Attributes of Sales.shp		Sale	Plan		Harv				Wind Throw
District	Salename	area	year	Status	type	Acres	Salenum	Fiscal	Acres
ASTORIA	BULL MUSIC COMBINATION	3	2004	COMPLETED	PC	118	3410409	2004	
ASTORIA	BULL MUSIC COMBINATION	2	2004	COMPLETED	PC	53	3410409	2004	
ASTORIA	THICK AND THIN	1	2003	COMPLETED	PC	26	3410303	2003	
ASTORIA	THICK AND THIN	4	2003	COMPLETED	PC	20	3410303	2003	
ASTORIA	THICK AND THIN	3	2003	COMPLETED	PC	30	3410303	2003	
ASTORIA	THICK AND THIN	2	2003	COMPLETED	PC	24	3410303	2003	
ASTORIA	OSWEG COMBINATION	1	2004	COMPLETED	PC	119	3410436	2004	
ASTORIA	OSWEG COMBINATION	3	2004	COMPLETED	PC	44	3410436	2004	
ASTORIA	NETTLE MEYER COMBINATIC	2	2002	COMPLETED	PC	603	3410306	2003	
ASTORIA	NETTLE MEYER COMBINATIC	4	2002	COMPLETED	PC	121	3410306	2003	
ASTORIA	NETTLE MEYER COMBINATIC	8	2002	COMPLETED	PC	114	3410306	2003	40
ASTORIA	NETTLE MEYER COMBINATIC	1	2002	COMPLETED	PC	171	3410306	2003	
ASTORIA	NETTLE MEYER COMBINATIC	5	2002	COMPLETED	PC	44	3410306	2003	
ASTORIA	NETTLE MEYER COMBINATIC	3	2002	COMPLETED	PC	47	3410306	2003	
ASTORIA	FOSTER DIVIDE COMBINATIC	1	2003	COMPLETED	PC	52	3410321	2003	
ASTORIA	FOSTER DIVIDE COMBINATIC	2	2003	COMPLETED	PC	61	3410321	2003	
ASTORIA	FOSTER DIVIDE COMBINATIC	3	2003	COMPLETED	PC	242	3410321	2003	
ASTORIA	FOSTER DIVIDE COMBINATIC	4	2003	COMPLETED	PC	39	3410321	2003	
ASTORIA	FOSTER DIVIDE COMBINATIC	6A	2003	COMPLETED	PC	51	3410321	2003	
ASTORIA	DEEP CREEK THINNING	2	2003	COMPLETED	PC	383	3410221	2004	
ASTORIA	DEEP CREEK THINNING	1	2003	COMPLETED	PC	187	3410221	2004	
ASTORIA	CEDAR CABIN THINNING	1	2003	COMPLETED	PC	119	3410302	2003	
ASTORIA	CEDAR CABIN THINNING	2	2003	COMPLETED	PC	60	3410302	2003	
ASTORIA	CEDAR CABIN THINNING	3	2003	COMPLETED	PC	115	3410302	2003	
ASTORIA	BOVINE MAINLINE COMBINA	3	2004	COMPLETED	PC	236	3410448	2004	
ASTORIA	BOVINE MAINLINE COMBINA	4	2004	COMPLETED	PC	78	3410448	2004	
ASTORIA	BOVINE MAINLINE COMBINA	5	2004	COMPLETED	PC	116	3410448	2004	
ASTORIA	BOVINE MAINLINE COMBINA	6	2004	COMPLETED	PC	119	3410448	2004	
ASTORIA	QUARTZ CREEK COMBINATI	1	2002	COMPLETED	PC	261	3410211	2002	
ASTORIA	QUARTZ CREEK COMBINATI	5	2002	COMPLETED	CC	15	3410211	2002	
ASTORIA	QUARTZ CREEK COMBINATI	2	2002	COMPLETED	PC	179	3410211	2002	
ASTORIA	QUARTZ CREEK COMBINATI	3	2002	COMPLETED	PC	245	3410211	2002	
ASTORIA	QUARTZ CREEK COMBINATI	4	2002	COMPLETED	PC	359	3410211	2002	
ASTORIA	COOKED GOOSE COMBINAT	2	2001	COMPLETED	PC	255	3410145	2002	
ASTORIA	BOECK RANCH THINNING	1	2002	COMPLETED	PC	207	3410254	2002	
ASTORIA	BOECK RANCH THINNING	2	2002	COMPLETED	PC	135	3410254	2002	
ASTORIA	WEST GREEN MOUNTAIN CC	1	2005	COMPLETED	PC	164	3410535	2005	
ASTORIA	WEST CREEK COMBINATION	9	0	COMPLETED	PC	30	3410391	2003	
ASTORIA	WEST CREEK COMBINATION	5	0	COMPLETED	PC	43	3410391	2003	
ASTORIA	WEST CREEK COMBINATION	8	0	COMPLETED	PC	36	3410391	2003	
ASTORIA	WEST CREEK COMBINATION	6	0	COMPLETED	PC	24	3410391	2003	

ASTORIA	WEST CREEK COMBINATION	7	0	COMPLETED	PC	28	3410391	2003	
ASTORIA	WEST CREEK COMBINATION	4	0	COMPLETED	PC	17	3410391	2003	
ASTORIA	WEST CREEK COMBINATION	3	0	COMPLETED	PC	70	3410391	2003	
ASTORIA	WEST CREEK COMBINATION	2	0	COMPLETED	PC	26	3410391	2003	
ASTORIA	SIMMONS RIDGE	3	0	COMPLETED	PC	42	3410493	2004	
ASTORIA	SIMMONS RIDGE	5	0	COMPLETED	PC	99	3410493	2004	
ASTORIA	SIMMONS RIDGE	7	0	COMPLETED	PC	264	3410493	2004	
ASTORIA	SIMMONS RIDGE	8B	0	COMPLETED	PC	8	3410493	2004	
ASTORIA	SIMMONS RIDGE	8	0	COMPLETED	PC	134	3410493	2004	
ASTORIA	SIMMONS RIDGE	8A	0	COMPLETED	PC	6	3410493	2004	
ASTORIA	SAINT NICK THINNING	1	0	COMPLETED	PC	80	3410301	2003	
ASTORIA	SAINT NICK THINNING	2	0	COMPLETED	PC	175	3410301	2003	
ASTORIA	SAINT NICK THINNING	3	0	COMPLETED	PC	309	3410301	2003	
ASTORIA	ROCK CREEK	1	0	COMPLETED	PC	68	3410307	2003	
ASTORIA	ROCK CREEK	2	0	COMPLETED	PC	42	3410307	2003	
ASTORIA	ROCK CREEK	6	0	COMPLETED	PC	137	3410307	2003	6
ASTORIA	ROCK CREEK	5	0	COMPLETED	PC	41	3410307	2003	
ASTORIA	KERRY EAST	2	0	COMPLETED	PC	693	3410463	2004	
ASTORIA	KERRY EAST	3	0	COMPLETED	PC	139	3410463	2004	
ASTORIA	KERRY EAST	1	0	COMPLETED	PC	120	3410463	2004	2
ASTORIA	JOHN DAY POINT THINNING	2	0	COMPLETED	PC	50	3410403	2004	
ASTORIA	JOHN DAY POINT THINNING	1	0	COMPLETED	PC	92	3410403	2004	
ASTORIA	HUNT CREEK LSD	1	0	COMPLETED	PC	28	3410212	2002	
ASTORIA	HUNT CREEK LSD	2	0	COMPLETED	PC	31	3410212	2002	
ASTORIA	HUNT CREEK LSD	3	0	COMPLETED	PC	59	3410212	2002	
ASTORIA	HUNT CREEK LSD	4	0	COMPLETED	PC	29	3410212	2002	
ASTORIA	HUNT CREEK LSD	5	0	COMPLETED	PC	69	3410212	2002	
ASTORIA	HUNT CREEK LSD	6	0	COMPLETED	PC	119	3410212	2002	
ASTORIA	HUNT CREEK LSD	7	0	COMPLETED	PC	95	3410212	2002	
ASTORIA	HUNT CREEK LSD	8	0	COMPLETED	PC	58	3410212	2002	
ASTORIA	HUNT CREEK LSD	9	0	COMPLETED	PC	74	3410212	2002	
ASTORIA	FISHHAWK BASIN COMBINAT	3	0	COMPLETED	PC	157	3410261	2002	
ASTORIA	COUGAR MONSTER	1	0	COMPLETED	PC	26	3410375	2003	
ASTORIA	COUGAR MONSTER	7	0	COMPLETED	PC	44	3410375	2003	
ASTORIA	COUGAR MONSTER	2	0	COMPLETED	PC	172	3410375	2003	
ASTORIA	COUGAR MONSTER	6	0	COMPLETED	PC	48	3410375	2003	
ASTORIA	BROWNSMEAD HILL	3	0	COMPLETED	PC	21	3410462	2004	
ASTORIA	ASTORIA BASIN THINNING	7	0	COMPLETED	PC	301	3410454	2004	
ASTORIA	ASTORIA BASIN THINNING	9	0	COMPLETED	PC	264	3410454	2004	
ASTORIA	ASTORIA BASIN THINNING	10	0	COMPLETED	PC	28	3410454	2004	
ASTORIA	ASTORIA BASIN THINNING	11	0	COMPLETED	PC	27	3410454	2004	
ASTORIA	FISHHAWK BASIN COMBINAT	10	0	COMPLETED	PC	121	3410261	2002	
ASTORIA	FISHHAWK BASIN COMBINAT	8	0	COMPLETED	PC	245	3410261	2002	

ASTORIA	FISHHAWK BASIN COMBINAT	7	0	COMPLETED	PC	163	3410261	2002	
ASTORIA	FISHHAWK BASIN COMBINAT	1	0	COMPLETED	PC	42	3410261	2002	
ASTORIA	FISHHAWK BASIN COMBINAT	2	0	COMPLETED	PC	58	3410261	2002	
ASTORIA	FISHHAWK BASIN COMBINAT	4	0	COMPLETED	PC	60	3410261	2002	
ASTORIA	FISHHAWK BASIN COMBINAT	5	0	COMPLETED	PC	94	3410261	2002	
ASTORIA	FISHHAWK BASIN COMBINAT	6	0	COMPLETED	PC	24	3410261	2002	
ASTORIA	ASTORIA BASIN THINNING	6	0	COMPLETED	PC	384	3410454	2004	
ASTORIA	GNAT CREEK COMBINATION	4	0	COMPLETED	PC	19	3410255	2002	
ASTORIA	GNAT CREEK COMBINATION	4A	0	COMPLETED	PC	51	3410255	2002	
ASTORIA	GNAT CREEK COMBINATION	3A	0	COMPLETED	PC	23	3410255	2002	
ASTORIA	GNAT CREEK COMBINATION	3	0	COMPLETED	PC	25	3410255	2002	
ASTORIA	WEST HUNT CREEK	1	2005	COMPLETED	PC	64	3410536	2005	
ASTORIA	BIGFOOT COMBINATION	2	2005	COMPLETED	PC	59	3410564	2005	
ASTORIA	BIGFOOT COMBINATION	3	2005	COMPLETED	PC	39	3410564	2005	
ASTORIA	BIGFOOT COMBINATION	6	2005	COMPLETED	PC	47	3410564	2005	
TOTALS						11,156			48
						0.43%	Percent		

District	Unit	Sale Name	Sale Area	Plan Year	Completed Year	Status	Harv Type	Acres	Sale Num	Windthrow Acres	Comments
Tillamook	North	Clam Junction Combo	1	1999	2002	Completed	PC	95	341-00-06	0	
Tillamook	North	Clam Junction Combo	2	1999	2002	Completed	PC	55	341-00-07	0	
Tillamook	North	Clam Junction Combo	3	1999	2002	Completed	PC	460	341-00-08	0	
Tillamook	North	Clam Junction Combo	4	1999	2002	Completed	PC	35	341-00-09	0	
Tillamook	North	Clam Junction Combo	5	1999	2002	Completed	PC	110	341-00-10	0	
Tillamook	North	Clam Junction Combo	6	1999	2002	Completed	PC	15	341-00-11	0	
Tillamook	North	Miami Stu	2	2000	2004	Completed	PC	100	341-00-72	0	
Tillamook	North	Miami Stu	3	2000	2004	Completed	PC	52	341-00-72	0	
Tillamook	North	Miami Stu	4	2000	2004	Completed	PC	33	341-00-72	0	
Tillamook	North	Miami Stu	5	2000	2004	Completed	PC	64	341-00-72	0	
Tillamook	North	Miami Stu	6	2000	2004	Completed	PC	8	341-00-72	0	
Tillamook	North	Claymore Thin	1	2000	2002	Completed	PC	137	341-01-25	0	
Tillamook	North	Claymore Thin	2	2000	2002	Completed	PC	158	341-01-25	0	
Tillamook	North	Acey Line Thin	1	2000	2003	Completed	PC	50	341-01-09	0	
Tillamook	North	Acey Line Thin	2	2000	2003	Completed	PC	18	341-01-10	0	
Tillamook	North	Acey Line Thin	3	2000	2003	Completed	PC	16	341-01-11	0	
Tillamook	North	Acey Line Thin	4	2000	2003	Completed	PC	40	341-01-12	0	
Tillamook	North	Tin Forks	2	2001	2004	Completed	PC	100	341-02-25	0	
Tillamook	North	County Line Return	1	2001	2004	Completed	PC	39	341-03-15	0	
Tillamook	North	County Line Return	2	2001	2004	Completed	PC	28	341-03-15	0	
Tillamook	North	County Line Return	4	2001	2004	Completed	PC	12	341-03-15	0	
Tillamook	North	County Line Return	5	2001	2004	Completed	PC	41	341-03-15	0	
Tillamook	North	County Line Return	6	2001	2004	Completed	PC	9	341-03-15	0	
Tillamook	North	County Line Return	7	2001	2004	Completed	PC	16	341-03-15	0	
Tillamook	North	County Line Return	9	2001	2004	Completed	PC	21	341-03-15	0	
Tillamook	North	Henry.com	2	2001	2005	Completed	PC	190	341-02-39	0	
Tillamook	North	Crystal Crossover	1	2001	2004	Completed	PC	60	341-02-42	0	
Tillamook	North	Crystal Crossover	3	2001	2004	Completed	PC	20	341-02-42	0	
Tillamook	North	North Cronin	1	2001	2005	Completed	PC	28	341-02-36	0	
Tillamook	North	North Cronin	2	2001	2005	Completed	PC	18	341-02-36	0	
Tillamook	North	North Cronin	3	2001	2005	Completed	PC	17	341-02-36	0	
Tillamook	North	North Cronin	4	2001	2005	Completed	PC	130	341-02-36	20	5 acres have been salvaged, 15 are planned for salvage

Tillamook	North	Cook Wright	1	2002	2004	Completed	PC	400	341-03-28	0	
Tillamook	North	Cook Wright	2	2002	2004	Completed	PC	70	341-03-28	0	
Tillamook	North	Eck Creek	1	2002	2004	Completed	PC	73	341-03-27	0	
Tillamook	North	Eck Creek	2	2002	2004	Completed	PC	103	341-03-27	0	
Tillamook	North	Eck Creek	3	2002	2004	Completed	PC	18	341-03-27	0	
Tillamook	North	Swiss Misc	2	2002	2006	Completed	PC	13	341-03-29	0	
Tillamook	North	Swiss Misc	3	2002	2006	Completed	PC	31	341-03-29	0	
Tillamook	North	Swiss Misc	4	2002	2006	Completed	PC	57	341-03-29	0	
Tillamook	North	Swiss Misc	5	2002	2006	Completed	PC	43	341-03-29	0	
Tillamook	North	Swiss Misc	6	2002	2006	Completed	PC	18	341-03-29	0	
Tillamook	North	Cook East	2	2003	2006	Completed	PC	31	341-03-86	0	
Tillamook	North	Cook East	3	2003	2006	Completed	PC	66	341-03-87	0	
Tillamook	North	Crymini	1	2003	2006	Completed	PC	15	341-04-14	0	
Tillamook	North	Crymini	2	2003	2006	Completed	PC	16	341-04-15	0	
Tillamook	North	Miami High	3	2003	2005	Completed	PC	73	341-04-55	2	These acres were adjacent to the thinning area.
Tillamook	North	Coal Ridge	2	2004	2004	Completed	PC	8	341-04-57	0	
Tillamook	North	Post Canyon	2	2004	2006	Completed	PC	77	341-04-64	0	
Tillamook	North	Widenoja	3	2005	2006	Completed	PC	14	341-05-58	0	
Tillamook	North	Widenoja	4	2005	2006	Completed	PC	36	341-05-58	0	
Tillamook	North	Widenoja	5	2005	2006	Completed	PC	21	341-05-58	0	
Tillamook	North	Widenoja	6	2005	2006	Completed	PC	96	341-05-58	0	
Tillamook	Central	Elk Wallow	1	2000	2002	Completed	PC	882	341-00-58	0	
Tillamook	Central	Elk Wallow	3	2000	2002	Completed	PC	7	341-00-58	0	
Tillamook	Central	Fox Fall	1	2000	2002	Completed	PC	25	341-01-04	0	
Tillamook	Central	Fox Fall	2	2000	2002	Completed	PC	326	341-01-04	0	
Tillamook	Central	Fox Ridge Thin	1	2002	2004	Completed	PC	72	341-03-22	0	
Tillamook	Central	Fox Ridge Thin	2	2002	2004	Completed	PC	22	341-03-22	0	
Tillamook	Central	Fox Ridge Thin	3	2002	2004	Completed	PC	19	341-03-22	0	
Tillamook	Central	Hughey Green	4	2001	2003	Completed	PC	26	341-02-08	0	
Tillamook	Central	Hughey Green	5	2001	2003	Completed	PC	15	341-02-08	0	
Tillamook	Central	Luebke	1	2002	2004	Completed	PC	79	341-03-14	0	
Tillamook	Central	Lyda Power	1	2000	2003	Completed	PC	497	341-01-18	0	
Tillamook	Central	Past the Buck	1	1999	2002	Completed	PC	527	341-00-07	0	
Tillamook	Central	Phelps Thin	1	2000	2003	Completed	PC	355	341-00-17	0	
Tillamook	Central	Spaur Thin	1	2002	2005	Completed	PC	154	341-03-23	0	
Tillamook	Central	Cedar Fence	1	2001	2004	Completed	PC	220	341-01-75	0	
Tillamook	Central	West Point	1	2003	2005	Completed	PC	9	341-04-20	0	

Tillamook	Central	West Point	2	2003	2005	Completed	PC	12	341-04-20	0	
Tillamook	Central	West Point	4	2003	2005	Completed	PC	11	341-04-20	0	
Tillamook	Central	West Point	6	2003	2005	Completed	PC	72	341-04-20	0	
Tillamook	Central	West Point	7	2003	2005	Completed	PC	19	341-04-20	0	
Tillamook	Central	West Point	8	2003	2005	Completed	PC	25	341-04-20	0	
Tillamook	Central	West Standard	1	2002	2004	Completed	PC	270	341-02-29	0	
Tillamook	Central	West Standard	3	2002	2004	Completed	PC	11	341-02-29	0	
Tillamook	Central	West Standard	4	2002	2004	Completed	PC	490	341-02-29	0	
Tillamook	Central	West Standard	5	2002	2004	Completed	PC	131	341-02-29	0	
Tillamook	Central	West Standard	6	2002	2004	Completed	PC	65	341-02-29	0	
Tillamook	South	Bale Bound	Area 1	2003	2005	Completed	PC	55	341-03-79	0	
Tillamook	South	Beaver High	Area 1	2003	2004	Completed	PC	101	341-04-17	0	
Tillamook	South	Beaver High	Area 2	2003	2004	Completed	PC	20	341-04-17	0	
Tillamook	South	Bound and Stretched	Area 1	2001	2002	Completed	PC	62	341-01-32	0	
Tillamook	South	Hughey Green	Area 1	2001	2003	Completed	PC	59	341-02-08	0	
Tillamook	South	Hughey Green	Area 2	2001	2003	Completed	PC	28	341-02-08	0	
Tillamook	South	Hughey Green	Area 4	2001	2003	Completed	PC	33	341-02-08	0	
Tillamook	South	Hughey Green	Area 5	2001	2003	Completed	PC	18	341-02-08	0	
Tillamook	South	North Fawcett	Area 3	2003	2004	Completed	PC	6	341-04-12	0	
Tillamook	South	North Fawcett	Area 4	2003	2004	Completed	PC	17	341-04-12	0	
Tillamook	South	North Fawcett	Area 5	2003	2004	Completed	PC	63	341-04-12	0	
Tillamook	South	North Fawcett	Area 6	2003	2004	Completed	PC	10	341-04-12	0	
Tillamook	South	North Fawcett	Area 7	2003	2004	Completed	PC	15	341-04-12	0	
Tillamook	South	Quarter Pruned	Area 1	2004	2005	Completed	PC	156	341-04-45	0	
Tillamook	South	Rimrock Thin	Area 1	2002	2004	Completed	PC	399	341-03-24	0	
Tillamook	South	Shanty Town	Area 1	2001	2003	Completed	PC	432	341-01-50	0	
Tillamook	South	Simmons Loop	Area 1	2001	2004	Completed	PC	257	341-01-66	0	
Tillamook	South	Simmons Loop	Area 2	2001	2002	Completed	PC	52	341-01-66	0	
Tillamook	South	Simmons Loop	Area 3	2001	2001	Completed	PC	28	341-01-66	0	
Tillamook	South	Simmons Loop	Area 4	2001	2001	Completed	PC	25	341-01-66	0	
Tillamook	South	Simmons Loop	Area 5	2001	2002	Completed	PC	12	341-01-66	0	
Tillamook	South	Simmons Loop	Area 6	2001	2002	Completed	PC	9	341-01-66	0	
Tillamook	South	Summit Creek Thin	Area 1	2002	2003	Completed	PC	163	341-02-04	0	
								9815		22	

Windthrow Analysis - Forest Grove District

Sale Name	Sale Area	Plan Year	Completed Year	Acres	Windthrow Acres
Barking Bull	1	2001	2002	123	5
Barking Bull	2	2001	2002	212	
Be Nine	1	2001	2001	399	
Goldminer	1	2001	2002	160	
Long Cochran	1	2001	2001	165	
Lucky Lars	1	2001	2003	100	
Nor Wolf	1,2,3	2001	2003	394	
Step Up	1	2001	2004	335	
Upper Drift	1	2001	2003	347	
Water Wheel	1,2	2001	2003	390	
Wilark Trilogy	1,2,3,4	2001	2002	97	
Blue Lake Special	1	2002	2003	290	
Devil's Saddle	1	2002	2004	342	
Hasenpfeffer	1,2,3,4,5	2002	2003	160	
Harvey Wallhanger	1	2002	2004	124	
Jordan Review	1	2002	2003	169	
McGregor Man	1	2002	2003	325	
Ought To Thin	1	2002	2003	318	
Scoggins Combo	2	2002	2005	136	
Thin finger	1,2	2002	2005	191	
T Wally	1,2	2002	2004	355	
Uff Da	1	2002	2003	24	
Abuncha Phellinus	1	2003	2004	279	40
Beaver Nation	1	2003	2005	175	
Captain Derby	1	2003	2005	244	20
Cezanne	1,2,3,4	2003	2005	316	
Giveout Mountain	1,2	2003	2004	316	2
Little Idiot Creek	1	2003	2004	94	
Noble Prize	1	2003	2004	23	
Porcupine Climb	2,3,4	2003	2004	82	
Raven Ridge	2	2003	2005	40	10
Round Belly	1	2003	2004	318	
Sappington Creek	2,3,4	2003	2005	300	
Sein Creek Thin	1	2003	2004	209	
Van Vleet	1	2003	2005	237	
Adrift Again	1	2004	2006	230	
C Saw	1	2004	2005	221	
Coyote Grande	1,2,3,4	2004	2005	564	15
Darl Bark	1	2004	2006	388	5
Mac PC	1	2004	2005	118	
Six Way	1,2,3	2004	2005	325	
Stein Logger	1	2004	2006	424	
Universal		2004	2006	290	
Willaminor	1	2004	2005	126	
D Deyoe	2	2005	2006	137	
Totals				**10612**	**97**
					0.90%

Notes:

1. All District completed partial cut harvests from 2001 AOP to present are included.

2. All excessive windthrow has been or is being salvaged.

REG 5/18/06

State Forests Program Stand Level Inventory Q and A

1. What inventory was used for the 2000 model?

State Forests inventory data used in the 2000 modeling was from our OSCUR II inventory system. This inventory was begun in 1979, and contained data from field based sampling work done primarily between 1979 and 1992. Approximately 60% of the OSCUR data was from 15 to 21 years old as of the 2000 modeling, most of the other 40% was from 5 to 14 years old. Data used for modeling in 2000 was OSCUR data that was grown-forward using timber growth models.

2. What inventory was used for the 2006 model Harvest & Habitat model?

The State Forests inventory transitioned from the OSCUR II system to a new Stand Level Inventory (SLI) system that was developed beginning in 2000. Field based sampling work for SLI began in 2002. By September 2004 approximately 29%[1] of the forest stands in the inventory had field based sample data, the remaining 71% of stands had data that was extrapolated from the field sample based data. SLI data as of September 2004 was used for the 2006 model.

3. What is the current inventory schedule, how do we obtain SLI, and what science is used to base this data collection?

Currently, State Forest ownership is comprised of approximately 9,000 SLI stands (an average of 87 acres per stand). The inventory approach[2] utilizes a sampling technique called Two-Phased Sampling. In Phase 1 every stand is classified into one of 70 groups – each group, or strata, represents a unique combination of: tree species, tree size, and stand tree density. In Phase 2 an equal percentage of stands in each strata receives field based sampling work, a strata average is calculated from the measured stands in each strata. The assignment of strata averages to the non-measured stands is made according to the strata determined for each stand in Phase 1. The result is inventory data for each stand, either field measured or strata based average information.

Field based sampling work is done primarily through personal service contracts with forest consulting firms and individuals. A small amount of the work is done by ODF foresters on a district by district basis.

The State Forest Program's plan for SLI data acquisition is to achieve and maintain a level of field based sampling for at least 50% of all stands. The percentage of stands with field based samples as of early 2006 is approximately 46%.

4. Are there any statutes, policy directives or rules that exist that direct us to obtain SLI?

There is no specific set of requirements to obtain inventory data. However, in order for the State Forester to produce plans called for by ORS 526.255 and OAR 629-035-0030, information on the forest stand resources and their conditions is necessary – which by inference requires a suitable forest vegetation inventory system and data.

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[1] average of three north-coast districts; Tillamook, Forest Grove, Astoria

[2] the approach used for about 9000 stands statewide, except for another 300 stands in the Klamath-Lake District that utilize a different approach (field samples for all stands)

5. What % inventory has been achieved, what % inventory has been achieved over the past 4 years, what is the scheduled timeline to be "completed," and what does "completed" mean?

The percentage of stands with field based samples as of early 2006 is approximately 46%. The percentage of acres with field based samples is 60% - higher due to the use of a statistically valid method of sample stand selection that chooses relatively larger acreage stands for sampling efforts.

The State Forests Management Program has obtained field based samples for approximately 900 to 1000 stands per year since SLI inception in 2002. Because some stands are operated (e.g. timber sale harvesting) on *after* SLI field sampling, some of the previously collected data is not useful currently, hence the current level of field based stand inventory is slightly less than the sum of the SLI sampling done to date.

The State Forests Management Program's plan for SLI design and implementation seeks to best meet the needs and uses for the information, in a cost-effective manner. The Two-Phased sampling approach provides for statistically reliable estimates for total forest inventory without the requirement (cost) of field sampling in every stand. Commonly acceptable confidence levels for total inventory estimates would require a minimum of 20% to 25% measured stand accomplishment. The Program's goal is 50%, and once attained, we will reassess the data needs and uses to determine what level to maintain. The Program is very near that juncture and will conduct the re-analysis in the FY07 period. The personal service contract cost of SLI field sampling work for attaining the 50% level is approximately $2,500,000 (not including ODF staff costs).

SLI is one of two, separate but complimentary, formal inventories done by the Program. The other inventory is referred to as the Permanent Plot inventory, or EXT – short for *extensive* inventory. The EXT differs from SLI in that it's primary purpose is to enable quantitative assessment of forest vegetation change over time, on a forest-wide scale, whereas the focus of SLI is to provide information at a stand by stand level, and for the current condition only. EXT is done to measure the change in timber resources over time due to growth, mortality, and harvest. EXT information serves as a reliable means to adjust forest growth models, calibrating them in order to provide the best estimates of future conditions based upon modeling. EXT is an extensive sample of the State Forests ownership. It is comprised of 430 field sample plots that are 1 hectare (2.47 acres) in size, spaced in a regular grid pattern – plots are spaced 1.7 miles apart, each plot representing approximately 1850 acres. The plots are carefully marked to allow repeated measurement at periodic intervals. The plots were initially installed in 1999 and 2000, and their first re-measurement is planned for 2008.

6. What opportunity, if any, exists to accelerate SLI data collection?

Several specific projects to improve the SLI are being done. Tillamook District, with approximately a third of the acreage in State Forests ownership, is reconfiguring its SLI stand boundary configuration – seeking to reduce within stand variation so that inventory estimates more closely reflect the stand characteristics. In the short term, the % of stands with field sampled data will be lower than at present, but future field sampling work will be focused in this district in order to re-attain the 50% sampled stand level.

Astoria District determined that a higher % of stands with field based samples was necessary for their specific operational planning needs, and has assigned district personnel to administer additional SLI personal service contracting in 2006.

The third improvement in the works is a transition from our current strata-based assignment of data to non-measured stands, to what's known as the Nearest-Neighbor assignment method.

This process, called *Imputation* for short, has the advantage of reducing differences between the assignment (Phase 2) values and the actual characteristics of each non-measured stand. While strata-based assignment supports the type of modeling done in 2006, at a strategic/tactical level – Imputation would better support operational level applications for model results because more accurate decisions (harvest unit by harvest unit) are feasible when data for non-measured stands more closely represents the conditions within the stands.

Attainment and maintenance of levels of measured stands greater than 50% is certainly feasible, yet may not be necessary given the potential for Two-Phased sampling to provide adequate data for the Program's information needs and uses. Greater numbers of measured stands would entail proportionately greater allocation of funds for personal service contracting, and proportionally greater ODF FTE and support costs to administer the contracts.

Summary of written testimony presented to the Board of Forestry April 28 2006.
Re: State Forests Management Plan.

This summary identifies themes that emerge from the written testimony and uses actual verbiage from the submitted testimony. Please refer to the full submitted documents for more detail on stakeholder views and opinions.

Themes of June 28 testimony:

- Harvest volume/log supply/revenue concerns
- Harvest and Habitat (H&H) model comments
- Forest Management Plan (FMP) implementation comments
- FMP – Structure Based Management (SBM) approach
- FMP adjustments
- Performance Measures

Harvest volume/log supply/revenue concerns:

- New facilities in western Washington may intercept wood from Washington and British Columbia – public timber supply in Oregon needs to increase in Oregon to keep the state's existing infrastructure and maintain healthy forests and rural communities (Hampton).
- The H&H model shows that implementation of current management strategy will not achieve harvest levels and cash flows presented to the Board in 2000 and 2001. The H&H report illustrated the great difference and cost between the current strategies and the wood emphasis model run (Hampton).
- Presented information (no source given) on PNW log supply, production, log consumption, and regional deficits. Argued for the importance of state forests in meeting regional log supply (Douglas Timber Operators).
- Disappointed in 150 MMBF harvest levels – thinks these lands could produce 300 MMBF forever (Boise).
- Oregon mills need logs from Oregon state forests. New mills in SW Washington, calls for Oregon supplying Oregon mills. Counties have a right to timber revenue from these lands (Boise).
- Current management plan does not address responsibility to counties (Hampton).
- The current FMP (as modeled) will forego 100 MMBF of timber harvest as compared to 2001 model results. This is too high a price to pay – including costs related to: foregone revenue; jobs; payroll loss; cash flow; impacts on communities; social fabric and business infrastructure (AOL).

Harvest and Habitat model comments:

- Proposes modeling approach to answer the question: "How much of the forest resource is dedicated to creating and maintaining the complex structure targets?" Presents initial results addressing this question (FTLAC).

- Timber emphasis model run appear reasonable and match our model results (Boise).
- Concern over volume estimates based on 40 foot logs, favors use of 32 foot logs. If yield tables are based on 40 foot logs, expect serious push back (Boise).
- Wood emphasis alternative is conservative. Modeling assumptions were too conservative for this alternative (AOL).
- Model uncertainty – model does not/cannot account for natural disturbances (fire, disease etc), so strong monitoring program is needed. Management uncertainty – model did not account for snags, downed wood, and other important components – old growth conditions will not be achieved without them. Spatial ecology – encourages continued work on the quantity and arrangement of habitat (Wildlife Society).
- Important to have the timber output information from state forests. However – there is more confidence in the harvest output of model than the habitat output. Model did not include critical components of snags, downed wood, etc. Model predictions on achieving complex structure are likely optimistic because structural components not included in analysis (Davies et al).
- H&H model is limited view of economic value – report section on "economics" is more appropriately titled "harvest revenue". Need a broader assessment of economics. H&H model reports only on one value within the GPV concept (Davies et al).
- Support independent scientific review of the model (Davies et al).

FMP implementation comments:

- Concern over the amount of forest dedicated to creating and maintaining complex structure. How is forest land allocated between acres managed intensively for financial return and those managed for providing complex structure (FTLAC).
- Concern expressed over particular timber sale and its affect on marbled murrelets; comments on FY 07 Annual Operation Plans (Denison).
- Need timber sales w/Douglas-fir about 70 years old – these have sufficient strength for engineered wood products (Boise).
- Given Greatest Permanent Value language – think you are moving in the right direction (Wildlife Society).
- Appreciate FMP's emphasis on adaptive management and the intent to change forest management activities to reflect knowledge gained through monitoring. Support the notion that economic outputs from state forests can help create a more prosperous Oregon (Davies et al).
- There have been observations of blowdown in hemlock stands in Astoria and Tillamook districts, due to FMP strategies. There have been high cost double entry sales in Tillamook – the first entry a thinning, and the second entry a clearcut. Field personnel are "handcuffed" to the requirements of the FMP (Hampton).
- Concerned about projected road building in FMP and H&H (Davies et.al.).

FMP – Structure Based Management (SBM) approach:

- Is old growth on federal lands sufficient for regional needs – is SBM even needed to meet wildlife needs in Oregon – is it worth the cost to the counties? (Boise).
- Older Douglas-fir responds slowly to thinning. Growing trees over 70 years old is a marginal investment. Younger stands grow vigorously and respond to thinning. Believe Douglas-fir contributes to northern spotted owl habitat after 50 years old (Boise).
- Apply SBM in younger stands, rather than older stands, and only after a landscape analysis identifies a need (Boise).
- Riparian buffers are wider than FPA. Arrange buffers to provide stream protection and wildlife (Boise).
- Questions whether older forest structure rotating around the landscape can actually provide most of the benefits of actual old growth (Davies et al).

FMP adjustments:

- Apply SBM only in younger stands (Boise).
- Include in the FMP conversation recreation, tourism, fishing and hunting, water, habitat, carbon sequestration etc., as integrated, interdependent values. Also include dialog among counties, recreation and conservation communities on promoting investments and support for counties that depend on timber revenue. Consider forest certification and its benefits. Looking for collaborative solutions (Davies et al).
- Urges the BOF to amend the FMP in light of H&H results and other new insights. This would be in the spirit of adaptive management. Re-examination and FMP amendment should be as soon as possible (AOL).
- New challenges today that did not exist in 2001 include : H&H results; CFTLAC do not support current FMP; Industry opposes reduced yields; BOF work on dynamic ecosystems; coho de-listed; Northern spotted owl status review; federal timber program failure to rebound) – and other listed factors (AOL).
- Basic approach of SBM need to be reviewed in light of reduction in volume flow, resource waste (blowdown), and the impaired productivity of the land (Hampton).
- Consider the designation of some significant areas of contiguous forest be managed towards an eventual status as refugia for fish, wildlife, and passive recreation – rather than toward final harvest, Or at a minimum, lengthen the amount of time older forest structure stands remain in that condition prior to harvest – from 20 to 50 years (Davies et al).

Performance Measures:

- Support the idea of road performance measures. Argues that proposed target for hydrologic connectivity is inadequate and should be adjusted. Proposes additional measure related to road density (Pacific Rivers Council).

The following groups/individuals submitted written testimony presented to the Board of Forestry on Friday April 28, 2006:
The Wildlife Society, Lori Hennings
Boise, Russ McKinley
Pacific Rivers Council, Brownen Wright
Douglas Timber Operators
Associated Oregon Loggers, Rex Storm
FTLAC, Mark Rasmussen
Hampton Affiliates, Dave Ivanoff
Marcia Denison
Brent Davies et al, - representing a coalition of environmental organizations including:

- American Rivers, David Moryc
- Audubon Society of Portland, Susan Ash
- Cascade Resource Advisory Group, Chris Winter
- Coast Range Association, Chuck Willer
- Center for Biological Diversity, Noah Greenwald
- Ecotrust, Brent Davies
- Native Fish Society, Les Helgeson
- Oregon Natural Resources Counci, Jay Wardl
- Oregon Trout, Brett Brownscombe
- Sierra Club, Oregon Chapter, Ivan Maluski
- Trout Unlimited , Oregon Chapter, Tom Wolf
- Umpqua Watersheds, Francis Eatherington
- Wild Salmon Center, Guido Rahr

GREATEST PERMANENT VALUE MATRIX

A COMPARISON OF ALTERNATIVE APPROACHES TO ACHIEVING GREATEST PERMANENT VALUE ON STATE FORESTLANDS

July 28, 2000

INTRODUCTION

- To provide the BOF with a Staff Analysis on the likelihood the draft FMP will achieve GVP standards on State Forest Lands.

- A tool for assisting the Board in making informed policy decisions regarding the FMP and the HCP.

- The FMP was compared to two alternative approaches and all were "rated" as to their likelihood for achieving GPV Standards.

- The two other approaches included an "Industrial" approach and a "Reserve-based" management approach.

- Analysis is relevant for State Forests within the Planning Area: relatively young and homogeneous forests.

THE PROCESS

- GPV Standards taken directly from the GPV Administrative Rule (OAR 629-035-0020).
- Key Indicators were then identified that could be used to illustrate the achievement of these standards.
- A GPV Matrix was created to compare the FMP (w/HCP) with two alternative approaches and their relative likelihood to achieve the standards.
- This Matrix is the summary of this report.
- The format for this Matrix was based on work by the British Columbia Commission on Resources & Environment.
- A range of alternative approaches to compare with the FMP (w/HCP) were considered within the Matrix: an "Industrial" approach and a "Reserve-based" management approach.
- The "Industrial" approach is similar to the Emphasize Net Present Value model used by the OSU Analysis.
- The "Reserve-based" approach is similar to the 50% Reserves model used by the OSU Analysis.

THE PROCESS (Continued)

- Strategies for the FMP (w/HCP) have been developed to a high level of detail. Detail is lacking for other approaches. "Ratings" were based on ODF's interpretation of what specific strategies would likely be used to achieve the primary intent of that approach, over time and across the landscape.

- Data from the OSU Analysis was a useful tool when comparing:
  - Economic indicators
  - General scope of activity across the landscape
  - Achievement of complex stand structures across the landscape

- OSU Analysis data was from the following alternatives:
  - Alternative 1A (for the FMP with HCP)
  - Alternative 3A (Emphasize Net Present Value for the "Industrial" model)
  - Alternative 6B (50% Reserves approach for the "Reserve-based" model)

- This analysis reflects Board direction to Staff from June 7, 2000 BOF Meeting, including direction to be more aggressive in dealing with Swiss Needle Cast disease.

Alternative Approaches for Comparison: Likelihood of Achieving GPV Standards

GPV STANDARDS (from OAR 629-035-0020: (2) and (3))	KEY INDICATORS (to illustrate achievement of GPV Standard)	FMP w/SBM + HCP + SNC	Emphasize NPV	50% Reserves
1. Actively manage these forestlands in a sound environmental manner to provide sustainable timber harvest and revenues to state, counties, and local taxing districts. (2)	A. Acres actively managed vs. passively managed vs. reserved, based on land classification. B. Revenue to Counties. C. Timber Sale Plans vs. accomplishments. D. Plan Economic Modeling: Net Present Value, Cash Row, Total Volume.	MEDIUM/HIGH	MEDIUM/HIGH	LOW
2. Management results in a high probability of maintaining and restoring properly functioning aquatic habitats for salmonids, and other native fish and aquatic life. (2)(a)	A. Extent to which a "blended" landscape level and site-specific mgt. approach is used. B. Miles of Type F and Type N streams with properly functioning aquatic habitat. C. Numbers of salmonids and other native fish and aquatic life across the landscape.	HIGH	MEDIUM	MEDIUM

GPV STANDARDS (from OAR 629-035-0020: (2) and (3))	KEY INDICATORS (to illustrate achievement of GPV Standard)	FMP w/SBM + HCP + SNC	Emphasize NPV	50% Reserves
3. Management protects, maintains, and enhances native wildlife habitats. (2)(b)	A. Extent to which the landscape emulates historic habitat conditions. B. Progress toward achieving stand-type array across the landscape. C. Richness and diversity of native wildlife species across the landscape.	HIGH	LOW/MEDIUM	MEDIUM
4. Management protects soil, air, and water. (2)(c)	A. The average forest Site Index over time. B. Number of smoke intrusions into DAs. C. Number of water quality limited streams in the forest. D. Number of landslides originating from these forestlands.	MEDIUM/HIGH	MEDIUM	HIGH
5. Management provides outdoor recreation opportunities. (2)(d)	A. Number of recreational user days. B. Diversity of types of recreational activities. C. Number of hiking, horseback, and motorized trails in the forest. D. Number of improved campgrounds in the forest. E. Amount of revenue available to reinvest.	HIGH	LOW	MEDIUM

GPV STANDARDS (from OAR 629-035-0020: (2) and (3))	KEY INDICATORS (to illustrate achievement of GPV Standard)	FMP w/SBM + HCP + SNC	Emphasize NPV	50% Reserves
6. Management practices pursue compatibility of forest uses over time. (3)(a)	A. Extent to which the forest is "zoned" for special uses. B. Percent of forest base in General and Focused Stewardship Land Classifications.	HIGH	LOW	LOW
7. Management practices integrate and achieve a variety of forest resource management goals. (3)(b)	A. Extent of achieving resource goals over time.	HIGH	LOW	LOW
8. Management practices achieve, over time, site-specific goals for forest resources. (3)(c)	A. Number of site-specific goals achieved for a given resource.	HIGH	MEDIUM	LOW
9. Management practices consider the landscape context. (3)(d)	A. Number of decisions and actions within Operation and Implementation Plans based on watershed assessment. B. Extent to which decisions on Desired Future Condition and specific activities are based on a consideration of broader landscape conditions.	HIGH	LOW	MEDIUM

GPV STANDARDS (from OAR 629-035-0020: (2) and (3))	KEY INDICATORS (to illustrate achievement of GPV Standard)	FMP w/SBM + HCP + SNC	Emphasize NPV	50% Reserves
10. Management practices are based on the best science available. (3)(e)	A. Extent to which management practices align with, and are implemented by, using the best science currently available. B. Independent Scientific Review indicate management practices are based on the best science available.	HIGH	HIGH	HIGH
11. Management practices incorporate an adaptive management approach that applies new management practices and techniques as new scientific information and results of monitoring become available. (3)(f)	A. Number of times District Implementation Plans are updated to apply new scientific information. B. Extent of internal peer reviews of management decisions and actions. C. Number of formal monitoring efforts. D. Number of formal research studies being participated in.	HIGH	HIGH	HIGH
	TOTALS:	HIGH: 9 MEDIUM/HIGH: 2 MEDIUM: 0 LOW/MEDIUM: 0 LOW: 0	HIGH: 2 MEDIUM/HIGH: 1 MEDIUM: 3 LOW/MEDIUM: 1 LOW: 4	HIGH: 3 MEDIUM/HIGH: 0 MEDIUM: 4 LOW/MEDIUM: 0 LOW: 4

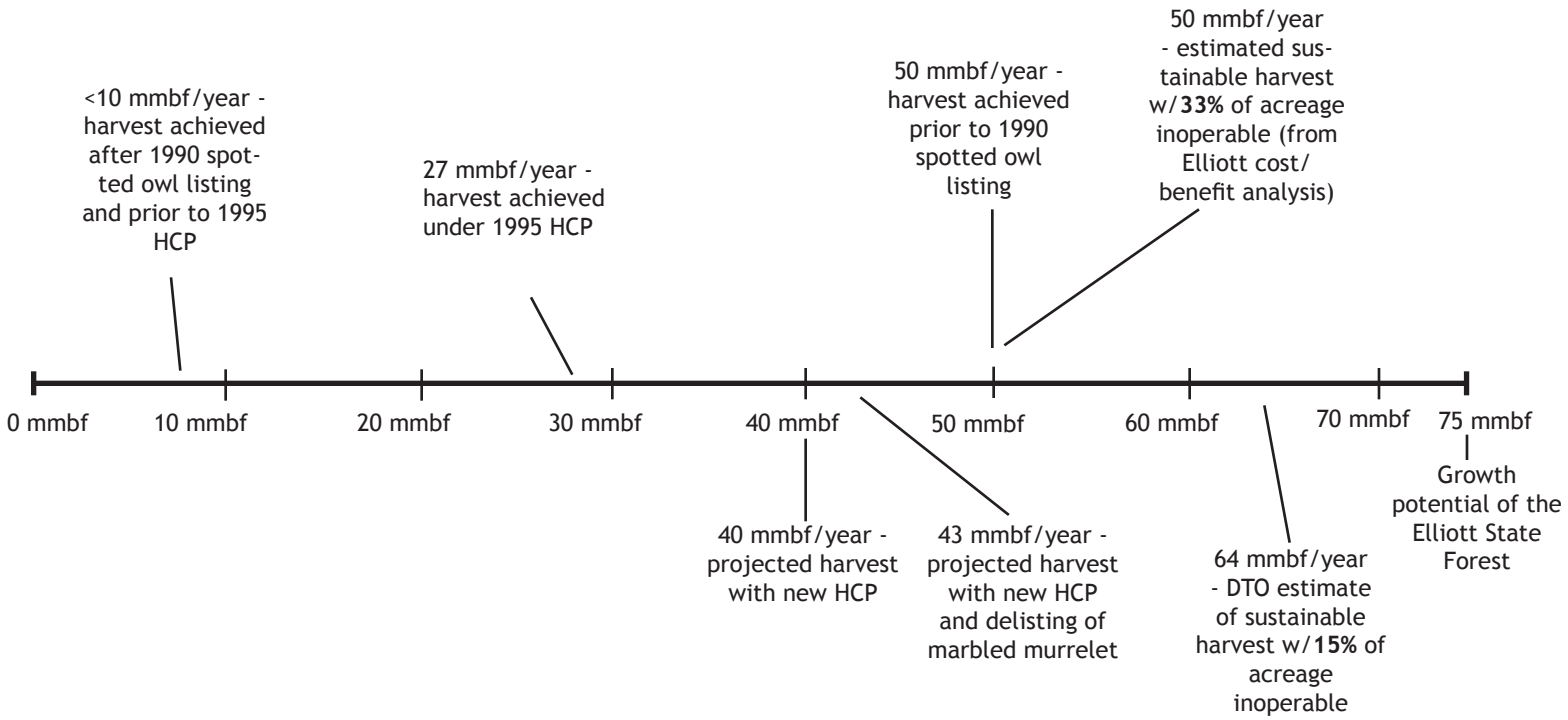
Elliott State Forest

93,000 acres — approximately 91% Common School Forestlands and 9% Board of Forestry forestlands.
Bi-model forest — 45% of the forest is <50 years of age; 46% of the forest >100 years of age.
Stands > 50 years of age average about 47 mbf per acre; stands > 75 years of age average 49 mbf per acre.
Steep, unique and visual areas comprise 5,900 acres:

~ Steep areas comprise 4,200 acres and are off limits to harvest because of Forest Practices Act (FPA) safety rules.

~ Visual areas comprise 1,200 acres and are off limits to harvest because of FPA stream protection rules/Loon Lake river corridors, and unimproved camping areas.

~Unique areas comprise 500 acres and are off limits to harvest because of a myrtle grove, a bottomland hardwood tract, and stands >175 years old (as of 2004).



Volumes listed are in million board feet (mmbf) per year

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Scientific Peer Review of H&H Model Project

Review Goals and Objectives

The Harvest and Habitat (H&H) models are intended to assist in making decisions about whether to make changes in the Northwest and Southwest Oregon Forest Management Plans (FMP), whether to pursue a Habitat Conservation Plan (HCP), and setting harvest levels for Annual Operation Plans. The review will target the modeling approach, the models themselves, the model outputs, and their interpretation, and will be based on the best available science.

The specific objectives of the review are to:

- Assess the strengths and weaknesses of the models (including the level of confidence in model results)
- Determine what kinds of decisions can, and cannot, be made credibly using the models
- Help the ODF determine the most appropriate application of the models in the decision-making process
- Improve future modeling efforts

Terms of Reference for Reviewers

1. Read background material and participate in a preparatory conference call. This includes:
   Review the questions that the panel is meant to address and ask for clarification (if needed) on the conference call.
   Review the first batch of materials send to the panel and ask on the conference call for any further materials you think are required to answer the questions.
2. Attend the review meeting in Salem OR the week of July 10-14 (2006). This includes:
   Listen to presentations (and ask questions of presenters as needed) July 10-12.
   Prepare answers to the review questions (including rationale and recommendations) July 12-13.
   Share these answers with other panel members, agree on areas of convergence and divergence, and agree on group conclusions and recommendations during a facilitated session July 13-14.
   (The answers prepared by each reviewer will be collated and synthesized by ESSA.)

Draft Questions to be Answered in the Review

For each of the following six categories of questions (A-F), the panel members will: a) address the questions in each category; and b) make recommendations for future improvements.

A. Structure

1. Are the structural features of these models (e.g. spatial/temporal scale and resolution, major components and functional relationships) appropriate to:
    a) the decision problem they are trying to address, and
    b) the available data?
2. Are the simplifying assumptions and limitations of the models clearly described?

B. Input Data

3. Is the accuracy and precision of the input data generally sufficient for the intended applications of the models? Are weaknesses in the input data recognized by the model users?
4. Have sensitivity analyses been done to assess which input data are most critical to the choice of alternative management strategies?

C. Growth and Yield Assumptions

5. Do the FVS growth models take into account the major biological factors which need to be considered in estimating growth and yield for these Oregon forests? (Variants of the USFS Forest Vegetation Simulator can consider root rot, dwarf mistletoe, and insects such as spruce budworm – are any of these critical to these forests, and missing?).

D. Natural Disturbances and Processes

6. Do the models deal adequately with important natural disturbances and processes in these forests (e.g. windthrow, fire, root disease, Swiss needle cast, natural regeneration after harvesting or fire)?
7. Do the models facilitate creation of harvest areas that mimic the sizes and shape of natural disturbances?

E. Key Functional Relationships and Constraints

8. Have the models been through a detailed sensitivity analysis to determine which functional relationships, parameters and constraints most strongly affect the choices amongst alternative decisions?
9. Are the key functional relationships, parameters and constraints (e.g. habitat requirements of focal fish and wildlife species) grounded in strong empirical data? Have model tests been done to assess the validity of key functional relationships?
10. Is it clear how the optimization algorithm used in the model attempts to meet the multiple competing objectives and constraints (e.g. timber production, wildlife habitat conservation, cost minimization)?

11. How easy is it to update key model functional relationships or parameters as new data are acquired?

F. Using the Models to Make Decisions

12. How useful are the models for the intended strategic and tactical level decisions to which they will be applied? [Specifically, can they be used to decide among the 4 options: FMP using a HCP, FMP using Take Avoidance, wood-emphasis, or reserve-based? Are these models appropriate for making decisions about: 1) whether to make changes in the Northwest and Southwest Oregon FMPs, 2) whether to pursue a HCP, and 3) setting harvest levels for Annual Operation Plans?]
13. Do the models allow the exploration of different management strategies under multiple competing hypotheses (e.g. different assumptions about habitat requirements of focal wildlife species)?
14. Is the model output deterministic, or does it provide a distribution of outcomes that recognizes uncertainties in both functional relationships and natural environmental variation?
15. Is model uncertainty clearly communicated in documents provided to decision makers (e.g. the Board of Forestry)?
16. Do the models support the implementation of adaptive management (i.e. can model predictions and key functional relationships be tested and iteratively improved)?
17. What are the key priorities for overall improvement in the models, given the intended applications (this synthesizes recommendations from previous questions; please consider pg. 55 of Doc A, Enhancements for the Future)

Guiding Principles for the Review

Answers to the review questions will include a clear rationale and supportive evidence.

Assumptions and uncertainties inherent in the answers to review questions will be made explicit.

Reviewers will endeavor to clarify areas where they agree and areas where they disagree in their answers to these questions.

Reviewers will work together to identify conclusions and recommendations for each of the 6 categories and for the H&H Model Project overall.

Schedule for the "review week"

Monday July 10		Tuesday July 11		Wednesday July 12		Thursday July 13		Friday July 14	
Morning Panel travels to Salem	Afternoon Presentations	Morning Presentations	Afternoon Presentations	Morning Presentations	Afternoon Writing	Morning Writing	Afternoon Facilitated session	Morning Facilitated session	Afternoon Panel travels home
Panel convenes at noon for a group lunch to review the agenda for the week	Initial presentations to the panel *Presenters and topics still to be determined* Panel to discuss and identify any additional presentations that may be needed during the week in order to answer the questions	Presentations to the panel specific to questions in categories A and B *Presenters and topics still to be determined*	Presentations to the panel specific to questions in categories C and D *Presenters and topics still to be determined*	Presentations to the panel specific to questions in categories E and F *Presenters and topics still to be determined*	Panel members individually work on their answers to the questions (and their rationale and recom-mendations)	Panel members complete their individual reports	ESSA facilitates the panel to share their answers and agree on areas of convergence and divergence among the reviewers	ESSA facilitates the panel to agree on conclusions and recom-mendations for each of the 6 categories and for the H&H models overall	Panel adjourns at noon

The Big Log Project: Potential Ways of Action for Improving Markets for Large Logs

Authors: Ernesto Wagner[1], and Eric Hansen[2], Oregon State University, Corvallis, Oregon

Description: This project was motivated by the depressed market situation of large logs (> 30" in diameter) in the state of Oregon. Our overall goal was to determine ways to increase the profitability of growing large diameter logs by private non-industrial timberland owners. The three specific objectives were:

1. Develop a statewide log and timber buyer database
2. Assess existing large log supply from private lands in Oregon
3. Conduct market research to help identify, enhance, and develop markets for large logs

Methods: In person interviews, literature review

Data Source: 30 interviews with processors, landowners, and other experts

Key Findings:

- A huge volume of large logs exists in private lands of Oregon
- A strong correlation exists between lumber and log prices in the Oregon marketplace during the 90's
- **Potential actions that benefit landowners**
  - Emphasize consultant foresters and associations
  - Create a corporation of forest landowners
- **Potential actions that benefit processors**
  - Secure supply by creating a joint venture with a corporation of landowners
  - Create a research fund for Colleges of Architecture

Oregonian forest landowners face a complicated situation. The price of their large, second-growth Douglas-fir logs (typically 80 years old or less) have plunged. This development may mean that many private landowners opt for liquidation of their older, larger trees in order to offset the risk of even lower prices for their large logs in the future. On the other hand, processors also confront great challenges, as the marketplace is totally different than ten years ago, with global competitors, new substitute products, and consolidation of the industry, to name a few.

Both landowners and processors can maintain their strategies and hope for adequate market evolution. But perhaps a better option is to take proactive action, as the Oregon Business Plan advises (http://www.oregonbusinessplan.org).

We decided to focus the study on 3 species (Douglas-fir, western hemlock and ponderosa pine) and collected information from academic papers, commercial articles, conference talks, and 30 in-person interviews, for attaining the three main objectives already referred at the beginning.

Develop a statewide log and timber buyer database

The log and timber buyer database encompasses contact information and log requirements (species of interest, length requirements, minimum small-end diameter, maximum large-end diameter, and preferred diameter) of more than 200 companies: http://www.cof.orst.edu/cof/extended/extserv/log.html

Assess existing large log (>30") supply from private lands in Oregon

The net volumes of sawtimber, Scribner scale, in the target diameter (>29") including all private and public lands of Oregon, except areas in the National Forest System and/or Bureau of Land Management (BLM)*, are the following for Eastern and Western Oregon

Eastern Oregon sawtimber (>29") outside of national forests	
Douglas-fir	0.37 billion bf
western hemlock	0.00 billion bf
ponderosa pine	0.74 billion bf

Western Oregon sawtimber (>29") outside of national forests and BLM	
Douglas-fir	6.91 billion bf
western hemlock	0.44 billion bf
ponderosa pine	0.11 billion bf

* Eastern and Western Oregon inventories are slightly different as Western Oregon excludes Bureau of Land Management Land, while Eastern Oregon does not.

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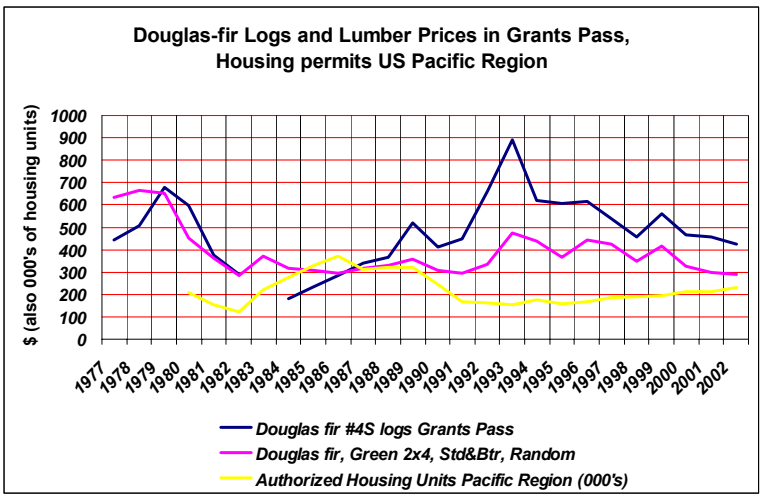
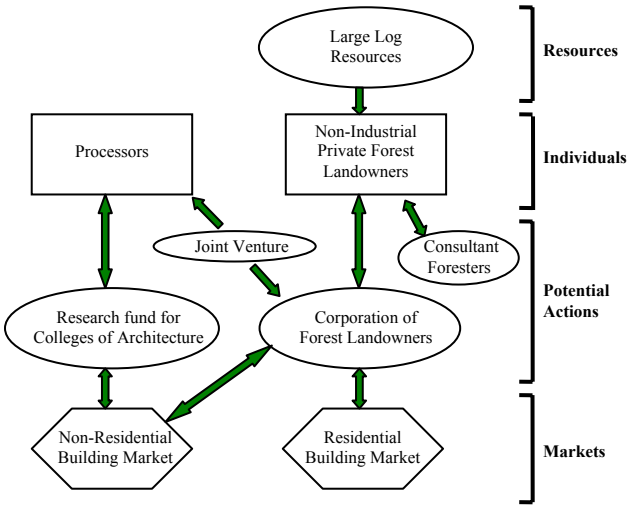
Regarding log and lumber prices, most existing reports have not adjusted for inflation (about 300% the last 25 years!). We did adjust our data for inflation and determined that there is a strong correlation between lumber and log prices in the Oregon marketplace during the 90's. The difference between log and lumber prices has held quite constant during those years (see chart). This characteristic is true for any species or area of the state. Thus, log and lumber markets in Oregon tend to be transparent, with no price manipulation by any member of the marketplace, as lower or higher lumber prices trigger lower or higher log prices with a delay of 3 months or less.





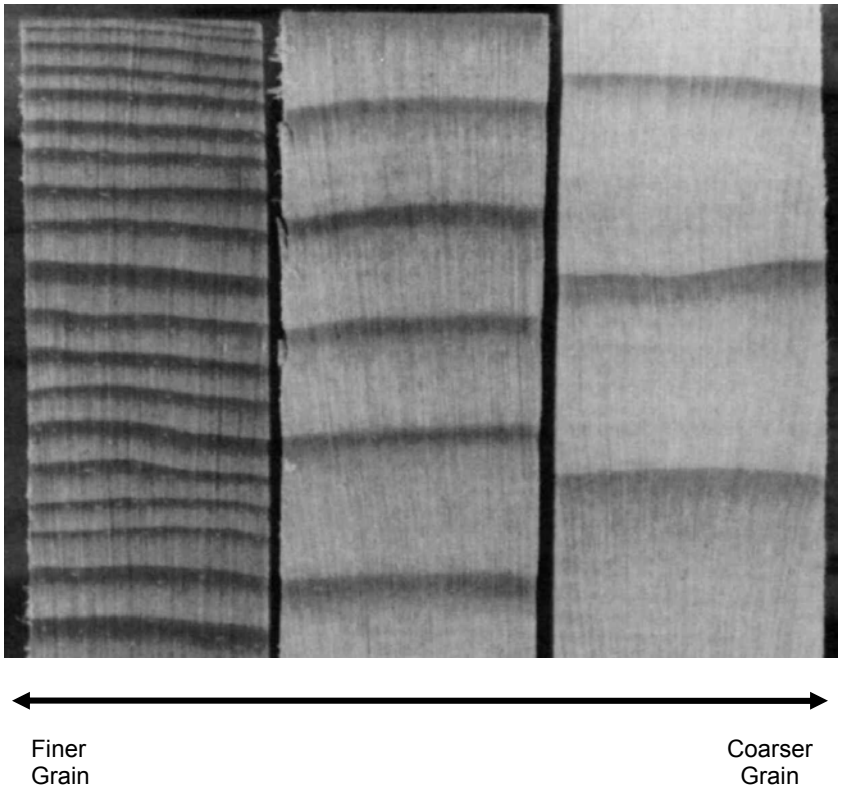
Conduct marketing research to help identify, enhance, and develop markets for large logs

The marketing research identified several potential actions that both processors and landowners can carry out in order to improve the profitability of their operations. Those potential actions are portrayed on the figure.

First, forest landowners can seek advice from a consultant forester. The consultant can recommend the best land management and marketing practices to follow. Another option is a corporation of forest landowners. Important tasks of this corporation would be educating landowners regarding their silvicultural options (for example, short rotations for commodity products), creating a log sort yard, and developing a joint venture with a processor. The joint venture secures raw material supply for the processor, while the corporation secures demand for at least a portion of log production. The corporation would help landowners with the price of commodity products, but individual landowners may still try niche markets for their fine grain logs, or logs with a special figure or pattern. So, for landowners: **education to survive, specialty products to thrive.**

Processors face a somewhat less complicated situation, as remaining sawmills that still desire large logs have specialized in certain products. Still, they can secure supply by developing a joint venture with a corporation of landowners. They can also grow the pie, by fostering wood use in non-residential applications. A potential action is the creation of a research fund for Colleges of Architecture of the Pacific Northwest. Future architects would develop non-residential applications of indigenous wood species of the Pacific Northwest. Wood is used sparingly in non-residential construction, a $400 billion/year market, compared with a $250 billion/year residential market. So, for processors: **develop new markets by nurturing professional groups with a wood taste.**

The Big Log Project



Ernesto Wagner
Eric Hansen
Scott Leavengood
John Punches
Steve Bowers

OSU Extension Forestry

To download the full Big Log Project report, go to http://www.cof.orst.edu/cof/fp/faculty/hansen/EHpubs.htm

Funding for this project was provided by the Northwest Oregon Economic Alliance and OSU Extension Forestry

We would like to thank the following people for their insightful reviews of this report: John Poppino (OSWA), Mike Gaudern (OSWA), Sean Smith (Starfire Lumber Co.), Rick Fletcher (OSU Extension Forestry), Bond Starker (Starker Forests), and John Belton (Woodland owner). We tried to honor all their suggestions, although in some cases it was not possible.

We would also like to thank our interviewees. All of them provided excellent information. The interviewees belonged to different organizations and areas, as we interviewed forest landowners, landowner association members, large and small sawmill executives, and consulting foresters.

Executive Summary

Oregonian forestland owners face a complicated situation. The price of their large, second-growth Douglas-fir logs (typically 80 years old or less) have plunged. Thus, many private landowners may opt for liquidation of their older, larger trees in order to offset the risk of even lower future prices for their logs. On the other hand, processors also confront great challenges, as the marketplace is totally different than ten years ago, with global competitors, new substitute products, and consolidation of the industry, to name a few.

Both landowners and processors can maintain their strategies and hope for adequate market evolution. But perhaps a better option is to take proactive action, exactly as the Oregon Business Plan advises (http://www.oregonbusinessplan.org).

We decided to focus the study on 3 species (Douglas-fir, western hemlock and ponderosa pine) and collected information from academic papers, commercial articles, conference talks, and 30 in-person interviews, to achieve three main objectives:

1. Develop a statewide log and timber buyer database
2. Assess existing large log (>30") supply from private lands in Oregon
3. Conduct marketing research to help identify, enhance, and develop markets for large logs

The log and timber buyer database encompasses contact information and log requirements of more than 200 companies: http://www.cof.orst.edu/cof/extended/extserv/log.php

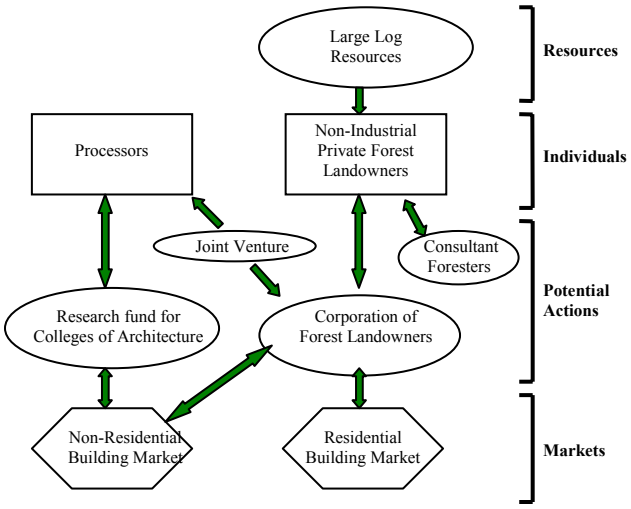
Regarding the assessment of log inventory, it includes all private and public lands in Oregon, except areas in the National Forest System*. The net volumes of sawtimber, Scribner scale, in the target diameter (>29") are the following:

Oregon sawtimber (>29" in diameter) outside of national forests	
Douglas-fir	7.28 billion bf
western hemlock	0.44 billion bf
Ponderosa pine	0.85 billion bf

Importantly, these figures reflect log inventory, not necessary log supply to the market.

The marketing research identified several potential actions that both processors and landowners can carry out in order to improve the profitability of their operations. Those potential actions are portrayed on the graphic.

First, forest landowners can seek advice from a **consulting forester** or **landowner association,** who can recommend the best land management and marketing practices to follow. Another option for landowners is a **corporation of forest landowners,** perhaps under the form of a limited liability company (LLC)**.** Important tasks of this corporation would be educating landowners regarding their silvicultural options (for example, short rotations for commodity products), creating a log sort yard, and developing a joint venture with a processor. The joint venture secures raw material supply for the processor, while the corporation secures demand for at least a portion of its production. The corporation would help landowners with the price of commodity products, but individual landowners may still explore niche markets for their fine grain logs, or logs with a special figure or pattern: So, for landowners, the message is: **education to survive, specialty products to thrive.**



Processors face a somewhat less complicated situation, as remaining sawmills that still desire large logs have specialized in certain products. Anyway, they can secure supply by developing a joint venture with a corporation of landowners. They can also grow the pie, by fostering wood use in non-residential applications. In this regard, **a potential action is the creation of a research fund for Colleges of Architecture.** Future architects would develop non-residential applications of indigenous wood species of the Pacific Northwest. Wood is used only scarcely in non-residential construction, a $400 billion/year market, compared with a $250 billion/year residential market. So, for processors, the message is: **develop new markets by nurturing professional groups with a taste for wood.**

* East and West Oregon inventories are slightly different as explained in the summary report.

Summary Report

Introduction

Oregon forestland owners face a complicated situation. The price of their large, second-growth Douglas-fir logs (typically 80 years old or less) have plunged. This development may mean that many private landowners opt for liquidation of their older, larger trees in order to offset the risk of even lower future prices for their large logs.

There are also great challenges on the processor side. A new competitive environment evolved quickly consisting of global competitors, accelerated consolidation of the industry, threats from substitute products like steel and plastics, pressure from environmental groups, and shifts in channel power to big box retailers, like The Home Depot or Lowe's.

There are several options, both for landowners and processors. One is to sit and wait for things to improve by themselves. But perhaps a better option is to take proactive action, exactly as the guidelines of the Oregon Business Plan recommend. (http://www.oregonbusinessplan.org).

First of all, there is no "silver bullet" for these conundrums, but we think that there are several potential options that both landowners and processors have in hand. This whole project was motivated by the current situation, and the objective was to determine ways to increase the profitability of growing large diameter logs by private non-industrial timberland owners. Thus, the project achieves three main objectives:

1. Develop a statewide log and timber buyer database, including mills that have the capacity to process large logs.
2. Assess existing large log supply from private lands in Oregon.
3. Conduct market research to help identify, enhance, and develop markets for large logs.

Some definitions and generalities

In this report we consider a large log as a log with at least 30" in diameter on the large end. Also important, the research

considered three primary species: Douglas-fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*), and ponderosa pine (*Pinus ponderosa*).

The research examined the situation of processors and landowners separately, and elicited recommendations for both. Information was collected through intensive and extensive review of academic papers, university reports, commercial articles, and conference talks. Also crucial were 30 in-person interviews with processors, landowners, and other experts in the states of Oregon and Washington, from January to May of 2003.

Statewide log and timber buyer database

The log and timber buyer database encompasses more than 200 companies and is available through the Web: http://www.cof.orst.edu/cof/extended/extserv/log.php. The database includes complete contact information for each company, as well as their log requirements: species of interest, length requirements, minimum small-end diameter, maximum large-end diameter, and preferred diameter. The database is available in both Excel and Adobe PDF format. An example of a PDF screen is shown below.

On-line at http://www.cof.orst.edu/cof/extended/extserv/ under LOG MARKETING ASSISTANCE

OREGON STATE UNIVERSITY

Oregon Log Buyers

Company	Manager	Timber or Log Buyers	Specifications -	Other Information
Georgia Pacific - Philomath P.O. Box 789 Philomath, OR 97370 General Phone: 541-929-2323 Website: http://www.gp.com/	Jim Schwindt Office: 541-929-2323	Robin Tucker Office: 541-929-2323 Cell: 541-602-5892 Robin Tucker Office: Cell:	Species: All conifer except cedar Length (ft.): preferred: 40, min: 12, max: 40 Diameter (in.): preferred: none, min: 8, max: 30	County: Benton Operation: 1. Mill
Hull - Oakes Lumber Co. P.O. Box 48 Monroe, OR 97456 General Phone: 541-424-3112 Website:	Office:	Dan Wagner Office: 541-424-3112 Cell: Office: Cell:	Species: Douglas-fir Length (ft.): preferred: 40, min: 20, max: none Diameter (in.): preferred: > 16, min: 12, max: none	County: Benton Operation: 1. Mill
Mary's River Lumber Co. 4515 NE Elliot Circle Corvallis, OR 97330 General Phone: 541-752-0218 Website: http://www.marysriverlumber.com/	Office:	Dave Rodman Office: 541-752-0218 Cell: 503-931-7348 Office: Cell:	Species: western redcedar Length (ft.): preferred: 40, min: 16, max: 40 Diameter (in.): preferred: none, min: 5, max: none	County: Benton Operation: 1. Mill

Log Supply Study

We examine this issue from three different angles.

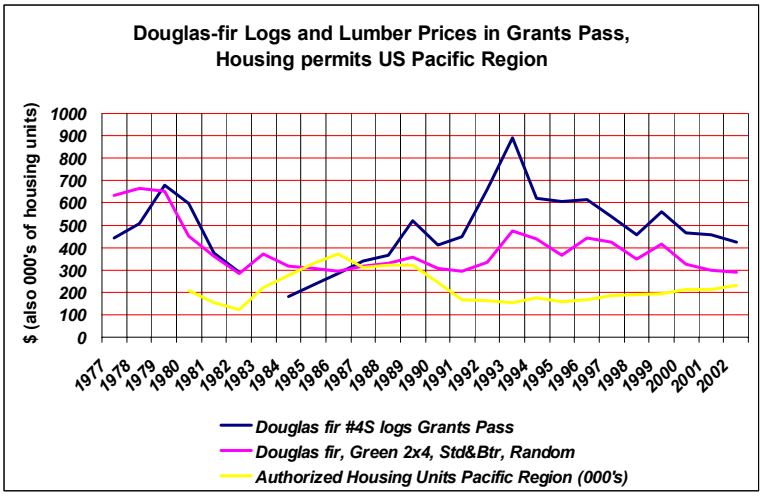
First, we use the results from two studies* that modeled the timber resource inventory in both Western and Eastern Oregon. This information renders the real answer for the question about large log supply in Oregon. The table shows net volumes of sawtimber, Scribner scale, in the target diameter (>29”):

Oregonian sawtimber (>29” in diameter) outside of national forests	
Douglas-fir	7.28 billion bf
western hemlock	0.44 billion bf
ponderosa pine	0.85 billion bf

It is relevant to note that the Western Oregon inventory encompasses all private and public land, except National Forests and Bureau of Land Management (BLM). In the case of Eastern Oregon, the inventory encompasses all private and public land, except National Forests. Douglas-fir shows a significant net volume of sawtimber: 7.28 billion bf, Scribner scale.

Second, we asked processors that handle large logs about their perception of the availability of large logs. Perceptions are generally even more important than reality. Processors were about equally split, and half of them obtain the large logs they need relatively easily, while the other half struggle in the process.

Third and finally, we looked at the history of log and lumber prices. Most existing reports and data have not adjusted the information by inflation. The last 25 years meant 300% inflation, so many of those reports elicit incorrect or inexact conclusions. We determined that there is a strong correlation between lumber and log prices in the Oregon marketplace during the 90’s. The difference between log and lumber



* Azuma et al. 1999 Timber Resource Statistics for Eastern Oregon, USDA, and Azuma et al. 1997 Timber Resource Statistics for Western Oregon, USDA

prices has held quite constant during those years, as can be seen in the chart of the previous page. This characteristic is true for any area of the state and for the three species analyzed. Thus, log and lumber markets in Oregon tend to be transparent, with no price manipulation by any member of the marketplace, as lower or higher lumber prices trigger lower or higher log prices with a delay of 3 months or less.

A second important conclusion is that the health of the housing market is not an appropriate indicator for the good standing of the wood products industry. There is no period of time where the housing market shows a good correlation with lumber prices.

Fine versus Coarse Grain Logs

Logs in the Pacific Northwest are traded according to log grade. The highest grades are the peeler logs (for example, a 1P: No. 1 peeler), then the sawlogs (for example, a 4S: No. 4 sawlog), and then utility logs (mostly used for chips). Log prices have decreased lately, as can be seen in the log and lumber price history analysis in the body of the report. Still, the situation of peeler type logs is much less complicated than the one of sawlogs, as the latter are approaching the lowest real prices they have had in 25 years.

Peeler logs have typically a finer grain and sawlogs a coarser one. Most peeler logs are actually not peeled, but used in more profitable appearance applications. The threshold between fine and coarse grain logs is ambiguous and varies depending on species and use. Still, we suggest 6 to 8 growth rings per inch as a good tentative threshold that divides fine and coarse grain softwoods.

Processor Study

We interviewed 18 processors that still handle large diameter logs in the states of Oregon and Washington. We concluded that most of them have specialized in distinct markets that use products from large diameter trees, like the export market, crossarms, specialty panels, etc. Indeed, this specialization appears to be paying off for some processors, while others struggle to survive. In short, processors can continue doing things the way they do, and perhaps some of them will be able to reap a quite good profit in their operations, as they are the “last icemen” in their particular niche markets.

However, we think that there are some potential actions that processors can undertake in order to improve their profitability. As can be seen in the diagram of the executive summary, the two main actions are a joint-venture with a corporation of forest landowners, and the creation of a research fund for Colleges of Architecture. We elaborate on these ideas later, but first we will briefly comment about several market research results, as they are important for processor operations.

- **Status of infrastructure**

  About 6 or 7 processors in the state of Oregon still desire large logs (> 30” in diameter), although many more are still able to handle large logs, but they do not desire them. Looking into the future, it appears that most, if not all of the current processors that still desire large logs, will still be in the market for large logs.

- **Hauling distance**

  Today, processors are hauling logs much farther distances than historically. Sawlogs (coarse grain) are hauled by truck up to 150 miles, while peeler logs (fine grain) are hauled up to 400 miles by truck. Distances can be much longer if logs are transported by rail.

- **Export markets**

  Western hemlock: Its traditional market in Japanese post and beam construction is mostly lost, and not only due to the decade-long recession that affects Japan, but also due to material substitution from European lumber and laminated lumber products. Domestic markets for hemlock are soft, although fine grain western hemlock still has a significant market in domestic specialty doors, floor molding, and window frames. The low domestic prices for hemlock are also influenced by cheap hemlock coming from Canada.

  Douglas-fir: Italy remains a significant buyer of Douglas-fir clears, but other European countries faded away as the dollar strengthened. Several of our interviewees expect these other European countries to regain importance as importers of fine grain

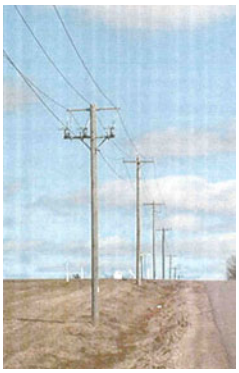
wood products, if the Euro remains strong against the dollar.

- **Cultural issues**
  Some sawmill owners face an important challenge: re-education of their old employees, as they have a "production/push as much wood as possible" mindset, and do not generally understand specialty products/cutting for grade.

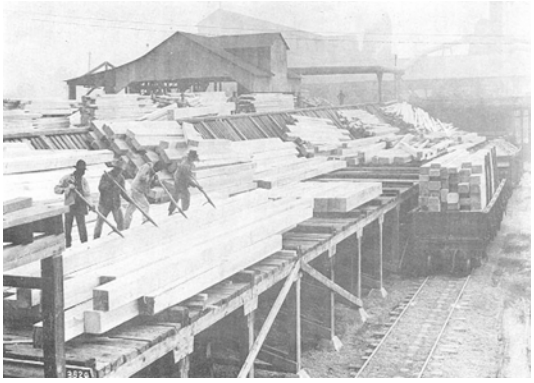
- **Custom sawyers**
  Custom sawyers should target contractors and not retail stores with their products, as contractors are at the end of the customer chain, thus they should be willing to pay a higher price than retail stores. Some contractors are required to use only environmentally certified wood products, thus becoming a chain-of-custody certified custom sawyer could be an important competitive advantage in some locations. Regarding products that custom sawyers can target, crossarms are a wood product that has a quite sizeable demand. Large solid wood beams and pillars constitute another interesting market.

Wood-Mizer® LT70

- **Niche markets for wood products from large logs**
  - *Utility poles:* Nationwide, there are about 165 million wood utility poles in service. Of those, 2 to 5 million are replaced annually. Today, the highest-value use of a tree is as a utility pole. Still, not too many trees are suitable for utility poles, with the bulk of the market in the 16 to 24" diameter range: "If a tree makes a pole, do it"



  - *Crossarms:* The market for crossarms is large and steady, and several firms produce crossarms. Market size information about crossarms is nearly non-existent.
  - *Crossties:* Crossties and related products are an obvious market for large, coarse grain timbers. There are about 750 million railroad ties in service nationwide. Of those, 16 million ties were replaced during 2001. The caveat is that prices paid for crossties are low, and they must be full sawn. Importantly, laminated wood products are making inroads into specialty railroad products.
  - *Solid Wood Beams and Pillars:* There is a sizeable market for large solid wood beams and pillars, as they are typically more aesthetic than laminated beams. Solid wood timbers are typically more cost competitive than laminated beams when dimensions are 6"x10" or smaller.



- **Competitive advantage in specialty, custom-made wood products**
  US companies still possess one significant competitive advantage over companies from low-wage countries: US firms are located in the consumer market. Thus, although any specialty or custom-made wood product, like furniture, windows or doors, can be manufactured in countries like China, transportation time to market negates much of the low-cost advantage. In other words, the one single competitive advantage left for US companies is shorter

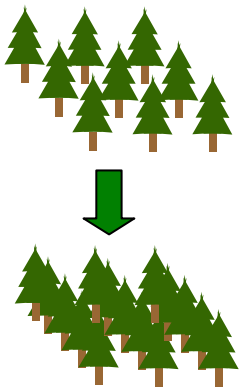
lead times in specialty/custom-made products. US firms must foster and promote this advantage.

Forest Landowner Study

We interviewed 10 forest landowners in the states of Oregon and Washington, west and east of the Cascades. The situation of landowners is perhaps more complicated than the one of processors. Landowners are less aware of the marketplace changes of the last years, and appear to be confused about the best actions to take, if any. Unlike the case of processors, we think it is critical that landowners become more proactive in order to improve their profitability. As can be seen in the diagram of the executive summary, landowners can organize themselves in a corporation of forest landowners, which in turn can pursue a joint venture with a processor. Still another option for landowners is to seek expert advice from a consulting forester, who can recommend the best land management and marketing practices. We will briefly comment next about several silvicultural and marketing issues, as these are crucial subjects for forest landowners.

- **Rotation/silvicultural practices**

  Large- and small-diameter fine grain logs will continue to have an important market in the foreseeable future in Oregon. Some of these fine grain logs are graded as peeler logs, as they meet the ring count, slope of grain, and amount of defects that are allowed for this grade. Interestingly, the majority of those peeler logs are not peeled, but processed in more profitable ways, such as door and window parts. The "big uglies" (logs with large knots and/or coarse grain) face a more complicated situation, as they can be used only in low-value applications, and are increasingly affected by substitutes, like steel and engineered wood products.



One option …

  Large processors tend to pursue short rotations (35 to 40 years) in their own forests. Small forest landowners can fight in the same arena by producing fast-growing trees for commodity markets. However, several factors do not necessarily apply to small forest landowners, like mechanized harvesting or corporate risk management. Many non-industrial forest landowners do not like short rotations for a variety of reasons, and they do have another silvicultural choice.

  They can produce fine grain trees in perhaps 50 or 60 years using high-stand densities, and adequate pruning, thinning, and fertilization. Thus, they would be able to produce fine grain logs, still in high demand by many processors, and with an interesting export market. In short, non-industrial private landowners could concentrate on quality, not quantity.

- **Marketing and sales practices**

  There are several marketing and sales practices that could improve stumpage returns for non-industrial private forest landowners. The most important are the following:

  - Forest landowners must invest in interior gravel roads, in order to be able to sell anytime during the year, seeking the best log prices.
  - Custom sawyers are a good option for a landowner that has a few logs for sale.
  - Research shows that high landowner knowledge about log markets and prices represents the greatest improvement in stumpage value*.
  - As common sense dictates, it is not good to contact only one buyer. Landowners should seek at least three potential timber buyers.
  - Historically, export buyers have paid premium prices. The export market is now depressed, but the European export market may improve significantly because of currency issues.

* Max Bennett, David A. Cleaves, 1997, The Effects of Marketing Practices on Stumpage Returns in Non-industrial Private Forest Timber Sales in Western Oregon, Forest Products Journal, 47(5), 23-28

- Avoid using loggers as sales managers. Experienced landowners can deal with the sale details alone. Otherwise, they can ask for help from a consulting forester, an experienced landowner, a landowner association, or an Extension forestry person.

Potential ways forward

Consulting foresters and Associations

Non-industrial forest landowners can seek advice from consulting foresters and landowner associations**,** who can recommend the best land management and marketing practices to follow. One such association is OSWA (Oregon Small Woodland Association).

"PNW Woods Research Fund"

The first frame "PNW Woods Research Fund: Creation of a private research fund for Colleges of Architecture of the Pacific Northwest" constitutes a proposition for growing the wood market into the non-residential arena. The use of wood in decorative applications is a promising market to develop for wood products from large logs.

Corporation of forest landowners and potential joint venture with a processor

The second frame "Corporation of landowners" suggests the development of a corporation of forest landowners, seeking the improvement of their bargaining power in negotiations with wood processors. A main task of such a corporation would be the creation of a log sort yard. Another important function of the corporation would be the development of a joint venture between itself and a wood processor. The fundamentals of this joint-venture are described in the third frame "Fundamentals of the Proposed Joint Venture Processor-Landowners". Such an agreement would constitute a win-win situation, because it would provide a secured supply of large, fine grain logs for the processor, and a solid, predictable market (known demand and price) for the logs of the corporation of landowners. The third and final frame "Operation of the Joint Venture" provides insights into the operation of the joint venture.

PNW Woods Research Fund

Creation of a private research fund for Colleges of Architecture

General Characteristics

Wood product manufacturers in Oregon and Washington interested in developing markets for large logs should consider a research fund for projects that use Pacific Northwest species in non-residential applications: **PNW Woods Research Fund.** This research fund would target the main schools of architecture of the Pacific Northwest: the College of Architecture and Urban Planning at the University of Washington, and the School of Architecture and Allied Arts at the University of Oregon. Still, other elite schools of architecture can be part of this research fund, as is the case of the College of Environmental Design, at the University of California, Berkeley. The across-the-board benefits of this research fund for forest products companies suggest an industry-wide effort in order to finance this fund, as has been done with similar cases in other industries.

Any project would need to meet certain conditions for receiving funding from the PNW Woods Research fund. The most important requirement is the use of Pacific Northwest indigenous species. In this regard, requiring the use of the natural color of wood is important, as, for example, the reddish color of Douglas fir is not matched by most competing foreign species, perhaps with the exception of some eucalypts. Also important, selected projects must emphasize that the use of native species is environmentally sound, as the Pacific Northwest is one of the regions of the world with stricter environmental regulations. Consistently, the projects can complement initiatives like the LEED green building program. More important, this research fund is completely consistent with the Oregon Business Plan http://www.oregonbusinessplan.org/, as it expands Oregon's capacity for innovation.

Projects should encompass structural and non structural uses of wood. Both uses should emphasize the versatility of solid wood materials as opposed to engineered wood products, which can be used only in specific ways. The renewability of wood and the lower energy and expense to manufacture lumber compared to non-renewable alternatives are also important to highlight, as early life-cycle assessment studies (LCA) show **. On the other hand, it is important to seek collaboration from Japanese and European universities and institutes, as they use wood in non-residential applications in a much more aggressive way than does the US. The subject of the projects would be quite open, but universities would have to commit to the publication of the project results in professional-oriented magazines, like *Architectural Record* or *Environmental Design and Construction*. Possible projects are:

Structural Applications

- Corporate headquarters, office buildings with extensive and original use of large, exposed wooden beams: For example, the development of rigid-frame wood structures.
- Wooden bridges with long spanning elements, like the Hiroshima bridge (see picture). The National Wood In Transportation Program of the Forest Service is worth mentioning (http://www.fs.fed.us/na/wit/) "as it strives to diversify local economies by providing the technical and financial assistance needed to expand the use of wood in transportation networks".

Non-Structural, Aesthetic Applications

- Intensive use of wood as decorative material in corporate headquarters and office buildings. Studies done in New Zealand suggest that intense use of wood in interior office decoration leads to an overall more favorable impression of potential occupants. This preference is stronger in people of European descent, and women.

Win-Win situation

- **Wood Products Companies**
  - The project funding would provide future architects (medium- to long-term focus) with exposure to wooden applications. These students will become professional architects, and they will certainly be much more wood-proactive than without these efforts.
  - The trade journals target current architects (short-term focus), as they are known to continually seek new design ideas and trends from trade journals and other publications.
  - Over 75% of Oregonians prefer to purchase Oregon-grown wood products, when given the choice*. The projects will exclusively use Pacific Northwest species.
- **Universities**
  - Universities generally depend on federal and state grants for research, which are especially elusive today. This project would provide 100% private funding, and allow exploring new areas of applied research.

* Forestry Values and Beliefs: Benchmark Survey of Oregonians, Oregon Forest Resources Institute, December 2002
** CORRIM: A Report of Progress and a Glimpse of the Future, Forest Products Journal 51 (10), October 2001

Corporation of Landowners

General Characteristics

The solution for the Pacific Northwest may be corporations, not cooperatives, of forest landowners. Corporations have most, if not all the advantages of cooperatives, and almost none of their disadvantages.

- The one-member, one-vote situation of cooperatives does not blend well with the "self-reliant individual" characteristic of landowners of the US West. In a corporation, landowners are shareholders, and profits are divided according to the number of shares of each landowner.
- The share mechanism also avoids the flat upfront fee of coops, which does not differentiate between big and small. Still, the corporation needs to raise money: by the sale of shares to the participant landowners.
- Mechanisms to protect small shareholders were invented a long time ago: for example, the constitution of the corporation may state that 2 from a 5-member board of directors must represent small landowners.
- Alternatively, forest landowners can organize themselves in a limited liability companies (LLC). LLCs are taxed as a partnership, and offer the limited liability of corporations*.
- There are two main product types that a corporation of landowners can target: commodity and niche/specialty products. We suggest that corporations should provide totally different assistance in the two product types.
  - Regarding commodities, corporations can help landowners by establishing a log sort yard, thus gaining bargaining power for their members. The ideal complement to the log sort yard is a joint venture with a processor, discussed later.
  - Regarding specialty products, corporations can promote educational activities in order to inform landowners of the available niche markets, and their potential.
- A main task of the corporation is the development of a successful log sort yard. Alternatively, a standing inventory of the pool of members is an option. This inventory would have to be intentionally reduced by 20 or 30% in order to have a buffer against landowners that decide not to harvest.

Log Sort Yard

http://www.fpl.fs.fed.us/documnts/fplgtr/fplgtr132.pdf

- For any processing operation, it is critical to have a reliable source of raw material. It is beyond the objectives of this report to assess "critical mass" for the log sort yard. Still, to be feasible, a sort yard likely needs access to 80,000 to 100,000 acres. Log supply not only needs to be steady, the log product mix must be adequate as well.
- The best way to administer the sort yard is by charging the landowner a flat fee per Mbf, no matter the selling price of his/her logs.
- A diversified forest products industry is key for a successful log sort yard, as it ensures demand for all types of logs. This includes markets for residues.
- The log sort yard must have a strategic geographic position. The location issue is tricky, as land use regulations, tax incentives, and workforce availability must be considered.
- Good promotion of the sort yard among processors is a key issue, as well as establishing a reputation for secured supply. Frequent prospectuses to potential log buyers (every 4 weeks or less) and having an internet site are a must.

How to foster interest for the corporation

- There appears to be a lack of knowledge among landowners regarding the consolidation that is affecting the wood products industry. Communicating this effectively may raise their concern, and increase their interest in corporations.
- A forest landowner corporation can obtain environmental certification, as their logs may be desired by specialty markets or export markets, where certification can be an issue. A corporation can deal with the costs of certification by establishing a unit of forest management covering several landowners, thus diminishing the costs that certification would have for individual landowners. Still, certification is expensive, and Oregon's tough forest management regulations are asserted by many as a "de facto" certification.
- Forest landowners are concerned about the bad reputation they have among the general public. Environmental certification and the political power of the corporation can improve the reputation of landowners among the general public, through mainly publicity/public relations activities.

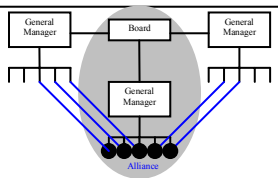
Disadvantages/Difficulties facing corporations

- Landowners are generally reluctant to hand over the management of their land to a third party, especially if nobody can prove that they will have larger profits by doing so. The "self-reliant individual" cultural trait of the US west is likely the most formidable barrier for any cooperative effort among landowners.
- There are only two successful log sort yards in Oregon: it is difficult to make them happen.

* Oregon Department of Revenue, last revised December 9, 2002, http://www.dor.state.or.us/InfoC/101-613.html

Fundamentals of the Proposed Joint Venture Processor-Landowners

Starting Point



The Shared Model, adapted from Galbraith 2000

A few landowners and a processor spark the process, by initiating informal talks

Marketing Strategy*

Objective

Form a "shared-model" joint venture that will provide secured supply to a processor, and a solid log market for the corporation of landowners.

Strategic Alternatives

The initial talks must identify the potential markets for specialty products that will be produced, for example, mouldings, clears, door and window parts, etc. The products should ideally use a mix of fine and coarse grain materials. Perhaps, the coarse grain material can be used in the interior part of the product.

Competitor Target

The competition in the target products must be identified, and it is key to examine their strengths and weaknesses. The opportunities and threats of the business must be analyzed as well (SWOT analysis).

Core Strategy

Competitive advantage of the processor: Secured supply of large, fine grain logs; a feature that other processors generally lack. The alliance of a processor and a corporation of landowners should also provide significant social and political power, helpful for gaining authorization for the log sort yard, and other facilities.

Competitive advantage of the corporation of landowners: A solid, predictable market (known demand) for the logs of the corporation of landowners. The expertise and time needed for creating a functional corporation of landowners provide this joint venture with some sort of sustainable competitive advantage, as it cannot be copied in the short, or even medium term.

Formation of the Joint Venture

The processor and the corporation of landowners form an alliance executive committee with equal number of members from both parties, plus an outside president, who administers and decides in the case of ties. The committee must also decide on a mechanism for resolving conflicts, where one or two potential arbitrators should be nominated from the beginning.

The committee agrees on rights and obligations for both the corporation of landowners and the processor.

Corporation of Landowners

Obligations

- Build a corporation of landowners that gathers a land area large enough for "critical mass" as defined by the processor: say 80,000 acres: This "critical mass" secures supply for the processor.
- Perform silvicultural and other management practices consistent with the end-product desired, as agreed by the alliance committee.
- Work with the processor in building an adequate sort yard, which works as a gathering point for the processor, and as a showroom for other potential buyers.

Rights

- The processor is required to buy a minimum amount of logs per month from the corporation, volume subject to change according to market conditions, as agreed by the alliance committee.

Processor

Obligations

- Develop/adapt its facilities for handling or processing logs from the corporation of landowners and manufacturing the products.
- Work with the corporation of landowners in creating an adequate log sort yard.

Rights

- The processor has the right of first refusal for any log sale, even if it represents a greater volume than the minimum the processor agreed to buy. Only if the processor declines to purchase the excess over its minimum, the corporation can offer those excess logs to other potential buyers.

Operation of the Joint Venture (next page)

* Winer RS. 1999. Marketing Management. Prentice Hall, Upper Saddle River, New Yersey p. 551

Operation of the Joint Venture

Startup activities of the Joint Venture

- Each new member of the corporation must buy shares, which adds capital for initial investments.
- Each new member of the corporation must perform a detailed forestland inventory (timber cruise).
- The landowners and the processor have to locate an area of land suitable for a log sort yard. This is not an easy issue, because of land use regulations and appropriate logistics. The log sort yard will be part of the assets of the corporation of landowners, although the processor should help in the process.
- The alliance committee should coordinate education sessions with landowners to inform them about the adequate silviculture and management criteria for their properties. Extension staff of universities can help in this process. Similar education efforts were already created by the OSU Forestry Extension program: they train participants at no cost (about 85 hours), who obtain a degree called Master Woodland Manager. The participants must pay back an equal amount of time by volunteering to help fellow woodland owners.
- The committee should also conduct market research to identify size and characteristics of target markets.

Normal activities of the Joint Venture

Day to day activities

- The alliance has administrative staff that manages log sort yard operations.
- The alliance also has a pool of yarding/harvesting machinery, which is "rented" at a minimum cost by the corporation members for harvesting operations.

Every two-week activities

- Processor defines its log needs, and any excess over that minimum is offered to other interested buyers.

Trimester activities

The alliance executive committee meets and discusses the performance of the joint venture. One of their most important jobs is to analyze the adequacy of the current marketing mix:

- **Integrated Marketing Communications**
  These encompass any promotional or advertising activities. The political power of the Joint Venture should allow very fruitful public relations, as the alliance committee should be able to foster articles by national and regional newspapers and magazines about the novel and environmentally sound collaboration between industry and landowners. Some direct marketing is also important, as the corporation of landowners have to inform other processors and potential customers about their existence. Extensive mailings (prospectuses) should be sent regularly. Actually, this direct marketing is already commonplace among some large forest landowners.
- **Channels of Distribution**
  - The log sort yard is the showroom of the corporation of landowners. Thus, its location is absolutely crucial.
  - The nearness to ports of the log sort yard is also desirable, as some of the finest logs may be suitable for export markets.
  - The alliance should avoid agents or brokers, as the size and expertise embodied in the joint-venture allow doing an excellent job with internal resources.

Market Value of Big Logs

History

Thirteen years ago, when the drastic harvest reduction in federal lands occurred, it was thought that large logs (30" or greater on the large end) would become really valuable. **Eight** to **ten** years ago, mills foresaw that the low proportion of private forestland in the Pacific Northwest would not be able to provide a secured supply of large, high quality logs, like was possible from federal timberlands.

In the last **thirteen years** over 70 mills have closed. About 20 have closed just in the last **6** years. The remaining forest products companies in the Pacific Northwest decided to retool their sawmills, in order to make them more efficient for processing the smaller logs coming off of private lands. The companies now try to provide their mills with small, very uniform logs. To make things worse for wood products from large logs, several substitute products (steel beams, steel studs, and steel pillars; and engineered wood products - EWP) became serious competitors during the last **thirteen years**. Users of building materials have been shifting from conventional solid wood toward laminated materials.

Because of the drastic decrease of logging in federal lands a large portion of the forest products industry does not have the capability of processing large logs and even those that have the capacity often do not want them. Some companies have chosen to retain their large log processing capabilities, as a hedge for future market condition changes.

Log Size Issues

There are other issues affecting the price of large logs. Log scaling practices mean that commodity lumber manufacturers prefer small diameter logs. Small logs are especially affected when taper is ignored, as it is in Scribner rules. The taper in large logs is often small, thus lumber recovery is not as large. Smaller logs have greater taper. Other factors are:

- Equipment for harvesting smaller trees is simpler and cheaper.
- Small logs are generally more consistent and regular in shape and quality, so they allow greater efficiencies in highly mechanized operations.
- Risk management in longer rotations is more complicated. Small logs mean shorter stand rotations.

The market for large, **fine grain** (6 to 8 growth rings or more per inch) logs is still showing **our best** prices. A good market for fine grain logs will likely continue to exist **7** years from now. However, the market for large, **coarse grain** (less than 6 to 8 growth rings per inch) logs is in trouble, and not likely of improving soon. Peeler logs have typically a finer grain and sawlogs a coarser one. Most peeler logs are actually not peeled, but used in more profitable appearance applications. **The Elliott State Forest**

is the State Forest which produces and has the capability of producing high grade (6 to 8+ ring count) logs. There will always be a demand for this type material and it now and will always produce our highest stumpage prices. Faster growth trees (less than 5 rings per inch) if left to grow larger will not always demand high stumpage prices. This may vary by District as well as by species.

Market Factors

Door manufacturers, who buy lumber, not logs, lacked a consistent supply of fine grain timbers. Thus they had to change their specialty door material specification. This specification previously considered solid wood elements, and now only the external veneer is made out of vertical grain western hemlock or Douglas-fir. The specialty door market is a market where there is a larger demand of western hemlock rather than Douglas-fir.

The demand for western hemlock is soft in the domestic market, although fine grain western hemlock still has a significant market in domestic specialty doors, flooring, and window frames. The low domestic prices for western hemlock are also influenced by cheap hemlock coming from Canada. The current depressed export market is causing logs and wood products from Canada and the U.S. to stay in North America, with the corresponding softening of prices of both logs and lumber, because of oversupply. Also, the Japanese market has shifted from western hemlock to European spruce lumber during recent years. Mills having a tough time finding markets for hemlock products do not generally buy hemlock logs.

The millwork industry includes the manufacture of doors, windows, stair parts, blinds, mouldings, etc. Ponderosa pine became the species of choice during the 20th century. Currently a significant scarcity of the resource and the almost end of logging in federal lands means that Ponderosa pine production is declining. When looking for a replacement for Ponderosa pine, U.S. manufacturers chose radiata pine from Chile and New Zealand, and also Taeda and Eliotti pines from Brazil and nearby South American countries. More than two thirds of all mouldings consumed in the U.S. are from imported species.

Summary Discussion

Because of a lack of supply of big logs, most mills have re-tooled to efficiently process smaller logs. Some mills still process large logs or still have the capability to process large logs, in addition to their small log production. A few mills specialize in the large log and make their market niche by producing large log products.

If you talk to a mill that has re-tooled and is only interested in smaller logs, they may quote you a lower price for large logs and say there isn't a market for them. But that is saying there isn't a desire or the capability to process them in **their** mill. This isn't taking into account the entire market. Some mills have told me they will bid less on coast range wood because it is faster growing, with less rings per inch, so it is considered coarse grain. However, for mills that make products that don't involve the wood grain as a factor, this is a non-issue and they will bid aggressively on coast range material. What material is desirable and what it is worth, all depends on whom you are talking to.

Questions:

- *The market is there / gone / steady for large trees?*

  There is still a market for large logs. Following is a **2006** partial list of mills that still process large logs in Oregon. There are also mills in Washington:

Mill Name & Location	Maximum Large End Diameter of Log
Boise Cascade (Medford, OR)	None
Hull - Oakes (Monroe, OR)	None
McKenzie Forest Products (Eugene, OR)	None
Rough & Ready Lumber (Cave Junction, OR)	None
Stimson (Clatskanie, OR)	None
Swanson Bros. (Noti, OR)	None
Zip-O-Log (Eugene, OR)	None
Scott Timber/Roseburg Lumber (Riddle, OR)	75"
Bald Knob Land & Timber (Creswell, OR)	72"
Freres Lumber (Lyons, OR)	62"
C&D Lumber (Riddle, OR)	60"
DR Johnson (Riddle, OR)	60"
South Coast Lumber (Brookings, OR)	57"
Sun Studs LLC/Swanson Group (Roseburg, OR)	55"
Olney Mill (Astoria, OR)	50"
Rosboro Lumber (Springfield, OR)	48"
Sundance Lumber (Springfield, OR)	42"
Frank Lumber (Mill City, OR)	40"
Douglas County Lumber (Roseburg, OR)	36"
Triple T Studs (Cascadia, OR)	34"
RSG Forest Products (Mollala, OR)	32"

  These mills and others are producing large log products such as transmission crossarms, planks, beams, stringers, posts, timbers, and ties.

- *Is there a break point at larger diameters where, for example, 35" trees just aren't removed because no one has a mill for them?*

  It all depends on the capabilities of the mill that is doing the harvesting and how easily they can market the large trees to mills that can process them. **This is more of a problem in the Northwest part of the State and not as much an issue the farther south you go.**

- *Are large trees a factor in a no-bid auction?*

  I would say no. Main factors in no-bid sales are:
  - The minimum price set compared to the current market.
  - The amount and type of project work.
  - The species types offered.
  - Too much small diameter material.
  - Too small a volume being offered.
  - A disagreement by the prospective bidder on the cruise volume.
  - An error made in the sale prospectus regarding volumes or values.
  - When large logs are of poor quality such as oversize 3Saw grade 12"+

- *Is there a small group of purchasers buying sales with large trees and why is that?*

  A normal ODF timber sale usually does not contain a predominance of large trees. A mill looking for large trees would most likely contact the successful ODF timber sale bidder in order to purchase any large trees from the sale. Or the successful ODF timber sale bidder would contact mills they know process large trees.

  For example, let's say Frank Lumber Company in Mill City bought an ODF timber sale in the Santiam Unit, consisting of Douglas-fir, western hemlock, red alder, and some western red cedar. Frank Lumber most likely bought the sale to obtain certain size Douglas-fir logs. Their mill can process up to a 40" log and the only species they cut is Douglas-fir. So they would most likely contact Hull-Oakes (Monroe, OR), Swanson Bros. (Noti, OR), or Zip-O-Logs (Eugene, OR) for anything over 40" they cut from the sale. They would probably talk with Hardwood Components (Lyons, OR) or one of the Northwest Hardwoods mills for the red alder. For the western hemlock they might contact Freres Lumber (Lyons, OR) or Interfor Pacific (Mollala, OR). And for the western redcedar they might contact Mary's River Lumber (Philomath, OR) or RSG Forest Products (Kalama, WA). Frank Lumber would trade or sell the material they couldn't use to these other mills.

- *Is there a way to monitor the market from both the marketing side and the accountability side (with Morris out on the ground and communicating with purchasers)?*

  Morris is one of our best sources of market information. He can see the size of the log decks mills are maintaining and the size of the logs in the decks. When he talks with the mill representatives he can verify what sizes and species they are processing and get general information on what the market is currently doing and market expectations. **Log quality is key to what product niches can be taken advantage of in processing large logs.**

Date: May 24, 2006

From: Lisa A. DeBruyckere

To: State Forests Program Staff

Subject: Reorganization of Salem positions

For a long period of time, our program experienced a significant increase in positions and a very healthy development of the Forest Development Fund. Since adoption of the NW and SW Oregon Forest Management Plans, the climate in which we work has changed. This has led to program discussions over the last several months regarding our organizational structure here in Salem. The following brief Q and A provides some additional backdrop to our discussion.

What has changed?

- We have begun to fully realize the costs of structure-based management (i.e., for the first time, our cost and revenue lines have met).
- Mid-way through the 10-year implementation of the forest management plans, there is continued dialogue among a segment of our constituents about the best integration of social, environmental and economic values.
- We have the recent outputs of the H&H model, which indicate lower harvest levels than those predicted by the 2000 version of the Sessions model, elevating a level of controversy about the plans and structure-based management.
- The Board of Forestry is engaged in discussions on whether to continue to pursue the western Oregon HCP.
- The Board of Forestry is developing performance measures for the program.
- We have initiated actions to "audit" implementation of our forest management plans on a regular basis.
- We need to re-engage the Board in a discussion regarding what ESA compliance tool should be used in conjunction with the FMP, which includes a variety of options (from the Western Oregon HCP, to Take Avoidance, Take Avoidance with conservation agreements, and Take Avoidance with time and space considerations, as examples). In addition, we'll soon be beginning a scoping process with the Klamath District for the Eastern Region Long Range Management Plan.
- We have been repeatedly unsuccessful (previous 2 biennia) obtaining new FTEs or converting existing limited duration positions to permanent, full-time positions.
- The counties are expressing an interest in receiving a greater portion of revenue from the Forest Development Fund.
- We have constructed and are committed to funding the annual operations of the Tillamook Forest Center.
- We are preparing for biennial budget for the next legislative session.

What do we need to change?

- We need to ask ourselves if our current organizational structure is functionally organized and the most efficient given the changing landscape in which we work.

How will we change?

- Through improved organizational efficiencies—a structure that gives us the ability to systematically and dynamically change its scope to respond to change.

Over the past year, State Forests Program management staff has met on a routine basis to discuss our organizational structure and key questions. It is imperative our organizational structure:

(1) Aligns the greatest short and long-term priorities of the program to:
- Continue implementation of our forest management plans.
- Improve accountability through enhanced monitoring.
- Elevate the importance of adaptive management as a cornerstone of our operations.
- Make available to the Board in the most efficient way possible the latest science and knowledge.
- Continue to provide a transparent decision-making process relative to potential changes in the forest management plans.
- Solicit the assistance of NGOs to help monitor forest plan implementation.
- Allocate resources to address training needs.
- Allocate resources to develop program policies.

(2) Maximizes opportunities to absorb any limited duration positions through restructuring, especially given the somewhat negative prognosis for conversion of LD positions to permanent.
(3) Assigns "lead worker" duties to several number positions to better coordinate program activities.
(4) Creates a more coordinated approach to data collection/analysis/reporting.
(5) Enhances effectiveness across and within program units.

The attached organization chart is the result of our discussions as a group and with many of you individually over the past 4–5 months, and is a means of addressing the organizational points above. This proposed structure:

(1) Replaces the Information Unit with an Adaptive Management Unit that houses modeling, inventory, GIS, application development, and research and monitoring under one integrated unit.
(2) Shifts the incumbent NRS4 Research and Monitoring Coordinator (Brandt) to an existing PEMD, heading the newly created Adaptive Management Unit.
(3) Uses the existing permanent NRS 4 position (R&M coordinator) to convert the NRS4 Aquatic and Riparian Specialist position (Dent) to a permanent position.
(4) Moves the Watershed Analysis function and the associated NRS2 (Hawksworth) from the Policy & Planning Unit to the renamed Resource Specialist Unit, and uses the NRS4 Aquatic Specialist position as a lead worker for the NRS 2 Watershed Analysis position.
(5) Uses an existing vacant permanent NRS 2 position, identified through the budget reconstitution process, to convert the LD NRS 2 monitoring specialist (Smith) to a permanent position.
(6) Shifts one Watershed Assessment Coordinator (NRS 3 Clough) to a forest management plan training position, and moves the position to the Resource Specialist Unit.
(7) Uses an existing vacant NRS 2 that was identified in the budget re-constitution process to create an NRS 2 policy development position. Recruitment will soon begin for this position.

The Unit functions are as follows:

Adaptive Management Unit (formerly the Information Technology Unit):

- Adaptive Management framework for planning and information analysis;
- Research and Monitoring to address implementation and effectiveness of forest plans and provide information for adaptive approaches to management;
- Stand Level Inventory;
- Permanent Plot Inventory;
- Quantitative data analysis linking R&M, SLI, PermPlots for planning and policy analysis;
- GIS and spatial data analysis to address scaling issues, landscape analyses; and,
- Forest modeling to address forest system processes, harvest schedules, futuring

Asset Management:

- Real property management
- Legal coordination
- Budget development and expenditure tracking
- Revenue projections
- Processing, advertising and awarding timber sale contract
- Program professional service contract support
- Log accountability
- Leading and participating in the development of program policies and procedures
- Participating in the development of program information systems

Policy and Planning – to provide technical support for all aspects of the program's operational planning and policy development activities. The unit also coordinates on policy-related issues across all department programs. Primary functions include:

- Supports and/or leads planning activities, including:
  - Forest Management Plans;
  - Implementation Plans;
  - Annual Operation Plans; and
  - Habitat Conservation Plans (when used as a federal ESA compliance tool).
- Supports and/or leads operational policy development activities;
- Participates in cross-programs coordination regarding department policy issues.
- Supports and/or leads recreation, scenic and cultural resource activities, including planning and policy development initiatives.
- Assists in internal and external web page management.
- Assists with public records management, including public information requests.

Resource Specialist Unit (formerly Technical Service Unit) – This unit provides sound and credible natural resource information to support achieving program goals. Primary functions include:

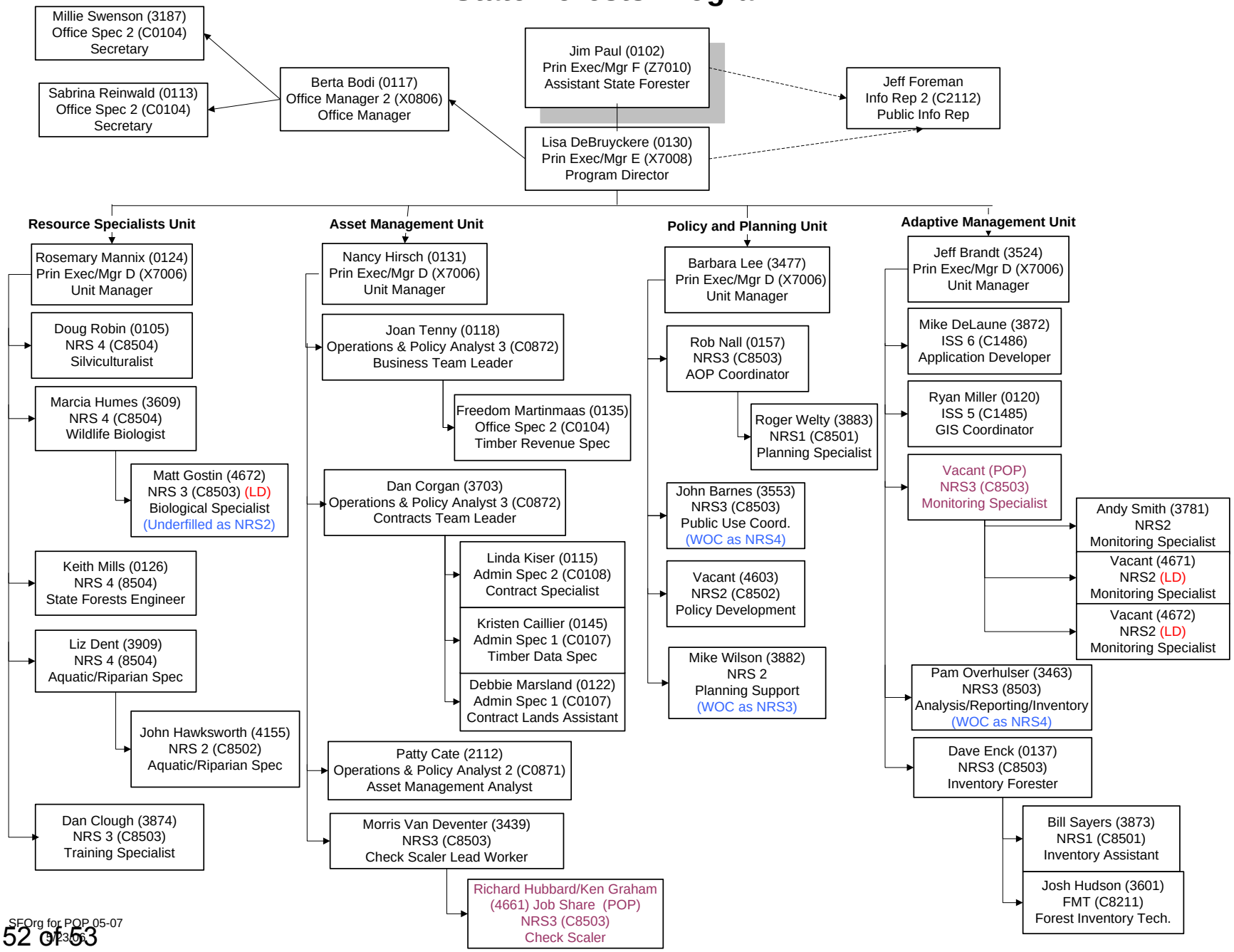
- Providing field support for the implementation of FMPs;
- Leading wildlife surveys, road surveys, and watershed analysis projects;
- Participating in the development of program Forest Management Plans;

- Leading and participating in the development of program policies and procedures;
- Conducting and coordinating periodic assessments of technical information on specific forest management issues;
- Leading and participating in research and monitoring efforts;
- Participating in the development of program information systems;
- Coordinating and developing program training; and
- Participating in broader agency efforts that require natural resource specialist expertise.

Many of you will experience some shifts in job duties in the future, regardless of whether your position was directly affected by any of the above changes. For us to be a truly adaptive program, we need to be able to respond to influences on our program, whether those be internal or external. I recognize change can be a difficult process for individuals to work through, and we'll do our best to make it as easy as possible. We won't change for change sake; I ask for your continued enthusiasm and support as we meet the changing needs of our program and constituents.

I hope this helps explain the proposed changes to our organizational chart. As a program committed to adaptive management, we will continuously review our organizational structure to ensure it is meeting the current and projected needs of the program and the agency. As always, your input and contributions toward this discussion are helpful and welcomed.

State Forests Program



TIMELINE FOR PERMANENT RULEMAKING

To Do:	Timeline	Examples
1. Identify objective of the rule, how agency will determine if rule has met the objective.		
2. Identify advisory committee members		
3. Hold advisory committee meetings to provide input on the following: a. Input on substance and language of rule. b. Input on the following items required in Fiscal Impact Statement: (1) Identify whether the rule will have a fiscal impact either negative or positive on state agencies, local government or the public, and if so, the extent of the impact. (2) Identify whether the rule will have a significant adverse impact on small businesses. (3) Estimate the number of small businesses subject to rule, identify types of businesses and industries with small businesses subject to rule. (4) Prepare description of projected reporting, recordkeeping and other administrative activities required for compliance, including costs of professional services. (5) Identify equipment, supplies, labor and increased administration required. (6) Prepare description of manner in which agency involved small businesses in developing the rule.		
4. Prepare: a. Notice of Proposed Rulemaking/Notice of Proposed Rulemaking Hearing (use form from Archives Division). b. Statement of Need and Fiscal Impact (use form from Archives Division). c. Proposed Rules text showing proposed changes.		
5. Obtain approval and signature on forms.		
6. Send notice to legislators specified in ORS 183.335(15) (at least 49 days before rule takes effect).	Day 50	11/01/05
7. File Notice of Proposed Rulemaking and Statement of Need and Fiscal Impact with Secretary of State (not later than 15th day of the month before you want the notice published).	Day 37	11/14/05
8. Mail to distribution list, provide email notification.	Day 29	11/22/05
9. Notice published in Oregon Bulletin.	Day 22	12/01/05
10. First possible date for rulemaking hearing.		12/15/05
11. Latest day for timely request for hearing in response to Notice of Proposed Rulemaking, if not scheduled in the notice (21 days after publication in Bulletin).		12/21/05
12. Earliest recommended date for hearing for Notice of Proposed Rulemaking Hearing. First possible effective date of rule for Notice of Proposed Rulemaking if no request for hearing is received.	Day 1 - Count back from here	12/22/05
13. Written comment deadline.		12/22/05
14. Review public comment, make appropriate revisions, prepare summary of testimony and agency response.		
15. Prepare permanent rule (Secretary of State copy and Legislative Counsel copy), disk, Certificate and Order for filing.		
16. File permanent rule with Secretary of State Archives Division.		
17. File permanent rule with Legislative Counsel, within ten days of filing with Secretary of State (showing changes).		