2	10	1	8			
Olympic Peninsula	19	9	0	0	7	16	3	2			
Lower Columbia	8	1	0	0	1	6	2	0			
Central Washington	1	1	2	3	3	3	1	0			
Inland Empire	6	3	0	1	1	2	4	3			
State Total	50	19	2	4	14	37	11	13			

Table 19: Logs by species for sawmills (thousand board feet, Scribner rule)

Production region	All species	Douglas-fir	Hemlock	True firs	Spruce	Ponderosa pine	
Puget Sound	584,616	263,129	194,702	1,857	3,369	194	
Olympic Peninsula	993,712	296,731	510,441	3,850	19,132	0	
Lower Columbia	370,636	245,595	32,433	0	0	0	
Central Washington	216,326	41,140	18,045	37,980	0	109,034	
Inland Empire	314,617	75,606	19,300	17,568	5,683	117,071	
State Total	2,479,907	922,199	774,922	61,255	28,184	226,298	
					Toh	la continued b	مام

Table continued below

Production region	Lodgepole pine	Western redcedar	Other softwoods	Red alder	Other hardwoods	
Puget Sound	0	48,432	100	63,697	9,136	
Olympic Peninsula	1,720	57,476	0	94,457	9,904	
Lower Columbia	0	57,000	0	32,403	3,205	
Central Washington	9,768	0	360	0	0	
Inland Empire	43,542	22,349	13,500	0	0	
State Total	55,030	185,257	13,960	190,557	22,245	

Table 20: **Degree of lumber manufacture** (thousand board feet, lumber tally)

Production region	— — — Green	Moisture - Kiln-dried	— — — Air-dried	- Total	— Lumber s	surface ——— Surfaced
Puget Sound	626,484	444,174	6,278	1,072,935	162,174	910,761
Olympic Peninsula	778,805	1,157,741	0	1,934,579	257,541	1,677,038
Lower Columbia	559,720	205,275	0	764,995	162,231	602,764
Central Washington	14,858	298,112	0	312,970	19,718	293,252
Inland Empire	106,533	340,585	311	447,429	91,144	356,285
State Total	2,086,400	2,441,886	6,589	4,532,908	692,807	3,840,101

Table 21: Lumber production by headrig (thousand board feet, lumber tally)

	All types	Circular	Band saw	Gang saw	Chipping	Scragg double cut
Production region		saw		•	saw	saw
Puget Sound	1,072,935	1,869	498,994	557,695	14,377	0
Olympic Peninsula	1,936,546	5,787	906,973	558,380	300,343	165,063
Lower Columbia	764,995	0	661,295	0	85,200	18,500
Central Washington	312,970	43,430	143,173	29,917	96,000	450
Inland Empire	447,429	304	142,555	0	304,558	13
State Total	4,534,875	51,390	2,352,990	1,145,992	800,478	184,026

Table 22: **Production and use of all types of wood residues**(dry weight tons)

All	Types	
	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•

			Α	II Types			
		Total					
Production region	Total	used	Pulp	Board	Fuel	Other	Unused
Puget Sound	809,158	809,158	438,172	77,002	105,567	188,419	0
Olympic Peninsula	1,300,587	1,300,587	629,267	62,451	387,325	221,543	0
Lower Columbia	682,721	682,721	501,396	61,344	107,313	12,669	0
Central Washington	213,617	213,617	108,954	60,579	16,841	27,244	0
Inland Empire	332,061	332,061	191,670	80,045	42,559	17,788	0
State total	3,338,144	3,338,144	1,869,459	341,421	659,605	467,663	0
-				Coarse		_	
		Total					
Production region	Total	used	Pulp	Board	Fuel	Other	Unused
Puget Sound	367,807	367,807	313,259	0	11,434	43,114	0
Olympic Peninsula	498,194	498,194	382,834	0	48,853	66,507	0
Lower Columbia	379,675	379,675	346,328	0	33,119	228	0
Central Washington	93,534	93,534	92,106	0	1,428	0	0
Inland Empire	155,417	155,417	145,922	0	9,495	0	0
State total	1,494,627	1,494,627	1,280,449	0	104,329	109,849	0
-				Fine		-	
		Total					
Production region	Total	used	Pulp	Board	Fuel	Other	Unused
Puget Sound	233,158	233,158	95,981	11,770	41,708	83,699	0
Olympic Peninsula	417,696	417,696	218,677	33	133,740	65,246	0
Lower Columbia	166,012	166,012	102,796	0	62,050	1,166	0
Central Washington	67,602	67,602	16,848	14,048	15,413	21,293	0
Inland Empire	96,644	96,644	32,889	29,469	17,618	16,668	0
State total	981,112	981,112	467,191	55,320	270,529	188,072	0
-				Medium		_	
		Total					
Production region	Total	used	Pulp	Board	Fuel	Other	Unused
Puget Sound	208,195	208,195	28,932	65,232	52,425	61,606	0
Olympic Peninsula Lower Columbia	384,696 137,035	384,696 137,035	27,756 52,272	62,418 61,344	204,732 12,144	89,790 11,275	0
Central Washington	52,482	52,482	0	46,531	0	5,951	0
Inland Empire	80,001	80,001	12,859	50,576	15,446	1,120	0
			*	,-	•	•	

Table 23: **Production and use of bark residue** (dry weight tons)

		Used						
Production region	Total	Total used	Pulp	Board	Fuel	Other	Unused	
Puget Sound	278,542	278,542	0	0	52,887	225,655	0	
Olympic Peninsula	503,511	503,503	56,421	6,800	314,004	126,278	8	
Lower Columbia	201,896	201,896	2	0	136,104	65,790	0	
Central Washington	80,746	80,746	0	0	75,386	5,360	0	
Inland Empire	115,435	115,435	32	0	112,002	3,401	0	
State total	1,180,130	1,180,122	56,455	6,800	690,383	426,484	8	

Veneer and Plywood Mills: Tables 27-35

Table 24: Number of veneer and plywood mills

Production region	All types	Veneer only	Layup only	Veneer and Layup
Puget Sound	2	1	1	0
Olympic Peninsula	6	2	2	2
Lower Columbia	1	0	0	1
Central Washington	1	0	0	1
Inland Empire	1	0	0	1
State Total	11	3	3	5

Table 25: **Veneer and plywood mills 8-hour shift capacity** (thousand square feet, 3/8-inch basis) 8-hour shift capacity is the total maximum volume produced under optimal conditions

	Veneer	Veneer Layup		nd Layup
Production region	only	only	Veneer	Layup
Puget Sound	400	300	0	0
Olympic Peninsula	520	360	425	2400
Lower Columbia	0	0	340	150
Central Washington	0	0	240	240
Inland Empire	0	0	250	250
State Total	920	660	1255	3040

Table 26: Veneer and plywood mills by lathe log diameter limit (in inches)

Production region	Layup only	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	Total
Puget Sound	1	0	1	0	0	0	0	0	0	2
Olympic Peninsula	2	0	0	3	0	0	0	0	1	6
Lower Columbia	0	0	1	0	0	0	0	0	0	1
Central Washington	0	0	0	1	0	0	0	0	0	1
Inland Empire	0	0	1	0	0	0	0	0	0	1
State Total	3	0	3	4	0	0	0	0	1	11

Table 27: Number of veneer and plywood mills by core size

Lathe log diameter limit in inches

										No Lathe	
Production region	3	4	5	6	7	8	9	10	11	or core	Total
Puget Sound	0	1	0	0	0	0	0	0	0	1	2
Olympic Peninsula	1	3	0	0	0	0	0	0	0	2	6
Lower Columbia	1	0	0	0	0	0	0	0	0	0	1
Central Washington	1	0	0	0	0	0	0	0	0	0	1
Inland Empire	1	0	0	0	0	0	0	0	0	0	1
State Total	4	4	0	0	0	0	0	0	0	3	11

Table 28: Number of veneer and plywood mills by equipment

Production region	4-foot	8-foot		Veneer	Core	Cold	Hot	_
	lathe	lathe	Slicer	chipper	chipper	press	press	Burner
Puget Sound	0	1	0	1	1	1	1	1
Olympic Peninsula	1	4	0	3	3	0	3	1
Lower Columbia	1	1	0	1	1	0	1	0
Central Washington	0	1	0	1	1	0	1	0
Inland Empire	0	1	0	1	1	0	1	0
State Total	2	8	0	7	7	1	7	2

Table 29: Average operating days per year by veneer mill type

	Average Days	Number
Plant type	Statewide	of Mills
Veneer only	257	3
Layup only	295	3
Veneer and layup	283	5
State Average	278	11

Table 30: Volume by log diameter (thousand board feet, Scribner rule)

Minimum log diameter	Volume	Percent
Less than 5 inches	99,041	22
5.0 to 10.9 inches	191,540	43
11.0 to 20.9 inches	129,157	29
21 inches or more	29,027	6
State total	448,765	100

Table 31: Production and use of wood residues from veneer and plywood mills

(thousand board feet, Scribner rule)

	Used Used							
		Total						
Production region	Total	used	Pulp	Board	Fuel	Other	Unused	
Puget Sound	68,500	68,500	42,358	0	8,412	17,730	0	
Olympic Peninsula	306,091	305,404	154,947	0	122,109	28,348	687	
Lower Columbia	17,983	17,983	3,439	0	14,544	0	0	
Central Washington	102,385	102,385	77,596	17,285	7,504	0	0	
Inland Empire	136,838	136,838	112,462	0	24,376	0	0	
State Total	631,797	631,110	390,802	17,285	176,945	46,078	687	

Table 32: Veneer and Plywood Production Statewide (thousand square feet, 3/8-inch basis)

Production

Total	1,465,211
Other	0
Plywood	1,001,855
Veneer	463,356

Pulp Mills: Tables 33-39

Table 33: Pulp mills by processing type

Pulp Mills

	All				Semi-
Production region	mills	Sulfite	Sulfate	Groundwood	chemical
Puget Sound	2	1	1	0	0
Olympic Peninsula	3	1	1	1	0
Lower Columbia	4	0	2	1	1
Inland Empire	2	0	0	2	0
State Total	11	2	4	4	1

Table 34: Pulp mill capacity (bone dry tons)

Pulp mill type	Capacity	Number of mills
Sulfite	940	2
Sulfate	6,277	4
Groundwood / semi-chemical	23,200	5
State Total	30,417	11

Table 35: Pulp mills' average operating days

Type of operation	Operating days	Number of Pulp Mills
Sulfite	354	2
Sulfate	350	4
Groundwood and Semi-chemical	349	5
State Total	351	11

Table 36: Pulp mill production by product and type of operation(bone dry tons)

		Products					
	All		Bleached	Unbleached	Other	Market	
Economic area	products	Newsprint	paper	paper	paper	pulp	
Puget Sound	588,266	0	158,266	0	350,000	80,000	
Olympic Peninsula	616,136	0	316,712	0	145,074	154,350	
Lower Columbia	1,918,129	705,721	355,423	807,161	0	49,824	
Inland Empire	434,014	434,014	0	0	0	0	
State Total	3,556,545	1,139,735	830,401	807,161	495,074	284,174	
					Table co	ntinued below	
Type of Operation							
Sulfite	312,616	0	158,266	0	0	154,350	
Sulfate	1,909,296	0	672,135	807,161	350,000	80,000	
Groundwood	1,284,809	1,139,735	0	0	145,074	0	
Semi-chemical	49,824	0	0	0	0	49,824	
State Total	3,556,545	1,139,735	830,401	807,161	495,074	284,174	

Table 37: Pulp mill wood used (except roundwood) (bone dry tons)

Chips									
Production region	Total	Total Chips	Mill residues	Roundwood chipping mill	Sawdust and shavings	Waste paper			
Puget Sound	1,160,260	980,260	895,920	84,340	0	180,000			
Olympic Peninsula	843,898	561,534	377,872	183,662	85,087	197,277			
Lower Columbia	2,624,330	2,309,244	1,810,125	499,119	51,492	263,594			
Inland Empire	385,651	302,965	86,136	216,829	0	82,686			
State Total	5,014,139	4,154,003	3,170,053	983,950	136,579	723,557			

Table 38: Chips and residues (bone dry tons)

Production region	All species	Douglas -fir	Hemlock	True fir	Spruce	Ponderosa pine	Lodgepole pine	Western red cedar	Other conifer	Red alder h	Other nardwood
Puget Sound Roundwood chips	s 84,340	53,043	13,193	0	0	0	0	6,500	0	0	11,604
Residues	1,160,260										
Total Chips	1,244,600										
Olympic Peninsul	a										
Roundwood chips			77,792	0	2,426	0	0	26,690	0	0	0
Residues	843,898										
Total Chips	1,027,560										
Lower Columbia											
Roundwood chips			52,672	126,	0	40,687	44,765	14,747	14,747	23,828	31,852
Residues	2,624,330										
Total Chips	3,123,449										
Inland Empire											
Roundwood chips		8,029	0	0	0	0	0	0	0	0	0
Residues	385,651										
Total Chips	393,680										
State Total											
Roundwood chips	775,150	286,825	143,65	126,	2,426	40,687	44,765	47,936	14,747	23,828	43,456
Residues	5,014,139										
Total Chips	5,789,289										

Table 39: Residue and off-site chip use by state or province (bone dry tons)

Table 55. Residue	Total	•	_	-		British	
Production region	volume	Washington	Oregon	ldaho	Montana	Columbia	Other
Puget Sound							
Chip residue	1,160,260						
Chip roundwood	84,340	77,840	0	0	0	6,500	0
Sawdust and shavings	0	0	0	0	0	0	0
Total	1,244,600	77,840	0	0	0	6,500	0
Olympic Peninsula							
Chip residue	843,898						
Chip roundwood	183,662	175,170	0	0	0	8,492	0
Sawdust and shavings	85,087	79,131	0	0	0	5,956	0
Total	1,112,647	254,301	0	0	0	14,448	0
Lower Columbia							
Chip residue	2,624,330						
Chip roundwood	499,119	361,027	129,192	7,629	1,271	0	0
Sawdust and shavings	51,492	46,343	5,149	0	0	0	0
Total	3,174,941	407,370	134,341	7,629	1,271	0	0
Inland Empire							
Chip residue	385,651						
Chip roundwood	216,829	101,989	0	98,136	2,088	14,616	0
Sawdust and shavings	0	0	0	0	0	0	0
Total	602,480	101,989	0	98,136	2,088	14,616	0
State Total							
Chip residue	5,014,139						
Chip roundwood	983,950	716,026	129,192	105,765	3,359	29,608	0
Sawdust and shavings	136,579	125,474	5,149	0	0	5,956	0
Total	6,134,668	841,499	134,341	105,765	3,359	35,564	0

Shake and Shingle Mills: Tables 40-45

Table 40: Shake and shingle mills' capacity and operating days

Total	single	shif t	сар	acity

((Sq	uai	res)	

	Number		. — — — -		Average number of
Production region	of mills	Shake	Shingle	Other	operating days/year
Puget Sound	4	68	114	200	218
Olympic Peninsula	18	1,293	427	119	190
Lower Columbia	1	0	25	0	200
State Total	23	1,361	566	319	195

Table 41: Shake and shingle mills with selected equipment

	Chipper	Barker	Burner	
State Total	1	0	6	

Table 42: **Wood used** (thousand board feet, Scribner rule)

	All types	Sound	Utility logs	Other
		logs		(shake bolts, etc.)
State Total	12,156	2,022	0	10,134

Table 43: **Ownership origin of logs**(thousand board feet, Scribner rule)

			Forest industry						
				Bureau of Farm				Farmer and	
	All		National	Land	Other	Own wood	Other wood	Native	miscellaneous
	owners	State	Forest	Management	public	supply	supply	American	private
State Total	2,022	0	0	0	0	0	659	401	963

Table 44: **Shake mill production**(squares)

		<u>Product</u>					
	Shakes	Shingles	Other	Total			
State Total	9,553	77,219	41,757	128,529			

Table 45: **Shake mill wood and bark residues**(dry weight tons)

		- — — -	— A ll Woo	od Typ es –		
		Total				
	Total	used	Pulp	Fuel	Other	Unused
State Total	56,696	40,350	0	36,446	3,904	16,346
			— — Соа	rse ——		
		Total				
	Total	used	Pulp	Fuel	Other	Unused
State Total	13,880	9,441	0	8,893	548	4,439
			— — Fii	ne — — —		
	Total	Total used	Pulp	Fuel	Other	Unused
State Total	42,816	30,909	0	27,553	3,356	11,907
			— — —Ва	rk — — –		
	Total	Total used	Pulp	Fuel	Other	Unused
State Total	31,832	27,427	0	10,003	17,424	4,405

Post, Pole and Piling Mills: Tables 46-49

Table 46: Post, pole and piling mills operation characteristics

	Yearly installed cap acity							
	(thousand board feet Average number of							
	Number	Scribi	ner rule)	operating	operating days in 2002			
	of mills	Peeling _	Treatment	Peeling	Treatment			
State Total	6	41,107	10,593	206	265			

Table 47: Post, pole and piling mills with selected equipment

	Number of		
	mills	Peeler	Burner
State Total	6	6	0
Otato i Otai	· ·	· ·	· ·

Table 48: Log use by diameter (thousand board feet, Scribner rule)

	Diameter in inches						
	Total	Less than 5	5-10.9	11-20.9	21 or more		
State Total	30,593	3,814	19,685	7,095	0		

Table 49: Mill shipments (thousand board feet, Scribner rule)

Production region	Treated	Untreated	Total
Puget Sound	12,795	906	13,701
Olympic Peninsula	250	38,222	38,472
Inland Empire	187	21	208
State Total	13,232	39,149	52,381

Log Exports: Tables 50-57

Table 50: Log export operations and volume

Port Puget Sound	County	Number of operations	Volume of logs exported
Anacortes	Skagit	3	10,130
Everett	Snohomish	5	42,952
Tacoma	Pierce	5	117,690
Total		13	170,772
Olympic Peninsula			
Aberdeen	Grays Harbor	3	104,866
Olympia	Thurston	9	63,446
Port Angeles	Clallam	2	1,167
Total		14	169,479
Lower Columbia			
Longview	Cowlitz	12	543,147
Total		12	543,147
State Total		39	883,398

Table 51: Logs exported by diameter (thousand board feet, Scribner rule)

Diameter in inches

State Total	883,398	5,336	203,867	600,128	74,066
Lower Columbia	543,147	4,756	132,397	361,138	44,856
Olympic Peninsula	169,479	580	34,584	118,354	15,961
Puget Sound	170,772	0	36,887	120,637	13,248
Production region	Total	Less than 5	5 - 10.9	11 - 20.9	21 +

Table 52: Log exports by species (thousand board feet, Scribner rule)

Production region	All species	Douglas- fir	Hemlock	True fir	Spruce	Ponderosa pine	Lodgepole pine	Western red cedar	Other conifer	Red alder	Other hardwood
Puget Sound	170,772	156,68	12,157	1,132	2 0	0	0	0	400	0	403
Olympic Peninsula	169,479	124,73	43,041	1,292	9	0	0	400	0	0	0
Lower Columbia	543,147	522,01	19,926	657	0	0	0	550	0	0	0
State Total	883,398	803,433	75,123	3,080	9	0	0	950	400	0	403

Table 53: Ownership origin of export logs(thousand board feet, Scribner rule)

Forest industry

Region	All owners	State	National Forest	Bureau of Land Management	Other public	Own wood supply	Other wood supply	Native American	Farmer and miscellaneous private
Puget Sound	170,772	C	0	0	0	95,435	40,955	0	34,383
Olympic Peninsula	169,479	C	0	0	0	90,491	54,670	173	24,145
Lower Columbia	543,147	C	0	0	0	239,450	252,822	0	50,876
State Total	883,398	C	0	0	0	425,375	348,446	173	109,403

Note: Export of logs from public lands is prohibted by federal law

Chipping Mills: Tables 54-57

Table 54: Capacity and operating days of chipping mills bone dry tons

Production region	Number of Operations	8-hour capacity	Average days operated
Puget Sound	3	675	202
Olympic Peninsula	4	1,230	236
Lower Columbia	4	952	112
Inland Empire	2	1,007	162
State Total	13	3,864	178

Table 55: Chip logs by diameter (thousand board feet, Scribner rule)

	— — — — Diameter in inches — — —						
Production region	Total	Less than 5	5 - 10.9	11 - 20.9	21 or more		
Puget Sound	17,365	5,382	4,252	3,932	3,799		
Olympic Peninsula	69,625	46,215	13,011	3,781	6,618		
Lower Columbia	31,055	19,678	4,507	3,810	3,060		
Inland Empire	73,184	11,774	12,092	35,318	14,000		
State Total	191,229	83,048	33,862	46,842	27,477		

 Table 56: Ownership origin of logs (thousand board feet, Scribner rule)

						Forest in	ndustry		
	All		National	Bureau of Land	Other	Own wood	Other wood	Native	Farmer and miscellaneous
Production region	owners	State	Forest	Management	public	supply	supply	American	private
Puget Sound	17,365	2,656	151	0	756	0	11,433	35	2,334
Olympic Peninsula	69,625	14,825	1,231	0	1,211	0	37,787	1,882	12,688
Lower Columbia	31,055	1,791	1,936	0	138	9,549	9,622	0	8,019
Inland Empire	73,184	7,318	3,818	0	0	0	50,592	318	11,137
State Total	191,229	26,591	7,136	0	2,105	9,549	109,434	2,235	34,178

Table 57: Chip logs by species and economic region (thousand board feet, Scribner rule)

	All species	Douglas	Hemlock	True	Spruce	Ponderosa	Lodgepole	Western	Other	Red	Other	
Production region		-fir		fir		pine	pine	red cedar	conifer	alder	hardwood	
Durant Ones d	47.005	2.007	F 700	0.077	, 450	0	0	202	200	0.070	4.007	
Puget Sound	17,365	3,887	5,700	2,277	156	0	0	302	302	2,872	1,867	
Olympic Peninsula	69,625	27,41	26,025	116	58	0	1,572	1,562	0	11,60	1,270	
Lower Columbia	31,055	6,980	2,255	5,159	0	1,708	1,139	0	0	12,43	1,381	
Inland Empire	73,184	4,137	159	61,410	32	7,318	96	32	0	0	0	
State Total	191.229	42.419	34.140	68.963	3 246	9.027	2.807	1.897	302	26.911	4.518	