RESOURCE INVENTORY
SHADY LANE PROPERTY

SECTION 99, TOWNSHIP 99 NORTH, RANGE 99 WEST, W.M.
SHADY COUNTY, WASHINGTON

NORTHWEST FORESTRY SERVICES

JULY 2013

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SHADY COUNTY, WASHINGTON

Inventory Dates: June 19 to 27, 2013
Report Date: July 17, 2013

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I. PROPERTY DESCRIPTION

Location, Size, and Access

The Shady Lane Property covers the southwest quarter of the northeast quarter and the northwest quarter of the southeast quarter of Section 99, Township 99 North, Range 99 West, W. M., Shady County, Washington. Approximate acreage is 80.0. The property is located just south of the Shady River, near Shady Town. Figure 1 is an aerial photograph taken in 2011. Cover types, which are described below, are delineated on the photograph.

The property is accessed from a well maintained graveled logging road that originates on Shady Lane. This road passes to the east of the property. A spur road from the mainline enters it. However, this spur is not drivable. It is overgrown with brush and blocked by blowdown.

Property lines are not marked. Their locations were estimated using a global positioning system (GPS).

Cover Types

For the inventory, the property was divided into five cover types. The five types are as follows:

Type	Acres	Description
1	59.5	Merchantable Conifers
2	8.6	Merchantable Hardwoods
3	5.1	RMZ and WMZ
4	0.8	10-year-old Plantation
5	2.6	Non-Forested Wetland
Roads	3.4	
Total	80.0	

The RMZ (Riparian Management Zone) is the required buffer around a fish-bearing stream that passes through the northwest corner of the property. As specified in Washington's Forest Practices Rules, it extends 140 feet beyond the ordinary high water mark on both sides of the stream. The WMZ (Wetland Management Zone) is the required protective buffer adjacent to the wetland associated with the Naselle River. It extends 100 feet from the edge of the wetland. Logging is not necessarily prohibited in the RMZ and WMZ, but it is strictly limited. The Forest Practices Rules specify the conditions for harvest and the amount of timber that may be removed.

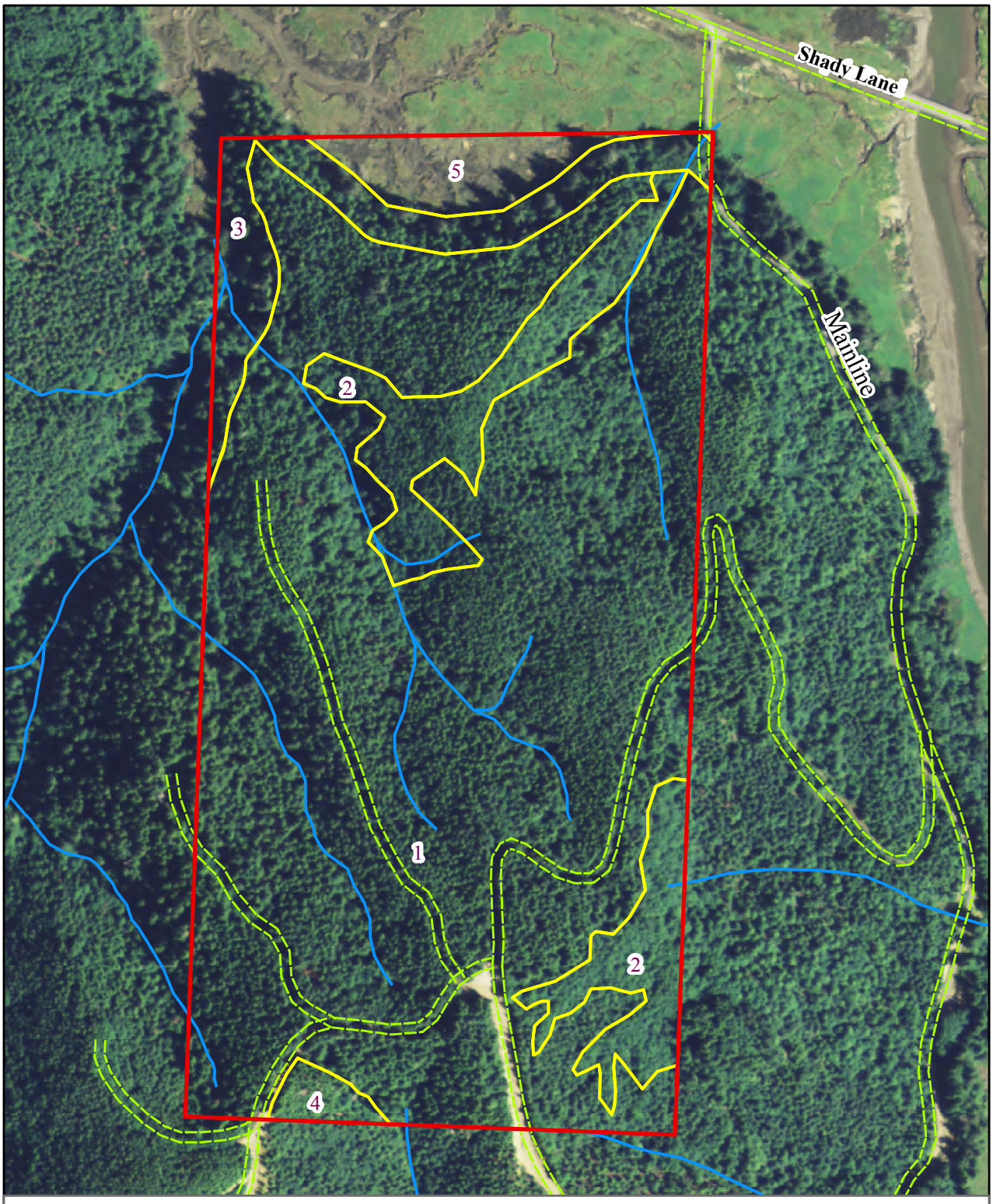

Figure 1. Aerial Photograph with Cover Types

Type 1 is well stocked with primarily western hemlock. Average age is about 46 years, but the stand also contains younger trees. Type 2 is stocked primarily with red alder. Conifers are scattered. Stocking is more variable than in Type 1. Age range is similar.

Type 3 consists primarily of hemlock and alder that is the same age is in Types 1 and 2. However, the type also contains large residual western hemlock, Sitka spruce, and western redcedar trees.

Type 4 appears to be well stocked with Douglas-fir and western hemlock. It was not included in this inventory.

Operability for Logging

Topography is mixed. Slopes generally are under 30 percent in the south and east. In the north and west, they range up to 100 percent. The terrain is broken by several small streams. Slopes are steepest near these streams.

Figure 2 is a topographic map of the property. It shows the areas that will require cable logging. The remainder the acreage can be logged by shovel or tractor.

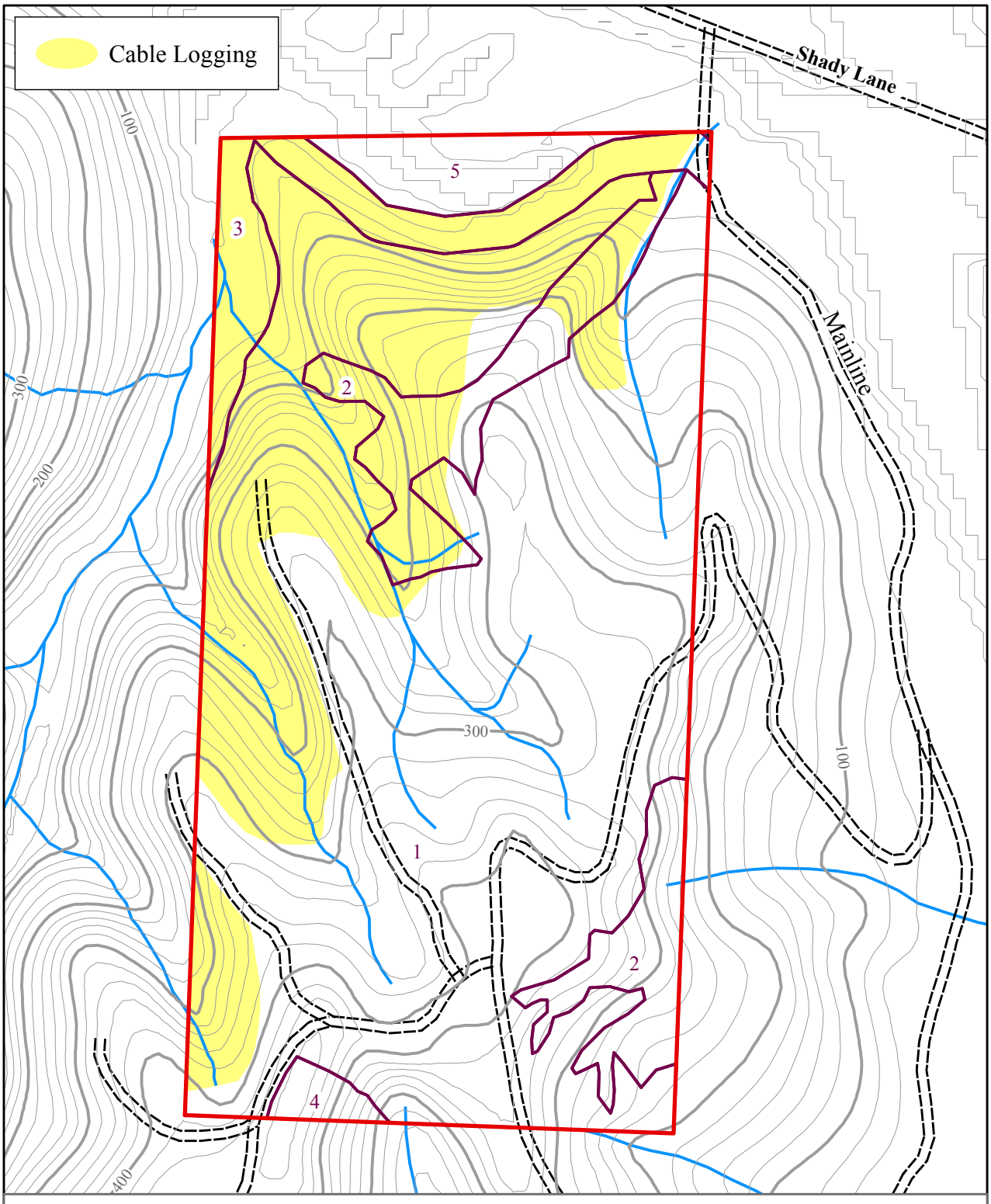

Figure 2. Topographic Map with Cover Types

1 inch = 400 feet

0 400 800 1,200

Contour Interval = 20 Feet

N W E S

II. METHODS

Tree Data – Cruise Design

Prior to the cruise, cover types were delineated on the aerial photograph in Figure 1. Acreage then was estimated using ArcGIS software.

The property was inventoried between June 19 and 27 by Matthew Sheehy. The three types with merchantable timber, Types 1 through 3, were cruised with a total of 83 plots. Types 1, 2, and 3 contained 62, 12, and 9 plots, respectively. Figure 3 shows the plot locations.

All plots were located on a square 200-foot grid. Each sample point was cruised with nested variable and fixed radius plots with the same center. Trees that were 6.6 inches and larger at four feet above stump level were cruised on the variable radius plots. Trees from 1.0 feet tall to 6.5 inches in diameter were cruised on the fixed radius plots. Plot centers were marked with fluorescent pink flagging. One flag was tied to a stick in the ground at center, and another was hung above center with plot number written on it

Basal area factor on the variable radius plots was 40. Sighting point for determining whether a tree was in a sample plot was four feet above stump level. Fixed radius plots were 0.01 acres in size.

Tree Measurements

On the variable radius plots, species, D4H (diameter at four feet above stump level), form factor, merchantable height, estimated defect, and type of tree damage, if any, were recorded for each sample tree. Total height and live crown ratio were recorded for all trees on every other plot. Form factor is the ratio of diameters outside bark at 16 and four feet above stump level. Merchantable height generally is height to an inside bark diameter of five inches for conifers and six inches for hardwoods. When the top log is pulp quality, minimum top diameter is three inches rather than five or six. However, merchantable height cannot exceed height to the point where outside bark diameter is 40 percent of outside bark diameter at 16 feet above stump level. If a tree is broken below the point of normal merchantability, merchantable height is to the break. The following categories of damage were recorded: blowdown, top broken, other weather damage, root disease, dwarf mistletoe, Swiss needle cast, other disease, and insect damage.

Preferred length was 40 feet, plus trim, for export quality Douglas-fir, western hemlock, and Sitka spruce sawlogs. It was 36 to 40 feet, plus trim, for domestic quality sawlogs of these species, as well as for western redcedar sawlogs. Preferred length was 30 feet, plus trim, for hardwood sawlogs. All logs contained 12 inches of trim. Logs were cruised in other lengths due to defect or at the top of the tree. In some cases, they were bucked shorter in order to improve sort recovery.

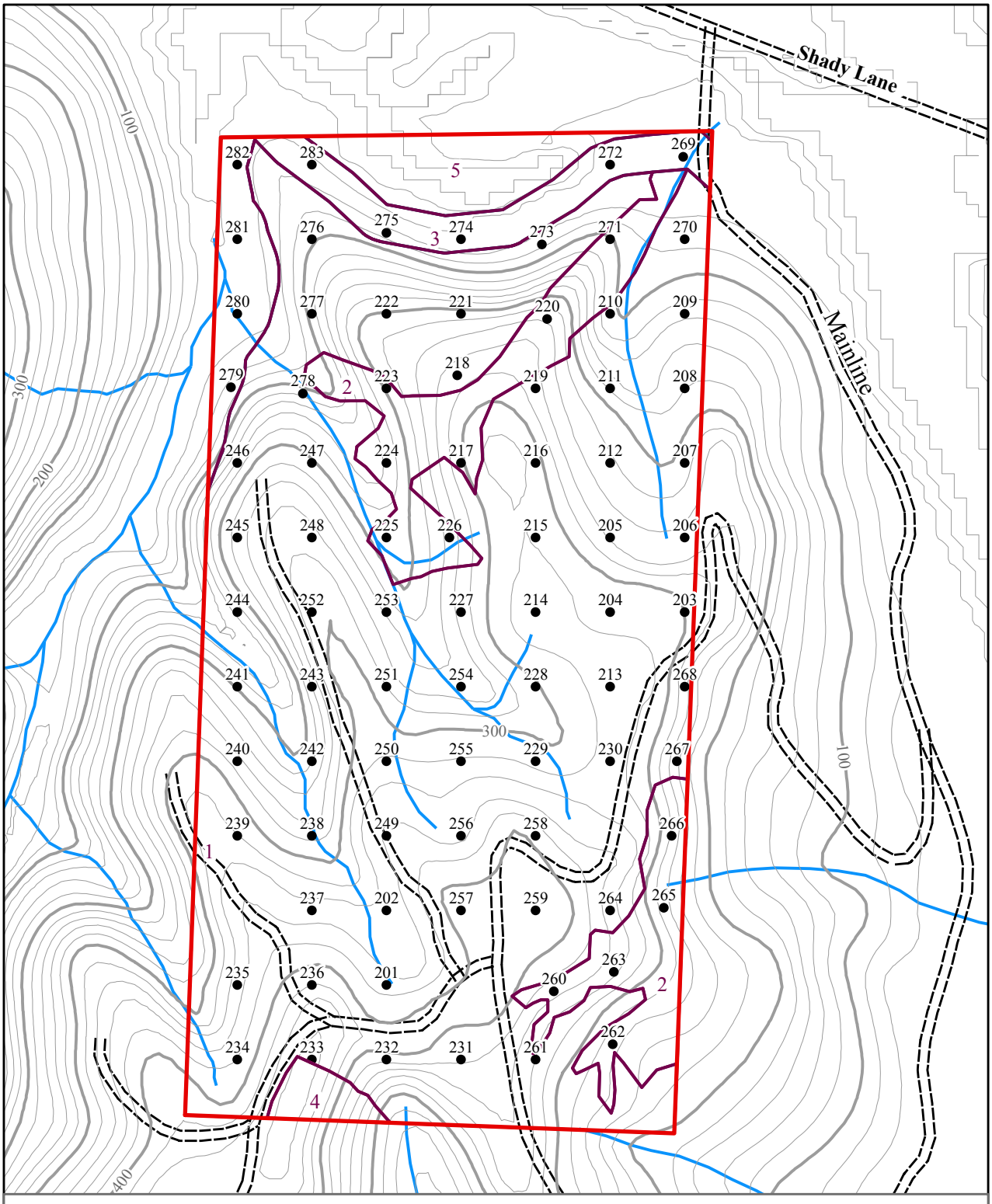

Figure 3. Plot Loctation Map

1 inch = 400 feet

0 400 800 1,200

Contour Interval = 20 Feet

N W E S

Maximum length for all species was 40 feet, plus trim, and minimum was 12, plus trim. The minimum merchantable tree was at least 6.6 inches in diameter. Dead trees with salvageable volume were tallied if they met these requirements.

On the fixed-radius plots, species, DBH (diameter at breast height - 4.5 feet above ground level), total height, and live crown ratio were recorded for each sample tree. Trees from 1.0 to 4.5 feet tall were given a DBH of zero.

Ten western hemlock trees were sampled for site index in Type 1, and three were sampled in Type 3. No suitable hemlock or Douglas-fir sample trees could be found in Type 2. Additional trees were bored in order to determine age distribution within each type.

Log Grades and Sorts

Each log on the variable radius plots was assigned a grade and sort. With one exception, grades are based on the Official Rules of the Columbia River Log Scaling and Grading Bureaus. The exception was applied to large, rough No. 3 Sawmill Douglas-fir, western hemlock, and Sitka spruce logs. These logs were assigned a grade designated No. 3 Sawmill Rough if they met the size standards for No. 2 Sawmill, but were too rough for No. 2 Sawmill specifications. The Official Rules include No. 3 Sawmill Rough logs with other No. 3 Sawmill logs. The distinction is important, however, because these large rough logs are worth considerably less than smaller No. 3 Sawmill logs. Grades generally remain constant over time.

Sorts reflect current market conditions and change over time. Table 1 lists the sorts used in the cruise. The first five are for export quality Douglas-fir, western hemlock, and Sitka spruce sawlogs.

Analysis Methods – Tree Data

Most of the data were analyzed using the Super A.C.E. cruise program. However, two stand characteristics, Diameter Diversity Index and Stand Density Index, were calculated using a spreadsheet. The formula for Diameter Diversity Index is complex and is not repeated here. This index is based on a comparison of diameter distribution in a particular stand to that of a typical old growth stand. The formula gives the most weight to trees in the larger diameter classes. The index increases as diameter diversity increases and as the percentage of trees with large diameters increases. The maximum index number is 10.00.

Table 1. Log Sort Definitions

JA – JAPAN EXPORT - Special Mill or very good No. 2 Sawmill appearance. No sweep, hooked butts, or knot whorls. Defect deductions less than 10 percent of gross scale. Knots generally less than 1.0 inches, well scattered in upper quarter. Minimum scaling diameter 12 inches, minimum length 26 feet plus trim.

CJ – INTERMEDIATE EXPORT – Good No. 2 Sawmill quality. No excessive taper or sweep. Defect deductions less than 10 percent of gross scale. Knots generally less than 1.5 inches, well distributed. Minimum scaling diameter 12 inches, minimum length 26 feet plus trim.

J8 – JAPAN EXPORT, 8"-11" - Special Mill appearance. No sweep, hooked butts or knot whorls. Defect deductions less than 10 percent of gross scale. Knots generally less than 0.5 inches, well scattered in upper quarter. Scaling diameter between 8 and 11 inches, minimum length 26 feet plus trim.

KO - KOREA EXPORT - No. 3 Sawmill quality. No excessive taper or sweep. Defect deductions less than 15 percent of gross scale. Scaling diameter between 8 and 11 inches, minimum length 26 feet plus trim.

CH – CHINA EXPORT – No. 2 or No. 3 Sawmill quality. No excessive taper or sweep, but more sweep allowable than for other export sorts. Defect deductions less than 25 percent of gross scale. Minimum scaling diameter 8 inches, minimum length 26 feet plus trim.

DO – DOMESTIC CONIFER SAWLOG - Too small for export or rough, bumpy, with sweep, hook, or defect that excludes export sorts. Minimum scaling diameter 5 inches, minimum length 12 feet plus trim.

HD – HARDWOOD SAWLOG - Can be trimmed to a smooth appearance. Minimum scaling diameter 8 inches, minimum length 12 feet plus trim.

H5 – Similar to HD, except scaling diameter 5 to 7 inches. Minimum length 16 feet plus trim.

PU – Pulp log. Too small for other sorts or cannot be classified as a sawlog due to sweep, roughness, or other defects. Minimum scaling diameter 3 inches, minimum length 12 feet.

Stand Density Index is calculated by the following formula:

$$(\text{Number of Trees per Acre}) \times (\text{Quadratic Mean Diameter}/10)^{1.605}$$

Only trees 2.0 inches in diameter and larger are counted. The index for a particular stand can be compared to an assumed maximum density. Maximum density in stands of shade-tolerant species is greater than that of other stands.

Multi-Layering

At all sample points in all types, the cruiser recorded whether the tree canopy on a 0.02-acre circular plot is multi-layered. Sample plots were considered to be multi-layered when they contained two or more distinct canopy levels. In general, a plot is called multi-layered when it contains residual trees that are distinctly taller than trees in the predominant age class, when hardwoods are overtopping smaller conifers, or when openings within the plot are filled with trees significantly shorter than the predominant trees.

Snags

Snags that are at least 6.6 inches in diameter and 4.5 feet tall were recorded if they fell in the variable radius plots. For each snag, DBH, total height, and Decay Class were recorded. Decay Classes are defined as follows:

1 bark loosened, sapwood riddled by beetles, heartwood intact, limbs intact, top intact

2 bark mined by beetles, sapwood mined extensively, heartwood softened with cavities, limbs broken, top broken

3 bark sloughing off, sapwood decayed considerably, heartwood decayed and partly sloughed, stubs of largest branches remain, top gone

4 bark piled at base, sapwood sloughed off, no sound heartwood, limbs gone, top gone

5 bark gone, sapwood gone, heartwood in the remaining stub, limbs gone, top gone

Down Wood

Volume and weight of down wood was measured using transects that ran from each plot center north for 50 feet. All down wood whose intersect diameter was 4.0 inches or larger was tallied. For each piece, species, intersect diameter, length, and Decay Class were recorded. Volume, weight, and number of pieces per acre were calculated using procedures described in a publication of the Canadian Forestry Service (Van Wagner, C. E.. 1982. Practical Aspects of the Line Intersect Method. Petawawa National Forestry Institute, Canadian Forestry Service, Chalk River, Ontario, Information Report PI-X-12, 11 p.).

Decay Classes are defined as follows:

1 bark intact, twigs less than three centimeters present, texture intact, shape round, original color, log elevated on support points

2 bark intact, twigs less than three centimeters absent, texture intact to partly soft, shape round, original color, log elevated on support points but sagging slightly

3 trace of bark, twigs less than three centimeters absent, texture in hard, large pieces, shape round, original color to faded, log is sagging near ground

4 bark absent, twigs less than three centimeters absent, texture in small, soft, blocky pieces, round to oval shape, light brown to faded brown or yellowish color, all of log on ground

5 bark absent, twigs less than three centimeters absent, texture soft and powdery, oval shape, faded to light yellow or gray color, all of log on ground

Understory Vegetation

The percentage of the forest floor covered by each of three categories of vegetation was ocularly estimated using 0.02 acre circular plots with the same centers as the plots used for measuring merchantable timber and pre-merchantable trees. The three categories were grass, herbs, and shrubs. Ferns were tallied with the herbs and constituted a large percentage of the cover in this category. Due to overlapping, the sum of coverages in the three categories could exceed 100 percent.

In addition, percentage of cover for each shrub or herb species that contained at least 10 percent cover was recorded. If no one species contained 10 percent cover, percentage of cover for the major species in each category was recorded.

III. INVENTORY RESULTS

Tree Data

Table 2 summarizes the tree data. It shows average diameter, basal area, number of trees, cubic and board foot volumes, and other measurements by species for each type. Table 3 breaks down board foot volume for all three types combined by species, log sort, and log grade. Tables 4, 7, and 10 contain the breakdowns for each of the three types. Tables 5, 8, and 11 are statistical summaries for each of the three types, and Tables 6, 9, and 12 are stand tables.

Estimated net total volume on the property is 1,733 MBF. About 1,585 MBF of this total, or about 91percent, is in Types 1 and 2, the two types in which timber harvest is not restricted. About 74 percent of total volume is in western hemlock. Most of the remainder is in Douglas-fir and red alder. Standard error of mean net total board foot volume is 6.5 percent.

Broken tops were the most common type of damage. In Type 1, an average of 10.4 trees per acre had broken tops, and in Type 3, an average of 7.2 per acre had broken tops. None were tallied in Type 2, but in this type, an average of 3.6 trees per acre had other weather damage. No other type of damage was found on the sample plots.

Site Quality

The site measurements indicate that average site index, base age 50, is 116 for western hemlock. This index is low Class 2 on a scale from 1 to 5, with Class 1 being the most productive for growing this species.

Table 2. Cruise Summary

TC PCATALOG

Catalog - Species, Volumes

Page No 1
Date: 7/17/2013

GROWN DATE:

Type	Acres	Sce	Date	Age	SI	Spc	S T	DBH	Total FF	Total Hgt	STK	BA /Ac	Trees /Ac	Logs /Ac	Avg Log CuFt	Avg Log BdFt	Net Cf/Ac	Net Bf/Ac	Total CUNITS	Total MBF
0001	59.50	TC	6/13	46	116	WH		12.6	87	81	56	157.4	182.75	315.1	18	64	5,720	20,082	3,403	1,195
				46	116	DF		13.9	86	80	13	23.9	22.56	38.5	20	66	768	2,544	457	151
				46	116	RA		12.9	85	75	9	17.4	19.19	33.1	15	44	503	1,464	300	87
				46	116	SS		16.1	86	80	1	5.8	4.08	6.7	30	95	202	643	120	38
				46	116	RC		23.0	75	73		1.3	.45	.6	61	138	37	82	22	5
		AGE TOTAL						*12.8*	*87*	*80*	*79*	*205.8*	*229.03*	*394.0*	*18*	*63*	*7,230*	*24,816*	*4,302*	*1,477*
				15	116	WH		2.6		18	87	7.9	211.12							
				15	116	DF		3.8		26	2	.3	3.22							
				15	116	RA		4.5		44	1	1.1	9.67							
				15	116	SS		2.9		20	3	.4	8.06							
				15	116	RC		2.1		12	4	.2	8.06							
				15	116	CA		2.8		27		.2	4.83							
		AGE TOTAL						*2.7*		*19*	*97*	*10.0*	*244.96*							
				24	116	DF		10.8	84	56	3	1.9	3.04	3.0	13	39	38	119	23	7
				24	116	SS		9.0	65	36	1	.6	1.46	1.5	5	10	7	15	4	1
		AGE TOTAL						*10.3*	*78*	*49*	*4*	*2.6*	*4.50*	*4.5*	*10*	*30*	*46*	*134*	*27*	*8*
				150	116	SS		36.0	87	109		1.3	.18	.4	161	668	59	244	35	15
		AGE TOTAL						*36.0*	*87*	*109*		*1.3*	*.18*	*.4*	*161*	*668*	*59*	*244*	*35*	*15*
0001	59.50	**TYPE**						*9.2*	*87*	*49*	*180*	*219.6*	*478.67*	*398.9*	*18*	*63*	*7,334*	*25,193*	*4,364*	*1,499*
0002	8.60	TC	6/13	46	116	RA		10.9	82	60	75	123.3	191.25	278.9	12	32	3,423	9,016	294	78
				46	116	WH		20.0	86	94	1	3.3	1.53	3.1	44	145	134	443	12	4
				46	116	RC		13.0	70	58	1	3.3	3.62	3.6	23	30	83	108	7	1
				46	116	DF		9.0	87	58	2	3.3	7.55	7.5	9	30	68	226	6	2
		AGE TOTAL						*10.9*	*82*	*60*	*79*	*133.3*	*203.94*	*293.1*	*13*	*33*	*3,709*	*9,794*	*319*	*84*
				15	116	RA		5.4		44	8	7.9	49.96							
				15	116	WH		3.6		24	37	6.4	91.59							
				15	116	RC		3.0		16	7	.8	16.65							
				15	116	SS		3.0		14	15	2.0	41.63							
				15	116	CA		1.4		15		.5	49.96							
		AGE TOTAL						*3.6*		*24*	*67*	*17.7*	*249.80*							
				24	116	RA		7.0	85	36	3	3.3	12.47	12.5	4	10	50	125	4	1
				24	116	WH		7.0	84	35	3	3.3	12.47	12.5	4	10	50	125	4	1
		AGE TOTAL						*7.0*	*85*	*36*	*6*	*6.7*	*24.95*	*24.9*	*4*	*10*	*100*	*249*	*9*	*2*
0002	8.60	**TYPE**						*7.8*	*82*	*40*	*152*	*157.7*	*478.68*	*318.1*	*12*	*32*	*3,809*	*10,043*	*328*	*86*
0003	5.10	TC	6/13	46	116	WH		14.7	84	68	52	142.2	120.91	170.9	27	88	4,574	15,078	233	77
				46	116	RA		12.7	86	69	30	48.9	55.39	88.2	17	52	1,507	4,607	77	23
				46	116	SS		29.5	86	104	4	8.9	1.87	3.7	99	345	371	1,289	19	7
				46	116	RC		29.0	83	81	2	4.4	.97	1.9	78	285	151	552	8	3
		AGE TOTAL						*14.5*	*85*	*68*	*88*	*204.4*	*179.14*	*264.8*	*25*	*81*	*6,604*	*21,526*	*337*	*110*
				150	116	WH		30.5	86	129	2	8.9	1.75	5.3	84	319	441	1,676	22	9
				150	116	SS		54.4	83	132	3	13.3	.83	2.5	266	1263	658	3,126	34	16
				150	116	RC		37.0	79	93	3	13.3	1.79	3.6	129	479	460	1,714	23	9
				150	116	DF		30.0	88	114	1	4.4	.91	2.7	72	327	195	887	10	5
		AGE TOTAL						*37.3*	*84*	*115*	*9*	*40.0*	*5.27*	*14.0*	*125*	*528*	*1,754*	*7,403*	*89*	*38*
				15	116	WH		4.2		28	70	15.0	155.43							
				15	116	RA		6.0		49	2	2.2	11.10							
				15	116	SS		1.0		4	5	.1	11.10							
				15	116	RC		3.6		15	20	3.2	44.41							
		AGE TOTAL						*4.1*		*25*	*97*	*20.5*	*222.04*							
0003	5.10	**TYPE**						*10.9*	*85*	*45*	*194*	*264.9*	*406.45*	*278.9*	*30*	*104*	*8,357*	*28,930*	*426*	*148*
	73.20	**SECTION SUMMARY**									**ACRES**								*5,118*	*1,733*
	73.20	**TWP RGE SUMMARY**									**ACRES**								*5,118*	*1,733*
	73.20	**PROJECT SUMMARY**									**ACRES**								*5,118*	*1,733*

Table 3. Log Sort and Grade Distribution – All Types Combined

TC PSPCSTGR **Species, Sort Grade - Board Foot Volumes (Project)**

Page 1
Date 7/17/2013
Time 2:03:43PM

Acres 73.20

Spp	S T	So Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent of Net Board Foot Volume: Log Scale Dia. 3-7	8-9	10-11	12+	Log Length 12-15	16-25	26-35	36-40	Average Log: Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
WH		CU CU		100.0	75											4	13		0.00	3.9
WH		PU UT	4	1.2	799	790	58	50	16	10	23	6	52	9	33	21	4	22	0.30	36.1
WH		CJ 2S	12	1.0	2,210	2,187	160				100				100	40	14	273	1.71	8.0
WH		CH 2S	6	3.5	949	916	67				100			6	94	38	14	288	1.85	3.2
WH		CH 3S	14	2.8	2,591	2,518	184		56	44				1	99	39	9	111	0.85	22.8
WH		DO 2S	3	11.9	513	452	33				100		12		88	34	15	249	1.96	1.8
WH		DO 3S	15	2.2	2,787	2,725	199	78	11	10				3	97	37	7	65	0.54	41.7
WH		DO 4S	21	.5	3,732	3,713	272	100	0				26	37	37	28	5	30	0.32	124.4
WH		DO 3R		34.4	35	23	2				100				100	40	14	190	1.88	.1
WH		JA 2S	3		396	396	29				100				100	40	12	212	1.35	1.9
WH		KO 3S	19	.5	3,402	3,386	248		49	51					100	40	9	126	0.87	26.8
WH		J8 3S	3		451	451	33		69	31					100	40	9	128	0.80	3.5
WH	**Totals**		74	2.1	17,940	17,557	1,285	35	22	19	24	0	8	9	82	31	7	64	0.59	274.2
SS		PU UT	1		12	12	1	100					100			20	3	10	0.25	1.2
SS		CH 2S	46	4.2	501	480	35				100			1	99	39	17	524	3.21	.9
SS		CH 3S	10	3.4	110	107	8		20	80				16	84	37	10	138	1.21	.8
SS		DO 2S	2	12.5	23	21	2				100		100			16	34	700	9.75	.0
SS		DO 3S	12	4.9	137	130	10	26	74						100	37	8	79	0.72	1.6
SS		DO 4S	7	1.7	73	72	5	93	7				39	24	37	26	5	29	0.46	2.5
SS		DO 3R	15	20.9	188	149	11				100		4	8	88	36	24	870	6.33	.2
SS		JA 2S	7		71	71	5				100				100	40	17	460	2.65	.2
SS	**Totals**		4	6.7	1,116	1,041	76	11	12	8	69		6	5	89	31	8	141	1.27	7.4
RC		CU CU														4	17		0.00	.1
RC		PU UT	5		13	13	1	100							100	40	4	30	0.58	.4
RC		DO 3S	95	3.8	234	225	16		12	4	83		6	25	69	33	13	259	2.55	.9
RC	**Totals**		1	3.6	247	238	17	5	12	4	79		6	24	71	32	11	168	1.79	1.4
DF		CU CU		100.0	33											20	12		0.00	.3
DF		PU UT	2		66	66	5	100					40		60	23	4	21	0.29	3.2
DF		CH 2S	9	5.2	204	194	14				100				100	40	13	224	1.51	.9
DF		CH 3S	21	.8	466	462	34		51	49					100	38	9	119	0.87	3.9
DF		DO 2S	2	19.5	73	59	4				100		32		68	32	14	179	1.66	.3
DF		DO 3S	26	3.6	609	587	43	61	7	33				2	98	38	7	75	0.61	7.8
DF		DO 4S	23	.7	507	504	37	100					20	44	35	30	5	31	0.36	16.0
DF		KO 3S	17		382	382	28		56	44					100	40	10	141	0.95	2.7
DF	**Totals**		10	3.8	2,341	2,253	165	41	22	26	11		7	10	83	33	7	64	0.58	35.1
RA		CU CU														3	10		0.00	2.9
RA		PU UT	31	.7	824	819	60	82	3	11	3		24	56	20	27	4	20	0.30	41.2
RA		HD 2S	12	6.2	337	316	23				100			84	16	31	12	154	1.39	2.1
RA		HD 3S	22	4.1	575	551	40			100			20	46	34	29	10	109	1.07	5.1
RA		HD 4S	28	11.1	817	726	53		100				20	53	28	28	8	53	0.71	13.8
RA		H5 4S	7	5.3	182	172	13	100					35	37	28	27	6	33	0.42	5.2
RA	**Totals**		11	5.5	2,736	2,585	189	33	29	25	13		20	55	25	27	6	37	0.49	70.2
Totals				2.9	24,379	23,674	1,733	34	22	20	24	0	9	14	76	31	6	61	0.59	388.3

Table 4. Log Sort and Grade Distribution – Type 1

T TSPCSTGR **Species, Sort Grade - Board Foot Volumes (Type)** Page 1
Date 7/17/2013
Time 2:04:13PM

Type	Acres	Plots	Sample Trees	CuFt	BdFt
0001	59.50	62	477	1	W

Spp	ST	Sort	Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 3-7	8-9	10-11	12+	Log Length 12-15	16-25	26-35	36-40	Average Log: Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
WH		CU	CU		100.0	92											4	13		0.00	4.6
WH		PU	UT	4	.6	826	821	49	55	11	12	22	5	55	9	31	21	4	20	0.29	40.5
WH		CJ	2S	12	1.1	2,420	2,393	142				100				100	40	13	264	1.66	9.1
WH		CH	2S	3	3.0	813	789	47				100			9	91	38	14	259	1.67	3.0
WH		CH	3S	15	2.8	3,061	2,976	177		55	45					100	39	9	112	0.84	26.7
WH		DO	2S	3	11.3	523	464	28				100		10		90	36	15	264	1.94	1.8
WH		DO	3S	15	2.1	3,161	3,094	184	81	11	8				2	98	37	7	64	0.53	48.3
WH		DO	4S	22	.1	4,385	4,382	261	100	0				26	38	37	28	5	30	0.32	146.5
WH		JA	2S	2		487	487	29				100				100	40	12	212	1.35	2.3
WH		KO	3S	21	.5	4,142	4,123	245		49	51					100	40	9	126	0.87	32.7
WH		J8	3S	3		555	555	33		69	31					100	40	9	128	0.80	4.3
WH	**Totals**			80	1.9	20,466	20,082	1,195	37	22	20	21	0	8	9	82	31	7	63	0.57	319.7
DF		CU	CU		100.0	41											20	12		0.00	.4
DF		PU	UT	3		82	82	5	100					40		60	23	4	21	0.29	4.0
DF		CH	2S	7	6.3	210	196	12				100				100	40	12	199	1.42	1.0
DF		CH	3S	21	.8	563	558	33		52	48					100	39	9	119	0.86	4.7
DF		DO	2S	2	16.7	59	49	3				100				100	36	12	150	1.39	.3
DF		DO	3S	27	3.6	749	722	43	61	7	33				2	98	38	7	75	0.61	9.6
DF		DO	4S	22	.8	591	587	35	100					21	41	37	30	5	32	0.36	18.6
DF		KO	3S	18		470	470	28		56	44					100	40	10	141	0.95	3.3
DF	**Totals**			11	3.6	2,764	2,663	158	42	23	27	9		6	10	84	33	7	64	0.58	41.9
RA		CU	CU														3	10		0.00	3.5
RA		PU	UT	32	1.5	480	473	28	80	7	12			24	62	14	26	4	24	0.35	19.5
RA		HD	2S	12	7.0	190	176	10				100			100		30	12	147	1.32	1.2
RA		HD	3S	21	4.4	322	308	18			100			14	66	20	28	10	106	1.08	2.9
RA		HD	4S	30	10.8	501	447	27		100				13	58	29	29	8	54	0.72	8.3
RA		H5	4S	5	16.7	71	59	4	100							100	36	6	50	0.39	1.2
RA	**Totals**			6	6.4	1,565	1,464	87	30	33	25	12		15	64	22	25	7	40	0.54	36.6
SS		PU	UT	1		15	15	1	100					100			20	3	10	0.25	1.5
SS		CH	2S	48	4.2	446	428	25				100				100	39	17	458	2.92	.9
SS		CH	3S	12	3.5	115	111	7		12	88				12	88	37	10	141	1.18	.8
SS		DO	3S	18	4.9	168	160	10	26	74						100	37	8	79	0.72	2.0
SS		DO	4S	9	1.7	90	89	5	93	7				39	24	37	26	5	29	0.46	3.1
SS		DO	3R	2	34.5	19	13	1				100				100	40	14	190	2.85	.1
SS		JA	2S	10		87	87	5				100				100	40	17	460	2.65	.2
SS	**Totals**			4	4.2	941	902	54	15	15	11	58		5	4	91	31	8	105	1.02	8.6
RC		CU	CU														4	17		0.00	.2
RC		DO	3S	100	8.4	90	82	5		41		59			68	32	34	11	138	1.81	.6

Table 4. Log Sort and Grade Distribution – Type 1 (page 2 of 2)

T TSPCSTGR **Species, Sort Grade - Board Foot Volumes (Type)** Page 2
Date 7/17/2013
Time 2:04:13PM

Type	Acres	Plots	Sample Trees	CuFt	BdFt
0001	59.50	62	477	1	W

Spp	ST	Sort	Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 3-7	8-9	10-11	12+	Log Length 12-15	16-25	26-35	36-40	Average Log: Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
RC Totals				0	8.4	90	82	5		41		59			68	32	28	12	110	1.75	.7
Type Totals					2.4	25,825	25,193	1,499	36	23	20	21	0	8	12	79	31	7	62	0.58	407.5

Table 5 – Statistical Summary - Type 1

TC TSTATS

STATISTICS

PAGE 1
DATE 7/17/2013

TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
0001	59.50	62	477	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	62	477	7.7		
CRUISE	60	325	5.4	13,906	2.3
DBH COUNT					
REFOREST	28	152	5.4	14,575	1.0
COUNT					
BLANKS	1				
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
WHEMLOCK	373	393.0	8.7	39	55.5	164.0	20,327	19,948	5,694	5,677
WHEMLOCK-S	2	.9	16.7	67	0.3	1.3	139	134	44	43
DOUG FIR	41	28.1	12.9	57	7.1	25.4	2,715	2,614	799	789
DOUG FIR-S	1	.7	13.0	63	0.2	.6	49	49	17	17
R ALDER	31	26.9	10.8	50	5.2	17.2	1,427	1,327	465	463
R ALDER-S	2	2.0	10.9	64	0.4	1.3	137	137	40	40
S SPRUCE	17	13.8	10.4	34	2.5	8.1	941	902	268	268
WR CEDAR	7	8.5	5.7	14	0.6	1.5	90	82	37	37
CASCARA	3	4.8	2.8	27	0.1	.2				
TOTAL	*477*	*478.7*	*9.2*	*40*	*72.5*	*219.6*	*25,825*	*25,193*	*7,365*	*7,334*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 %	COEFF	**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	74.7	4.8	160	169	177			
WHEMLOCK-S	78.6	73.6	47	180	313			
DOUG FIR	54.1	8.7	119	131	142			
DOUG FIR-S								
R ALDER	60.6	12.4	82	94	106			
R ALDER-S	81.9	76.8	22	95	168			
S SPRUCE	118.7	35.8	273	425	577			
WR CEDAR	86.1	80.7	44	230	416			
CASCARA								
TOTAL	*93.6*	*5.2*	*159*	*167*	*176*	*351*	*88*	*39*

CL: 68.1 %	COEFF	**SAMPLE TREES - CF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	70.1	4.5	46	48	50			
WHEMLOCK-S	63.1	59.2	23	56	89			
DOUG FIR	51.2	8.2	36	40	43			
DOUG FIR-S								
R ALDER	48.0	9.8	29	32	35			
R ALDER-S	79.7	74.7	7	28	48			
S SPRUCE	107.2	32.3	77	114	151			
WR CEDAR	51.7	48.5	48	93	138			
CASCARA								
TOTAL	*83.7*	*4.6*	*46*	*48*	*50*	*280*	*70*	*31*

CL: 68.1 %	COEFF	**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	122.8	15.6	332	393	454			
WHEMLOCK-S	567.4	72.1	0	1	1			
DOUG FIR	215.6	27.4	20	28	36			
DOUG FIR-S	787.4	100.0	0	1	1			

Table 5. Statistical Summary – Type 1 (page 2 of 2)

TC TSTATS **STATISTICS** PAGE 2
DATE 7/17/2013

TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
0001	59.50	62	477	1	W

CL: 68.1 %	COEFF		TREES/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
R ALDER	267.1	33.9	18	27	36			
R ALDER-S	612.1	77.7	0	2	4			
S SPRUCE	267.4	34.0	9	14	18			
WR CEDAR	386.3	49.1	4	9	13			
CASCARA	583.0	74.0	1	5	8			
TOTAL	*103.6*	*13.2*	*416*	*479*	*542*	*429*	*107*	*48*

CL: 68.1 %	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	68.0	8.6	150	164	178			
WHEMLOCK-S	552.2	70.1	0	1	2			
DOUG FIR	188.7	24.0	19	25	32			
DOUG FIR-S	787.4	100.0	0	1	1			
R ALDER	195.8	24.9	13	17	21			
R ALDER-S	552.2	70.1	0	1	2			
S SPRUCE	254.9	32.4	5	8	11			
WR CEDAR	484.0	61.5	1	1	2			
CASCARA	583.0	74.0	0	0	0			
TOTAL	*44.3*	*5.6*	*207*	*220*	*232*	*78*	*20*	*9*

CL: 68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	76.2	9.7	18,017	19,948	21,879			
WHEMLOCK-S	590.2	75.0	34	134	234			
DOUG FIR	198.0	25.1	1,957	2,614	3,272			
DOUG FIR-S	787.4	100.0	0	49	98			
R ALDER	208.7	26.5	975	1,327	1,678			
R ALDER-S	558.5	70.9	40	137	235			
S SPRUCE	300.7	38.2	557	902	1,246			
WR CEDAR	586.9	74.5	21	82	144			
CASCARA								
TOTAL	*56.9*	*7.2*	*23,372*	*25,193*	*27,015*	*130*	*32*	*14*

CL: 68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	74.7	9.5	5,138	5,677	6,216			
WHEMLOCK-S	568.3	72.2	12	43	74			
DOUG FIR	194.1	24.6	595	789	984			
DOUG FIR-S	787.4	100.0	0	17	34			
R ALDER	202.2	25.7	344	463	582			
R ALDER-S	556.8	70.7	12	40	69			
S SPRUCE	280.7	35.6	173	268	364			
WR CEDAR	552.8	70.2	11	37	62			
CASCARA								
TOTAL	*53.7*	*6.8*	*6,834*	*7,334*	*7,834*	*115*	*29*	*13*

Table 6. Stand Table – Type 1

TC TSTNDSUM

Stand Table Summary

Type	Acres	Plots	Sample Trees	Page:	1
0001	59.50	62	477	Date:	7/17/2013
				Time:	2:05:20PM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
WH		1	72		5	116.035	.12									
WH		2	15		22	24.174	.53									
WH		3	18		24	29.009	1.42									
WH		4	11		43	17.728	1.55									
WH		5	5		48	8.058	1.10									
WH		6	10		55	16.116	3.16									
WH		7	9	86	58	21.726	5.81	31.38	4.2	18.5	2.72	133	579	162	79	34
WH		8	11	86	69	20.331	7.10	27.72	7.1	28.0	4.02	196	776	239	117	46
WH		9	8	88	68	11.683	5.16	14.60	9.3	31.0	2.78	136	453	166	81	27
WH		10	15	87	69	17.743	9.68	24.84	11.2	36.2	5.72	279	899	341	166	53
WH		11	21	87	81	20.529	13.55	39.10	11.5	40.0	9.22	450	1,564	549	268	93
WH		12	20	88	84	16.429	12.90	29.57	15.0	51.7	9.09	444	1,528	541	264	91
WH		13	24	88	89	16.798	15.48	33.60	17.3	59.6	11.88	580	2,002	707	345	119
WH		14	22	88	93	13.277	14.19	26.55	20.7	71.8	11.27	550	1,907	671	327	113
WH		15	22	88	94	11.566	14.19	22.08	24.5	86.7	11.17	542	1,914	664	323	114
WH		16	22	88	98	10.165	14.19	20.33	27.6	95.7	11.49	560	1,945	684	333	116
WH		17	20	88	98	8.186	12.90	15.96	32.7	110.5	10.71	522	1,764	637	311	105
WH		18	10	89	102	3.651	6.45	7.30	35.8	126.5	5.37	262	924	319	156	55
WH		19	10	89	104	3.277	6.45	6.55	42.2	145.5	5.66	276	954	337	164	57
WH		20	9	87	101	2.661	5.81	5.62	43.9	149.5	5.06	247	840	301	147	50
WH		21	7	87	104	1.878	4.52	3.76	49.8	185.0	3.98	187	695	237	111	41
WH		22	5	87	103	1.222	3.23	2.69	49.5	181.8	2.73	133	489	162	79	29
WH		23	2	91	107	.447	1.29	.89	61.2	247.5	1.12	55	221	67	33	13
WH		24	1	87	92	.205	.65	.41	57.0	200.0	.48	23	82	29	14	5
WH		25	3	86	99	.568	1.94	1.32	53.6	194.3	1.45	71	257	87	42	15
WH		28	1	87	99	.151	.65	.30	89.5	345.0	.55	27	104	33	16	6
WH		29	1	88	115	.141	.65	.28	75.0	300.0	.60	21	84	36	13	5
WH		32	1	83	112	.116	.65	.23	117.5	435.0	.56	27	100	33	16	6
WH		Totals	375	87	47	393.869	165.30	315.11	18.2	63.7	117.63	5,720	20,082	6,999	3,403	1,195
DF		2	1		17	1.612	.04									
DF		5	1		35	1.612	.22									
DF		9	3	84	60	4.381	1.94	5.84	7.5	27.5	.83	44	161	50	26	10
DF		11	5	86	71	4.888	3.23	6.84	12.6	41.4	1.63	86	284	97	51	17
DF		12	2	84	70	1.643	1.29	2.46	13.7	43.3	.64	34	107	38	20	6
DF		13	3	86	72	2.100	1.94	2.80	18.5	57.5	.98	52	161	59	31	10
DF		14	6	86	82	3.621	3.87	6.04	20.6	66.0	2.36	124	398	141	74	24
DF		15	3	86	87	1.577	1.94	3.15	21.0	70.0	1.26	66	221	75	39	13
DF		16	8	86	90	3.697	5.16	7.39	24.1	81.3	3.39	178	601	202	106	36
DF		17	5	86	91	2.047	3.23	3.68	27.9	94.4	2.15	103	348	128	61	21
DF		18	1	88	111	.365	.65	.73	38.0	130.0	.53	28	95	31	17	6
DF		19	3	87	88	.983	1.94	1.97	33.7	103.3	1.26	66	203	75	39	12
DF		20	1	85	101	.296	.65	.59	42.5	145.0	.48	25	86	28	15	5
DF		Totals	42	86	72	28.820	26.06	41.50	19.4	64.2	15.51	806	2,663	923	480	158
RA		3	2		24	3.223	.16									
RA		4	1		56	1.612	.14									
RA		5	2		55	3.223	.44									
RA		6	1		52	1.612	.32									
RA		9	2	82	66	2.921	1.29	4.38	7.3	23.3	.74	32	102	44	19	6
RA		10	2	87	88	2.366	1.29	4.73	8.0	27.5	.87	38	130	52	23	8
RA		11	3	85	69	2.933	1.94	4.89	11.4	24.0	1.28	56	117	76	33	7
RA		12	4	85	72	3.286	2.58	5.75	12.9	31.4	1.70	74	181	101	44	11

Table 6. Stand Table – Type 1 (page 2 of 2)

TC TSTNDSUM

Stand Table Summary

Type	Acres	Plots	Sample Trees	Page:	2
0001	59.50	62	477	Date:	7/17/2013
				Time:	2:05:20PM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
RA		13	1	83	68	.700	.65	1.40	11.0	30.0	.40	15	42	24	9	2
RA		14	3	84	84	1.811	1.94	4.22	14.7	47.1	1.43	62	199	85	37	12
RA		15	1	86	82	.526	.65	1.05	21.5	75.0	.52	23	79	31	13	5
RA		16	6	88	77	2.772	3.87	3.70	29.8	90.0	2.53	110	333	150	65	20
RA		17	2	86	71	.819	1.29	1.23	28.3	90.0	.80	35	111	48	21	7
RA		18	2	86	68	.730	1.29	1.10	33.7	86.7	.85	37	95	50	22	6
RA		19	1	87	101	.328	.65	.66	33.5	115.0	.50	22	75	30	13	4
RA		Totals	33	85	65	28.860	18.47	33.10	15.2	44.2	11.63	503	1,464	692	300	87
SS		1	3		3	4.835	.01									
SS		4	1		38	1.612	.14									
SS		5	1		54	1.612	.22									
SS		9	1	65	36	1.460	.65	1.46	5.0	10.0	.12	7	15	7	4	1
SS		12	2	86	77	1.643	1.29	2.46	16.0	43.3	.65	39	107	39	23	6
SS		14	2	87	73	1.207	1.29	1.81	22.0	63.3	.66	40	115	39	24	7
SS		17	1	87	88	.409	.65	.82	30.5	100.0	.41	25	82	25	15	5
SS		20	1	84	85	.296	.65	.59	39.0	110.0	.38	23	65	23	14	4
SS		25	2	86	101	.379	1.29	.76	69.8	267.5	.87	53	203	52	31	12
SS		28	1	87	79	.151	.65	.30	72.5	240.0	.36	22	72	21	13	4
SS		32	1	87	113	.116	.65	.23	133.0	580.0	.51	31	134	30	18	8
SS		42	1	86	102	.067	.65	.13	209.5	820.0	.46	28	110	28	17	7
SS		Totals	17	81	41	13.785	8.11	8.57	31.3	105.2	4.42	268	902	263	160	54
RC		1	3		7	4.835	.02									
RC		2	1		18	1.612	.04									
RC		4	1		22	1.612	.14									
RC		20	1	73	64	.296	.65	.30	59.0	90.0	.24	17	27	14	10	2
RC		28	1	78	90	.151	.65	.30	63.5	185.0	.26	19	56	15	11	3
RC		Totals	7	75	15	8.505	1.48	.60	61.3	138.0	0.49	37	82	29	22	5
CA		2	2		26	3.223	.07									
CA		4	1		30	1.612	.14									
CA		Totals	3		27	4.835	.21									
Totals			477	87	49	478.673	219.65	398.88	18.4	63.2	149.69	7334	25,193	8,906	4,364	1,499

Table 7. Log Sort and Grade Distribution – Type 2

T TSPCSTGR **Species, Sort Grade - Board Foot Volumes (Type)** Page 1
Date 7/17/2013
Time 2:04:13PM

Type	Acres	Plots	Sample Trees	CuFt	BdFt
0002	8.60	12	72	1	W

Spp	ST	Sort	Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 3-7	8-9	10-11	12+	Log Length 12-15	16-25	26-35	36-40	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
RA		PU	UT	30		2,784	2,784	24	87		13			27	45	28	28	4	15	0.27	182.8
RA		HD	2S	3	6.7	317	296	3				100			100		30	12	140	1.30	2.1
RA		HD	3S	26	4.2	2,447	2,344	20			100			27	23	50	29	10	110	1.05	21.4
RA		HD	4S	31	11.2	3,157	2,804	24		100				29	42	29	27	8	52	0.71	54.1
RA		H5	4S	10		914	914	8	100					57	43		24	6	30	0.44	30.9
RA	**Totals**			91	5.0	9,619	9,141	79	37	31	30	3		30	40	30	28	5	31	0.43	291.4
WH		PU	UT	21		125	125	1	100						100		26	3	10	0.15	12.5
WH		CH	2S	62	4.2	367	351	3				100				100	40	13	230	1.67	1.5
WH		DO	3S	17		92	92	1	100						100		32	7	60	0.66	1.5
WH	**Totals**			6	2.6	583	568	5	38			62			38	62	28	4	37	0.42	15.5
DF		DO	4S	100	.0	226	226	2	100						100		30	5	30	0.30	7.5
DF	**Totals**			2	.0	226	226	2	100						100		30	5	30	0.30	7.5
RC		PU	UT	100		108	108	1	100							100	40	4	30	0.58	3.6
RC	**Totals**			1		108	108	1	100							100	40	4	30	0.58	3.6
Type Totals					4.7	10,537	10,043	86	39	28	27	6		27	41	32	28	5	32	0.43	318.1

Table 8. Statistical Summary – Type 2

TC TSTATS **STATISTICS** PAGE 1
DATE 7/17/2013

TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
0002	8.60	12	72	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	12	72	6.0		
CRUISE	12	42	3.5	1,968	2.1
DBH COUNT					
REFOREST	9	30	3.3	2,148	1.4
COUNT					
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
R ALDER	44	253.7	9.9	44	42.9	134.6	9,619	9,141	3,473	3,473
WHEMLOCK	13	105.6	4.8	25	6.0	13.1	583	568	184	184
WR CEDAR	3	20.3	6.1	20	1.7	4.2	108	108	83	83
DOUG FIR	1	7.5	9.0	42	1.1	3.3	226	226	68	68
S SPRUCE	5	41.6	3.0	14	1.2	2.0				
CASCARA	6	50.0	1.4	15	0.5	.5				
TOTAL	*72*	*478.7*	*7.8*	*33*	*56.6*	*157.7*	*10,537*	*10,043*	*3,809*	*3,809*

CONFIDENCE LIMITS OF THE SAMPLE
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

SAMPLE TREES - BF

CL: 68.1 % / SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
R ALDER	82.9	13.4	60	69	79			
WHEMLOCK	132.0	123.7		150	336			
WR CEDAR	173.2	120.0		10	22			
DOUG FIR								
S SPRUCE								
CASCARA								
TOTAL	*92.3*	*14.2*	*61*	*71*	*81*	*340*	*85*	*38*

SAMPLE TREES - CF

CL: 68.1 % / SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
R ALDER	65.8	10.7	22	25	27			
WHEMLOCK	129.1	121.0		46	102			
WR CEDAR	173.2	120.0		8	17			
DOUG FIR								
S SPRUCE								
CASCARA								
TOTAL	*74.3*	*11.5*	*22*	*25*	*28*	*221*	*55*	*25*

TREES/ACRE

CL: 68.1 % / SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
R ALDER	67.0	20.2	202	254	305			
WHEMLOCK	177.2	53.4	49	106	162			
WR CEDAR	285.7	86.1	3	20	38			
DOUG FIR	346.4	104.4		8	15			
S SPRUCE	123.6	37.2	26	42	57			
CASCARA	289.2	87.2	6	50	94			
TOTAL	*66.1*	*19.9*	*383*	*479*	*574*	*190*	*48*	*21*

BASAL AREA/ACRE

CL: 68.1 % / SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
R ALDER	52.6	15.9	113	135	156			
WHEMLOCK	164.0	49.4	7	13	20			
WR CEDAR	280.3	84.5	1	4	8			
DOUG FIR	346.4	104.4		3	7			
S SPRUCE	221.1	66.6	1	2	3			
CASCARA	248.6	74.9	0	1	1			

Table 8. Statistical Summary – Type 2 (page 2 of 2)

TC TSTATS **STATISTICS** PAGE 2
DATE 7/17/2013

TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
0002	8.60	12	72	1	W

CL: 68.1 %	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
TOTAL	*50.9*	*15.3*	*134*	*158*	*182*	*113*	*28*	*13*

CL: 68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
R ALDER	80.7	24.3	6,918	9,141	11,364			
WHEMLOCK	274.1	82.6	99	568	1,037			
WR CEDAR	346.4	104.4		108	222			
DOUG FIR	346.4	104.4		226	463			
S SPRUCE								
CASCARA								
TOTAL	*78.2*	*23.6*	*7,675*	*10,043*	*12,411*	*267*	*67*	*30*

CL: 68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
R ALDER	66.6	20.1	2,776	3,473	4,170			
WHEMLOCK	261.4	78.8	39	184	330			
WR CEDAR	346.4	104.4		83	170			
DOUG FIR	346.4	104.4		68	139			
S SPRUCE								
CASCARA								
TOTAL	*66.8*	*20.1*	*3,042*	*3,809*	*4,575*	*194*	*49*	*22*

Table 9. Stand Table – Type 2

TC TSTNDSUM

Stand Table Summary

Type	Acres	Plots	Sample Trees	Page:	1
0002	8.60	12	72	Date:	7/17/2013
				Time:	2:05:20PM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
RA		4	1		40	8.327	.73									
RA		5	2		44	16.653	2.27									
RA		6	3		45	24.980	4.90									
RA		7	4	77	46	49.890	13.33	49.89	5.0	10.0	5.74	249	499	49	21	4
RA		8	3	83	45	28.648	10.00	28.65	7.7	13.3	5.05	220	382	43	19	3
RA		9	2	84	61	15.090	6.67	22.64	7.0	16.7	3.64	158	377	31	14	3
RA		10	4	86	61	24.446	13.33	36.67	9.5	25.0	8.01	348	917	69	30	8
RA		11	3	81	59	15.153	10.00	25.25	9.6	24.0	5.58	242	606	48	21	5
RA		12	6	84	59	25.465	20.00	42.44	12.0	27.0	11.71	509	1,146	101	44	10
RA		13	3	85	70	10.849	10.00	21.70	13.3	30.0	6.65	289	651	57	25	6
RA		14	4	86	75	12.473	13.33	24.95	16.6	50.0	9.54	415	1,247	82	36	11
RA		15	4	86	93	10.865	13.33	21.73	22.8	71.3	11.37	494	1,548	98	43	13
RA		16	1	87	108	2.387	3.33	4.77	30.0	100.0	3.29	143	477	28	12	4
RA		17	4	86	75	8.459	13.33	12.69	31.8	101.7	9.29	404	1,290	80	35	11
RA		Totals	44	83	56	253.684	134.57	291.37	11.9	31.4	79.88	3,473	9,141	687	299	79
WH		1	3		4	24.980	.14									
WH		2	2		29	16.653	.36									
WH		3	2		23	16.653	.82									
WH		4	1		32	8.327	.73									
WH		5	1		45	8.327	1.14									
WH		6	2		34	16.653	3.27									
WH		7	1	84	35	12.473	3.33	12.47	4.0	10.0	1.02	50	125	9	4	1
WH		20	1	86	94	1.528	3.33	3.06	44.0	145.0	2.76	134	443	24	12	4
WH		Totals	13	84	26	105.593	13.12	15.53	11.9	36.6	3.78	184	568	32	16	5
DF		9	1	87	58	7.545	3.33	7.55	9.0	30.0	1.29	68	226	11	6	2
DF		Totals	1	87	58	7.545	3.33	7.55	9.0	30.0	1.29	68	226	11	6	2
RC		3	2		16	16.653	.82									
RC		13	1	70	58	3.616	3.33	3.62	23.0	30.0	1.12	83	108	10	7	1
RC		Totals	3	70	23	20.269	4.15	3.62	23.0	30.0	1.12	83	108	10	7	1
CA		1	4		12	33.306	.18									
CA		2	2		21	16.653	.36									
CA		Totals	6		15	49.959	.54									
SS		1	3		7	24.980	.14									
SS		4	1		25	8.327	.73									
SS		5	1		24	8.327	1.14									
SS		Totals	5		14	41.633	2.00									
Totals			72	83	40	478.684	157.71	318.06	12.0	31.6	86.07	3809	10,043	740	328	86

Table 10. Log Sort and Grade Distribution – Type 3

T TSPCSTGR **Species, Sort Grade - Board Foot Volumes (Type)** Page 1
Date 7/17/2013
Time 2:04:13PM

Type	Acres	Plots	Sample Trees	CuFt	BdFt
0003	5.10	9	75	1	W

Spp	ST	Sort	Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 3-7	8-9	10-11	12+	Log Length 12-15	16-25	26-35	36-40	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
WH		CU	CU														5	21		0.00	3.1
WH		PU	UT	9	4.6	1,618	1,544	8	14	48		38	18	36		46	24	8	63	0.74	24.7
WH		CJ	2S	20		3,478	3,478	18				100				100	40	15	384	2.29	9.0
WH		CH	2S	20	4.7	3,515	3,351	17				100				100	39	17	443	2.75	7.6
WH		CH	3S	9	3.1	1,478	1,433	7		83	17				17	83	37	8	91	0.95	15.8
WH		DO	2S	6	14.6	1,259	1,074	5				100		24		76	27	14	192	2.04	5.6
WH		DO	3S	18	3.6	2,969	2,861	15	41	15	44				6	94	37	8	89	0.77	32.3
WH		DO	4S	12	9.9	2,408	2,171	11	97	3				32	27	41	29	5	28	0.41	76.6
WH		DO	3R	2	34.4	508	334	2				100				100	40	14	190	1.88	1.8
WH		KO	3S	4		508	508	3			100					100	40	11	180	1.22	2.8
WH	**Totals**			58	5.6	17,741	16,754	85	21	14	12	53	2	9	6	83	31	8	93	0.90	179.3
RA		PU	UT	33		1,533	1,533	8	74			26		15	68	17	28	4	28	0.34	55.2
RA		HD	2S	43	5.3	2,091	1,980	10				100			63	37	33	12	167	1.50	11.9
RA		HD	3S	8		367	367	2			100				100		30	11	130	1.23	2.8
RA		HD	4S	10	13.2	556	483	2		100					100		28	8	48	0.71	10.2
RA		H5	4S	6		244	244	1	100						100		28	6	30	0.39	8.1
RA	**Totals**			16	3.8	4,791	4,607	23	30	10	8	52		5	73	22	29	6	52	0.59	88.2
SS		CH	2S	42	4.2	1,980	1,898	10				100			4	96	37	21	845	4.72	2.2
SS		CH	3S	6	2.8	238	231	1		63	37				37	63	37	10	124	1.34	1.9
SS		DO	2S	6	12.5	337	295	2				100		100			16	34	700	9.75	.4
SS		DO	3R	46	19.6	2,478	1,992	10				100		4	9	87	35	29	1186	8.21	1.7
SS	**Totals**			15	12.3	5,033	4,415	23		3	2	95		8	8	84	35	21	710	4.73	6.2
RC		DO	3S	100	1.7	2,306	2,266	12			6	94		9	7	85	31	16	411	3.57	5.5
RC	**Totals**			8	1.7	2,306	2,266	12			6	94		9	7	85	31	16	411	3.57	5.5
DF		CH	2S	55		489	489	2				100				100	36	19	540	2.78	.9
DF		CH	3S	14		127	127	1			100					100	36	10	140	1.33	.9
DF		DO	2S	31	25.0	362	272	1				100		100			16	24	300	4.19	.9
DF	**Totals**			3	9.3	978	887	5			14	86		31		69	29	18	327	2.44	2.7
Type Totals					6.2	30,849	28,930	148	17	11	9	63	1	9	17	73	30	8	103	0.98	281.9

Table 11. Statistical Summary – Type 3

TC TSTATS

STATISTICS

PAGE 1
DATE 7/17/2013

TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
0003	5.10	9	75	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	9	75	8.3		
CRUISE	9	55	6.1	941	5.8
DBH COUNT					
REFOREST	6	20	3.3	1,132	1.8
COUNT					
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
WHEMLOCK	48	278.1	10.5	39	51.4	166.1	17,741	16,754	5,033	5,014
R ALDER	12	66.5	11.9	51	14.8	51.1	4,791	4,607	1,507	1,507
S SPRUCE	6	13.8	17.2	20	5.4	22.3	5,033	4,415	1,029	1,029
WR CEDAR	8	47.2	9.0	18	7.0	21.0	2,306	2,266	611	611
DOUG FIR	1	.9	30.0	92	0.8	4.4	978	887	195	195
TOTAL	*75*	*406.5*	*10.9*	*38*	*80.1*	*264.9*	*30,849*	*28,930*	*8,376*	*8,357*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

SAMPLE TREES - BF

CL: 68.1 % / SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
WHEMLOCK	97.1	16.7	235	282	329			
R ALDER	62.5	19.8	112	139	167			
S SPRUCE	87.8	43.7	1,671	2,968	4,265			
WR CEDAR	265.1	50.1	60	120	180			
DOUG FIR								
TOTAL	*197.1*	*26.6*	*406*	*553*	*700*	*1,554*	*388*	*173*

SAMPLE TREES - CF

CL: 68.1 % / SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
WHEMLOCK	87.0	14.9	67	79	91			
R ALDER	58.4	18.5	36	45	53			
S SPRUCE	79.4	39.5	392	648	904			
WR CEDAR	260.7	49.3	16	32	48			
DOUG FIR								
TOTAL	*165.2*	*22.3*	*107*	*138*	*168*	*1,091*	*273*	*121*

TREES/ACRE

CL: 68.1 % / SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
WHEMLOCK	110.6	39.1	169	278	387			
R ALDER	147.4	52.1	32	66	101			
S SPRUCE	236.6	83.6	2	14	25			
WR CEDAR	153.3	54.2	22	47	73			
DOUG FIR	300.0	106.0		1	2			
TOTAL	*84.9*	*30.0*	*284*	*406*	*528*	*324*	*81*	*36*

BASAL AREA/ACRE

CL: 68.1 % / SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
WHEMLOCK	54.8	19.4	134	166	198			
R ALDER	134.2	47.4	27	51	75			
S SPRUCE	130.2	46.0	12	22	33			
WR CEDAR	135.0	47.7	11	21	31			
DOUG FIR	300.0	106.0		4	9			
TOTAL	*34.3*	*12.1*	*233*	*265*	*297*	*53*	*13*	*6*

NET BF/ACRE

CL: 68.1 % / SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
WHEMLOCK	65.3	23.1	12,888	16,754	20,619			

Table 11. Statistical Summary – Type 3 (page 2 of 2)

TC TSTATS **STATISTICS** PAGE 2
DATE 7/17/2013

TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
0003	5.10	9	75	1	W

CL: 68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
R ALDER	129.8	45.9	2,495	4,607	6,720			
S SPRUCE	130.8	46.2	2,374	4,415	6,456			
WR CEDAR	173.7	61.4	876	2,266	3,657			
DOUG FIR	300.0	106.0		887	1,828			
TOTAL	*41.1*	*14.5*	*24,730*	*28,930*	*33,130*	*76*	*19*	*8*

CL: 68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	60.3	21.3	3,946	5,014	6,082			
R ALDER	124.8	44.1	843	1,507	2,172			
S SPRUCE	126.2	44.6	570	1,029	1,488			
WR CEDAR	166.5	58.8	252	611	971			
DOUG FIR	300.0	106.0		195	401			
TOTAL	*37.8*	*13.3*	*7,243*	*8,357*	*9,472*	*64*	*16*	*7*

Table 12. Stand Table – Type 3

TC TSTNDSUM

Stand Table Summary

Type	Acres	Plots	Sample Trees	Page:	1
0003	5.10	9	75	Date:	7/17/2013
				Time:	2:05:20PM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
WH		1	1		10	11.102	.06									
WH		2	4		16	44.408	.97									
WH		4	3		26	33.306	2.91									
WH		5	3		33	33.306	4.54									
WH		6	3		47	33.306	6.54									
WH		8	1	87	44	12.732	4.44	12.73	5.0	20.0	1.31	64	255	7	3	1
WH		10	4	78	53	32.595	17.78	32.59	12.5	30.0	8.35	407	978	43	21	5
WH		12	3	84	59	16.977	13.33	22.64	15.2	42.5	7.08	345	962	36	18	5
WH		13	1	86	94	4.822	4.44	4.82	31.0	120.0	3.06	149	579	16	8	3
WH		14	3	85	54	12.473	13.33	16.63	17.0	47.5	5.80	283	790	30	14	4
WH		15	3	86	73	10.865	13.33	18.11	22.8	64.0	8.46	413	1,159	43	21	6
WH		16	1	87	75	3.183	4.44	6.37	22.0	60.0	2.87	140	382	15	7	2
WH		17	2	88	101	5.639	8.89	11.28	31.5	105.0	7.28	355	1,184	37	18	6
WH		18	1	87	99	2.515	4.44	7.55	24.0	96.7	3.71	181	729	19	9	4
WH		20	1	87	114	2.037	4.44	4.07	49.5	185.0	4.13	202	754	21	10	4
WH		21	3	86	98	5.543	13.33	11.09	44.3	155.0	10.45	492	1,718	53	25	9
WH		22	1	87	91	1.684	4.44	3.37	50.5	160.0	3.49	170	539	18	9	3
WH		23	1	87	102	1.540	4.44	3.08	58.5	210.0	3.69	180	647	19	9	3
WH		24	1	87	102	1.415	4.44	2.83	58.5	205.0	3.39	166	580	17	8	3
WH		25	2	87	104	2.608	8.89	5.22	70.5	257.5	7.54	368	1,343	38	19	7
WH		26	2	85	90	2.411	8.89	4.82	62.8	202.5	6.20	303	976	32	15	5
WH		29	1	84	98	.969	4.44	1.94	85.0	355.0	3.38	165	688	17	8	4
WH		30	2	86	127	1.811	8.89	4.53	91.6	376.0	8.50	415	1,702	43	21	9
WH		31	1	85	134	.848	4.44	2.54	85.7	310.0	4.47	218	789	23	11	4
WH		Totals	48	84	46	278.095	166.13	176.20	28.5	95.1	103.17	5,014	16,754	526	256	85
RA		6	1		49	11.102	2.18									
RA		8	2	87	71	25.465	8.89	38.20	7.0	20.0	6.15	267	764	31	14	4
RA		10	1	87	47	8.149	4.44	8.15	11.0	30.0	2.06	90	244	11	5	1
RA		13	1	86	57	4.822	4.44	9.64	13.0	30.0	2.88	125	289	15	6	1
RA		17	3	87	76	8.459	13.33	16.92	25.7	85.0	9.99	434	1,438	51	22	7
RA		18	1	86	81	2.515	4.44	5.03	32.0	110.0	3.70	161	553	19	8	3
RA		19	1	87	88	2.257	4.44	4.51	33.5	115.0	3.48	151	519	18	8	3
RA		20	1	87	85	2.037	4.44	4.07	41.5	130.0	3.89	169	530	20	9	3
RA		22	1	86	72	1.684	4.44	1.68	65.0	160.0	2.52	109	269	13	6	1
RA		Totals	12	87	65	66.489	51.07	88.21	17.1	52.2	34.67	1,507	4,607	177	77	23
SS		1	1		4	11.102	.06									
SS		26	1	88	110	1.205	4.44	2.41	81.5	325.0	3.24	196	784	17	10	4
SS		35	1	81	93	.665	4.44	1.33	131.5	380.0	2.89	175	506	15	9	3
SS		44	1	81	114	.421	4.44	1.26	135.7	626.7	2.83	171	791	14	9	4
SS		63	1	85	171	.205	4.44	.62	408.3	1930.0	4.15	252	1,189	21	13	6
SS		64	1	87	129	.199	4.44	.60	394.0	1920.0	3.88	235	1,146	20	12	6
SS		Totals	6	85	25	13.798	22.28	6.22	165.6	710.2	16.99	1,029	4,415	87	52	23
RC		2	2		12	22.204	.48									
RC		3	1		18	11.102	.54									
RC		6	1		18	11.102	2.18									
RC		29	1	83	81	.969	4.44	1.94	78.0	285.0	2.04	151	552	10	8	3
RC		36	1	74	79	.629	4.44	1.26	114.0	360.0	1.94	143	453	10	7	2
RC		37	1	81	100	.595	4.44	1.19	134.0	505.0	2.15	160	601	11	8	3
RC		38	1	84	100	.564	4.44	1.13	139.5	585.0	2.13	157	660	11	8	3

Table 12. Stand Table – Type 3 (page 2 of 2)

TC TSTNDSUM

Stand Table Summary

Type	Acres	Plots	Sample Trees	Page:	2
0003	5.10	9	75	Date:	7/17/2013
				Time:	2:05:20PM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
RC		Totals	8	81	19	47.166	20.99	5.51	110.9	411.0	8.25	611	2,266	42	31	12
DF		30	1	88	114	.905	4.44	2.72	71.7	326.7	3.70	195	887	19	10	5
DF		Totals	1	88	114	.905	4.44	2.72	71.7	326.7	3.70	195	887	19	10	5
Totals			75	85	45	406.454	264.91	278.85	30.0	103.7	166.78	8357	28,930	851	426	148

Diameter Diversity Index and Stand Density Index

Diameter Diversity Index is relatively low in Types 1 and 2. These stands are young and contain few large trees. The Index is higher in Type 3 due to the presence of large residuals. Indexes follow. The maximum possible is 10.

Type 1	4.7
Type 2	3.3
Type 3	6.2

Stand densities generally are high, primarily due to the abundance of hemlock natural regeneration. Stand Density Indexes are as follows:

Type 1	393
Type 2	307
Type 3	464

Multi-Layering

Multi-layering is uncommon. In fact, none of the 83 sample plots in the cruise was considered to be multi-layered.

Snags

Tables 13 and 14 summarize the snag data. The property contains an average of about 20 snags per acre. Most are in Decay Classes 1 and 2, and most are western hemlock. No Class 5 snags were tallied.

Most of the snags are small, with an average diameter for the property of only 9.5 inches. Only one snag larger than 20 inches in diameter was recorded. It was a 58-inch redcedar in Type 2.

Table 13. Number of Snags by Type and Decay Class

	◄---------- Decay Class ----------►					
	1	2	3	4	5	All
Type 1	8.1	9.1	4.4	1.0	0	22.6
Type 2			2.4	0.2	0	2.6
Type 3				13.2	0	13.2
All	6.6	7.4	3.8	1.8	0	19.6

Table 14. Number and Size of Snags by Type and Species

	Douglas-fir	Western Hemlock	Sitka Spruce	Western Redcedar	Red Alder	All
Type 1						
Number per Acre	4.6	13.6	2.4		2.0	22.6
Average DBH	8.6	9.7	7.0		10.6	9.3
Average Height	57.3	50.3	64.0		64.2	54.4
Type 2						
Number per Acre				0.2	2.4	2.6
Average DBH				58.0	16.0	19.0
Average Height				20.0	38.0	36.7
Type 3						
Number per Acre		13.2				13.2
Average DBH		10.7				10.7
Average Height		14.3				14.3
All						
Number per Acre	3.7	12.0	2.0	<0.1	1.9	19.6
Average DBH	8.6	9.8	7.0	58.0	11.4	9.5
Average Height	57.3	47.5	64.0	20.0	60.3	52.2

Down Wood

Table 15 summarizes results for the down woody material. Volume is relatively low. Most of the material is in Decay Classes 4 and 5.

Table 15. Down Wood

	◄---------- Decay Class ----------►					
	1	2	3	4	5	All
Type 1						
Pieces per Acre	28	22	25	40	45	160
Cubic Feet per Acre	288	209	119	560	520	1,697
Tons per Acre	4	3	1	5	5	18
Type 2						
Pieces per Acre	1	11	42	16	61	131
Cubic Feet per Acre	16	22	193	93	479	803
Tons per Acre	<1	<1	2	1	5	8
Type 3						
Pieces per Acre		5	5	56	15	81
Cubic Feet per Acre		53	269	732	30	1,083
Tons per Acre		1	3	8	<1	12
All						
Pieces per Acre	23	20	26	38	45	152
Cubic Feet per Acre	236	176	138	517	482	1,549
Tons per Acre	3	2	2	5	5	17

Understory Vegetation

Table 16 summarizes results for the understory vegetation. In the table, "Cover" refers to the percentage of the forest floor covered by the vegetation class. "Frequency" refers to the percentage of sample plots containing the vegetation class.

In all types, sword fern constituted the majority of the cover in the herb and fern category. Salmonberry constituted the majority of the cover in the shrub category in Types 1 and 2. It also was the major species in Type 3, but red huckleberry also was important in this type.

Table 16. Understory Vegetation

	Shrubs		Herbs and Ferns		Grasses	
Type	Cover	Frequency	Cover	Frequency	Cover	Frequency
1	9	92	26	100	1	84
2	18	100	55	100	3	100
3	24	100	30	100	7	100
All	11	94	30	100	2	88