

TIMBER APPRAISAL

MUDDY RIVER PROPERTY
TILLAMOOK COUNTY, OREGON



SEPTEMBER 2011

TIMBER APPRAISAL

MUDDY RIVER PROPERTY
TILLAMOOK COUNTY, OREGON

submitted to

John Jones
99999 NW Jones Lane
Tillamook, Oregon 99999-9999

by

Jerry Witler, ACF
Forester
Northwest Forestry Services
11825 SW Greenburg Road #2A
Tigard, Oregon 97223-6466

Report Date: September 30, 2011

Appraisal Date: July 21, 2011



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11825 SW Greenburg Road #2A, Tigard, Oregon 97223-6466

September 30, 2011

John Jones
99999 NW Jones Lane
Tillamook, Oregon 99999-9999

Dear Mr. Jones:

I have completed the timber appraisal that you requested for your property on Muddy River in Tillamook County, Oregon. In my opinion, timber market value was \$116,000 as of the appraisal date, July 21, 2011.

According to County records, total acreage on the property is approximately 96.77. Based on measurements using a Geographic Information System, estimated land acreage is 85.0. Of the 85.0 acres, about 69.3 contain merchantable timber that is physically and legally available for timber harvest. Most of the remaining acreage is in a Riparian Management Area (RMA) adjacent to the Muddy River and a small tributary and in a protective buffer around a bald eagle nest site. Both the RMA and the eagle nest site buffer are mandated by Oregon's Forest Practices Rules.

The Muddy River property is stocked with Sitka spruce and red alder. Most trees average about 35 years in age, but some of the spruces are 90 years or older. Many of these older spruces are very large, but contain poor quality logs. On the other hand, most of the alders are of good quality. Estimated net timber volume, excluding the RMA, is 875 MBF (thousand board feet). Accounting for the eagle nest site buffer, estimated timber volume available for harvest was 825 MBF.

Timber was appraised using the conversion return approach, a variation of the income approach to appraisal. In this approach, timber value is net revenue from hypothetical logging on, or as soon as feasible after, the appraisal date. Net revenue is the difference between delivered log prices and all costs associated with harvest.

The report is attached. It sets forth the assumptions and limiting conditions, pertinent facts, and reasoning leading to the value conclusion.

Sincerely,

Jerry Witler, ACF
Forester

TIMBER APPRAISAL
MUDDY BAY PROPERTY
TILLAMOOK COUNTY, OREGON

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DESCRIPTIONS, ANALYSES, AND CONCLUSIONS

I. INTRODUCTION

Subject Property: The property is comprised of three contiguous parcels with six Assessor Account Numbers. The parcels are all located in Section 99 of Township 99 South, Range 990 West, W.M., Tillamook County, Oregon. County Tax Lot and Account Numbers follow. Acreages are from the County Assessor's office.

<u>Parcel</u>	<u>Lot Number</u>	<u>Assessor Account Number</u>	<u>Acres</u>
1	999999-99-00100	999991	58.47
	999999-00-00100 99	999992	2.00
2	999999-00-00300	999993	17.53
	999999-00-00300 99	999994	2.00
3	999999-00-00500	999995	15.00
	999999-00-01100	999996	<u>1.77</u>
			96.77

A Preliminary Title Report from First American Title Insurance Company, dated April 6, 2011 indicates that title is vested in John and Jane Jones, as tenants by the entirety.

Purpose: To estimate timber market value for the subject property. The property is being considered for purchase. The function of the appraisal is to assist in facilitating the purchase.

Real Property Interest: Merchantable timber

Client, Intended Use, and Intended Users: John Jones requested this report and is the client. It was requested in order to assist the land appraiser, who also has been hired by Mr. Jones, in his estimation of property market value. The land appraiser will reconcile timber value as estimated in this report to total property value. Sole intended users of the report are Mr. Jones and the land appraiser.

Appraisal Date: July 21, 2011, the date of inspection

Type of Value: Timber market value. The definition of market value used in this report is from the Interagency Land Acquisition Conference, Uniform Appraisal Standards for Federal Land Acquisitions, 5th edition. It is as follows:

“The amount in cash, or on terms reasonably equivalent to cash, for which in all probability the property would have sold on the effective date of the appraisal, after a reasonable exposure time on the open competitive market, from a willing and reasonably knowledgeable seller to a willing and reasonably knowledgeable buyer, with neither acting under any compulsion to buy or sell, giving due consideration to all available economic uses of the property at the time of the appraisal.”

Extraordinary Assumptions and Hypothetical Conditions: None

Scope of Work: As part of this assignment, all timber that was physically and legally available for timber harvest was cruised. Timber then was appraised using the conversion return approach, a variation of the income approach to appraisal. In the conversion return approach, timber value is net revenue from hypothetical logging on, or as soon as feasible after, the appraisal date. Net revenue is the difference between delivered log prices and all costs associated with harvest. Log buyers and timber harvesters from throughout northwestern Oregon and southwestern Washington provided price and cost data.

Information used in developing a value estimate also was obtained from the Oregon Department of Forestry (ODF). Mark Main, Stewardship Forester with ODF in Tillamook, provided information regarding legal restrictions on timber harvesting, including those due to the presence of sensitive wildlife species located on or near the subject property.

Inspection and Owner Contacts: I inspected the subject property on July 21, 2011. I was accompanied by Northwest Forestry Services timber cruisers Kevin Young and Matthew Sheehy. Mr. Young and Mr. Sheehy returned to the property on July 25 and July 26 to complete the timber cruise. We did not meet with any representative of the landowners during our visits. I had called Mr. Jones on July 18 to ask permission to enter the property for purposes of the inspection and cruise.

II. ASSUMPTIONS AND LIMITING CONDITIONS

- (1) For purposes of this appraisal, title to the timber is assumed to be marketable and insurable. The appraiser takes no responsibility for legal matters and infers no opinion of title. The timber has been valued as though free of liens and encumbrances, other than those listed in the documentation provided by the landowner.
- (2) The landowner has provided the appraiser with a legal description of the subject property. The appraiser assumes no responsibility for the descriptions or dimensions. This report includes maps and photographs derived from the legal description. Their sole purpose is to assist the reader in visualizing the property.
- (3) The data used in this report were collected and analyzed using accepted procedures. However, data are subject to sampling and other errors. The report contains the appraiser's best estimates of log volumes, log prices, and harvest costs, but the appraiser cannot guarantee the volume or value of the timber.
- (4) The various approaches to value and mathematical calculations in the report are merely aids to the formulation of the opinion of value. In these calculations, certain arithmetical figures are rounded to the nearest significant amount.
- (5) Any harvest plans presented in this report are for valuation purposes only. They are based on limited observations, which have not been field verified. Detailed engineering may indicate other alternatives.
- (6) The data and conclusions in this appraisal are a part of the whole. No part of this appraisal is to be used out of context. By itself, no part of this appraisal is necessarily correct in that it represents only part of the evidence upon which the final judgment of value is based.
- (7) The estimated market value in this report is subject to change over time. It is reported as of July 21, 2011 and is valid only for that date.
- (8) Information contained in this report about the presence of threatened, endangered, or other protected wildlife on or nearby to the subject property was obtained from ODF. The estimated impacts on timber value resulting from the presence of these species were based on discussions with personnel from this agency and on examination of Oregon's Forest Practices Rules. Nevertheless, the appraiser assumes no responsibility for management requirements that may be enforced by any government agency.
- (9) Information provided by others is assumed to be true and accurate. A reasonable effort has been made to verify such information. However, the appraiser assumes no responsibility for its accuracy.

- (10) During the timber cruise, the collapsed remains of an old building were found in the southwest corner of the property. Other than these remains, neither the appraiser nor the timber cruisers noticed any evidence of hazardous waste on the subject property. However, neither the appraiser nor the timber cruisers are qualified to identify or to survey for such materials and accept no responsibilities in this specialized field.
- (11) This report shall be used for its intended purpose and only by the parties listed in Section I. Possession of the report does not include the right of publication.
- (12) Neither all nor any part of this report shall be conveyed to the public through advertising, public relations, sales, or other media without the written consent of the author.

III. PROPERTY DESCRIPTION

Location and Access: The subject property is located near the tip of a peninsula that extends into the Muddy River. It is about two miles south of Tillamook by air, but about five miles south by road. Figure 1 is an aerial orthophotograph taken in 2009. Figure 2 is a topographic map. The approximate locations of property boundaries, access road, and cover types are delineated in the figures. Cover types are described below.

Access is by U. S. Highway 101 to Muddy River Road. Muddy River Road runs northerly for about a mile before reaching the subject, and then passes through to the property on the north. The route from Highway 101 crosses land currently managed by a large timber company. It is paved part of the way through the neighboring ownership, then becomes a well maintained graveled road. The road passes through two gates, both electronically controlled. An access code is needed to enter each.

Access to the property is secured by an easement over Muddy River Road. However, a sign near the road entrance indicates that no vehicles over 25 feet in length are permitted to use it. A log truck is over 50 feet in length. According to the owner of the neighboring property, the sign was posted for safety reasons because the road is narrow and winding. It applies to most visitors. However, the neighbor stated that a truck hauling logs from the subject property would be permitted to use the road. The logging operator would be responsible for maintenance, as well as for stationing flaggers where necessary.

Several old trails and roads run through the interior of the subject. All are grown over with brush.

Boundaries: The Muddy River property is bounded by the Muddy River on the west and northeast. The north boundary is on the line between Section 99 in Township 99 South, Range 99 West and Section 98 in Township 98 South, Range 99 West. A sign on Muddy River Road at the entrance to the property to the north is located near the north boundary. A survey post established by Tillamook County was found on this line on the east side of the road. Old orange flagging also was found along this part of the boundary. The south boundary of the subject is marked with signs posted by the neighboring landowner.

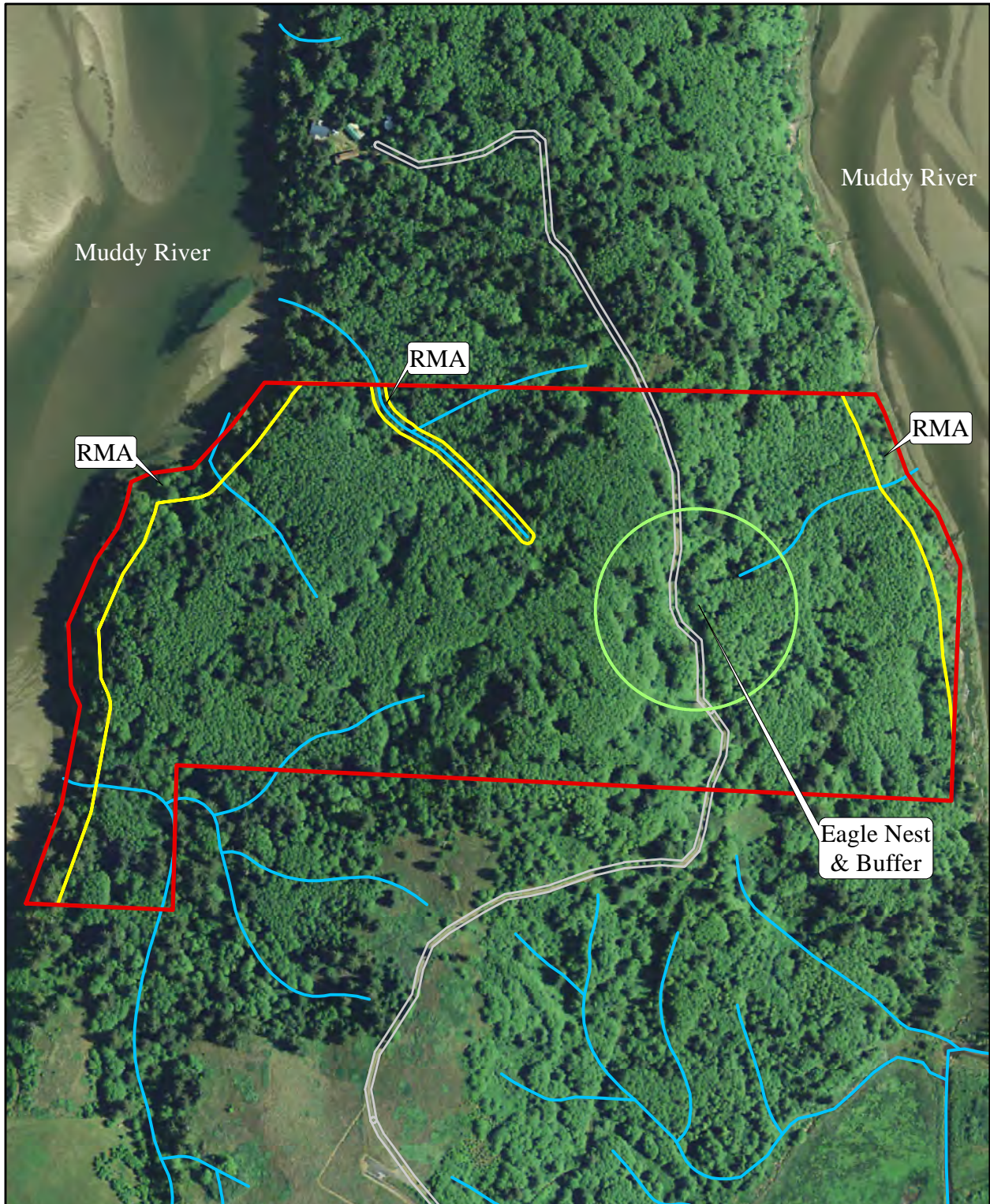
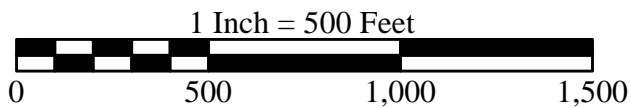


Figure 1. Aerial Photograph with Cover Types



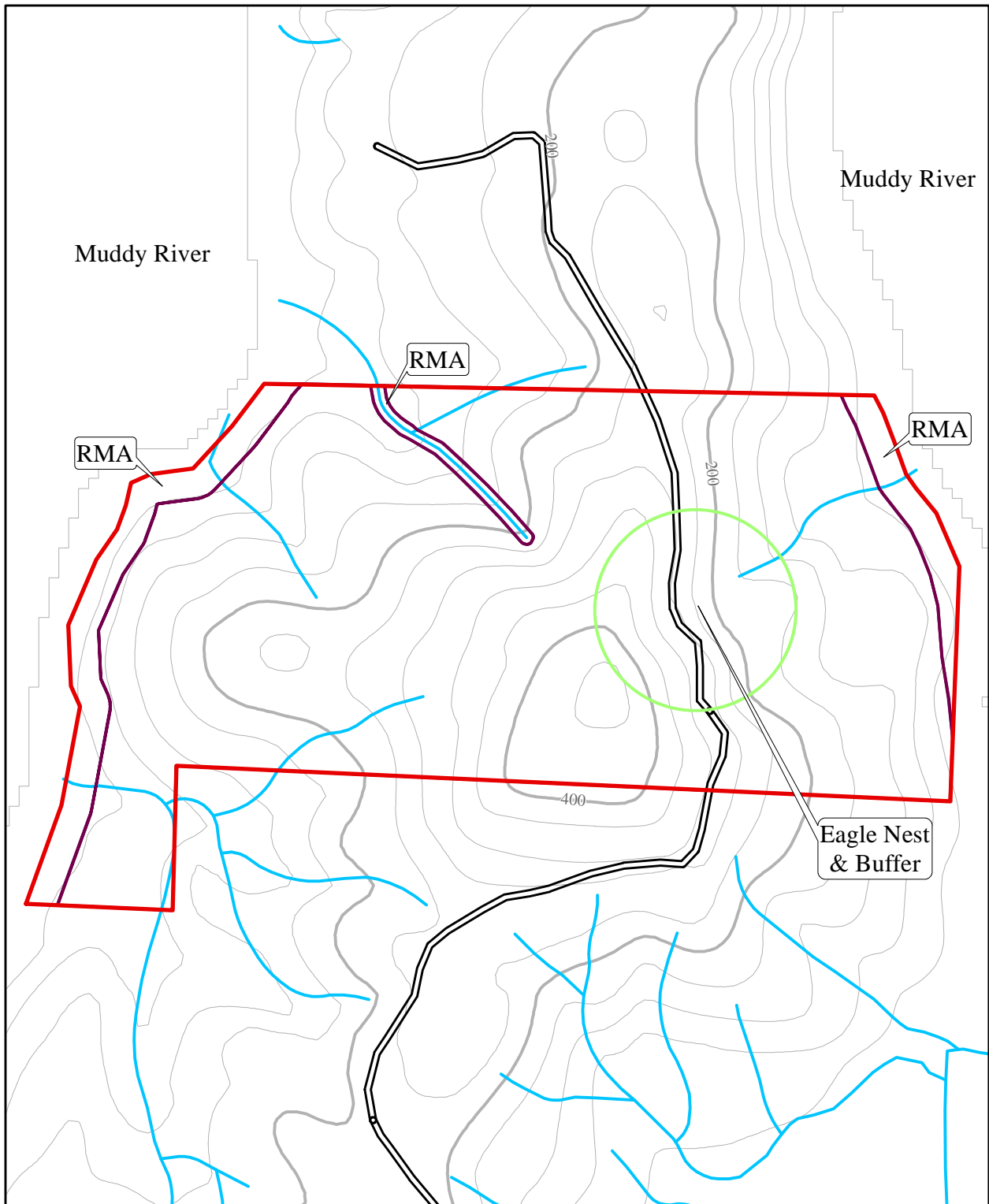
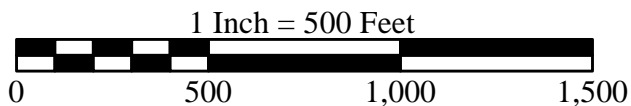


Figure 2. Topographic Map with Cover Types



Contour Interval
= 40 Feet



Cover Types: According to County records, total acreage on the property is approximately 96.77. However, based on measurements using a Geographic Information System, estimated land acreage is 85.0. Of the 85.0 acres, about 69.3 contain merchantable timber that is physically and legally available for timber harvest. Of the remaining 15.7 acres, about 0.6 are in the access road, 7.5 are in a Riparian Management Area (RMA) adjacent to the Muddy River and a small tributary, and 7.6 are in a protective buffer around a bald eagle nest site. Both the RMA and eagle nest buffer are mandated by Oregon's Forest Practices Rules. They are discussed in more detail in Section IV

Timber: Timber is a mixture of primarily Sitka spruce and red alder. A small volume of western hemlock also is present. Average age of most trees is about 35 years. However, some of the spruces are 90 years or older. Tree stocking is highly variable, ranging from well stocked alder or spruce patches to open areas dominated by salmonberry. On average, stocking is low to medium. According to Ann Harder, the property was logged in the mid-1960's.

Some of the spruce trees are very large in diameter. Diameters range to almost 90 inches. However, the level of defect is high. Most of the large spruces are open-grown and rough, with numerous large limbs. Many are forked and contain numerous crooks.

On the other hand, log quality in the red alder is good. Most trees contain a sawlog quality butt log. The alders are considerably smaller than the spruces. Few are over 20 inches in diameter.

Site Quality: The only species on the property suitable for measuring site quality is red alder. As described above, many of the spruces are defective and few of them reflect the potential of the site for growing trees. The property contains only a few hemlocks. Therefore, eight red alders from throughout the property were sampled to estimate site quality. From the sample, average site index for this species is 85. Site index is a measure of productivity. For alder, it is defined as the projected height of dominant and co-dominant trees at a total age of 50 years. Site Index 85 is medium quality for growth of red alder.

Additional site information was obtained from soil maps available from the U. S. Department of Agriculture Natural Resources Conservation Service. Their maps indicate that average Douglas-fir site index for the soils on east edge of the property and in the northwest corner is 124, and that average western hemlock site index for the same areas is 122. Site index for Douglas-fir and western hemlock is defined slightly differently than for red alder. It is the projected height of dominant and large co-dominant trees at a breast height age (4.5 feet above ground level) of 50 years. Douglas-fir and western hemlock site indexes are divided into five classes, with Class 1 being best for growth. Site indexes 124 and 122 are middle Class 2.

For the remaining areas, the maps show Sitka spruce site index. They indicate an average spruce site index of 168. Site index in this case is defined as the projected average height of dominant and co-dominant trees at a total age of 100 years. Site index 168 also is Class 2 on a scale of 1 to 5, with Class 1 being best for growth.

Operability for Logging: Operability for logging varies in different parts of the property. A ridge runs north-south through the center of the property. The terrain drops to the Muddy River on both sides of the ridge. Elevation at the top is about 450 feet. The access road is located just to the east of a ridge.

The terrain east of the access road is steep near the road, but levels off near the bay. However, the soils are wet where the terrain levels, with areas of standing water. Consequently, a cable yarder will be required for logging the entire east side.

Much of the terrain on the west side of the road is gentle. However, this area contains several steep pitches, particularly near the bay. Therefore, much of the west side also will require cable systems for logging.

Suitability for Timber Production: The subject property is well suited for timber production. Soils are productive, the property is accessible, and operability for logging is reasonably good. Legal requirements will affect value, as will be discussed in Section IV, but most of the acreage is available for harvest. Although the current stand is not well stocked, it can be logged for a substantial financial gain, as will be shown in Section VI. After harvest and proper reforestation, a new stand could reach merchantable size in 40 years or less. Furthermore, a well stocked stand will contain trees of better quality than those currently on site.

IV. LEGAL LIMITATIONS ON TIMBER HARVEST

Water Protection: The water protection requirements in Oregon's Forest Practices Rules will limit logging on the subject. The Muddy River is a major fish-bearing stream. The Forest Practices Rules require an RMA adjacent to them that extends 100 feet from the normal high water mark. Limited logging may be allowed in this area if specified stocking standards are met. If they are met, excess trees may be removed. Informal observations by the appraiser indicate that no conifers may be removed from the RMA. Some red alders may be available for harvest, though. However, as discussed below, the appraisal scenario in this report is based on the assumption that no trees will be removed from the RMA.

The subject property contains a few small streams that flow into the Muddy River. None of them is classified as fish-bearing, but, according to ODF records, one in the northwest is registered as a domestic water source. The water right belongs to the landowner to the north. This stream requires a 20-foot wide no-cut RMA on each side. Under the Forest Practices Rules, no RMA is required around the other streams. Nevertheless, operators must take care not to damage their banks.

Bald Eagles and Other Sensitive Wildlife Species: The presence of threatened, endangered, or other sensitive wildlife often can have a large impact on timber value. During the inspection and cruise of the Muddy River property, several bald eagles were sighted flying overhead. Eagles are listed as a threatened species by the state of Oregon. They have been removed from the federal list of threatened and endangered species, but other federal laws still provide protection.

According to Mark Main at ODF, a large Sitka spruce tree along the access road once contained a bald eagle nest. This tree measures about 70 inches in diameter. It has a broken top, but otherwise is structurally sound. Mr. Main believes that the nest was abandoned several years ago. On the other hand, ODF records show that this tree either contains a nest or is used as a perch tree. A perch tree is used for resting, marking territory, and as an approach to a nest. According to his records, the presence of eagles in the tree was verified last in 2007. Eagles often will return to a tree that they have abandoned, or a new pair of eagles may occupy the site.

The Forest Practices Rules define an active nest tree as one in which a bald eagle has nested in the past and that is structurally capable of successful future use, whether or not the tree still contains a nest. Therefore, this large spruce is considered to be an active nest tree for purposes of the Rules.

Under the Rules, a forested buffer of not less than 330 feet must be retained around an active eagle nest tree. In addition, during the period of critical use, usually from January 1 through August 31, no operation may be permitted within one-quarter mile of the active nest tree. If the eagles have a line-of-sight vision from the tree to the operation, the distance is extended to one-half mile. The assumed period of critical use may be modified by ODF based on the actual dates that bald eagles are present at the nest site. The timing limitation could delay harvest on the subject for more than a month beyond the appraisal date.

The area around the nest tree is poorly stocked with timber. Based on the cruise plots in the 330-foot radius circle, per acre board foot volume in this area is about half that of the rest of the property. The 330-foot circle contains about six percent of total volume, excluding the RMA.

ODF has no record of any other species that would impact logging on the subject, other than aquatic species that may inhabit the Muddy River. The RMA discussed above provides adequate protection under the law for any such species.

Wildlife Leave-Trees and Down Wood: In addition to requirements discussed above, the Forest Practices Rules specify that trees be left to help maintain wildlife habitat. They require that, for each acre harvested, an average of two snags or green trees be left. These trees or snags must be at least 30 feet tall and 11 inches in diameter, and at least 50 percent of them must be conifers. They can be left in clusters or distributed throughout the harvest unit. The Rules also require that two downed logs or trees per acre be left. These logs must contain at least 10 cubic feet gross volume and be at least six feet long. At least 50 percent of them must be conifers. The logs can be left in clusters or distributed throughout the harvest unit.

Excess trees in the RMA and trees left in the eagle buffer count towards the wildlife-tree requirements. On the subject, trees left in these areas should be sufficient to satisfy the requirements. Cull logs already on site or those left after logging should provide the required amount of down wood. Therefore, the wildlife-tree and down wood requirements should have no effect on timber value beyond the impacts already described for the RMA and eagle circle.

V. TIMBER INVENTORY

Cruise Design: The 76.9 acres outside of the RMA were cruised between July 21 and 26, 2011 by Kevin Young, Matthew Sheehy, and Jerry Witler. ArcGIS software was used to calculate cover type acreages.

The timber was sampled with 88 variable-radius plots located on a square 200-foot grid. The map in Figure 3 shows the plot locations. Plot centers were marked with fluorescent pink flagging. A stick was placed in the ground at each center with a flag tied to it. Two flags were hung above center with plot number written on one of them. All trees, including salvageable mortality, that were at least 6.6 inches in diameter at four feet above stump level were cruised. All sample trees were measured and graded. Basal area factor was 27.78. Trees were sighted at four feet above stump level.

Tree Measurements: Species, diameter at four feet above stump level, form factor, merchantable height, and estimated defect were recorded for each sample tree. Merchantable height generally is height to an inside bark diameter of five inches for conifers and six inches for red alder. 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.

Preferred gross length for export quality Sitka spruce and western hemlock was 40 feet plus trim. It was 36 to 40 feet plus trim for domestic quality sawlogs of these species. It was 30 feet plus trim for hardwood sawlogs. Logs were cruised in other lengths due to defect or at the top of the tree. In some cases, they were cut shorter in order to obtain a better sort. Maximum gross log length was 40 feet plus trim, and minimum was 12 feet plus trim. Trim was 12 inches on all logs.

Log Grades and Sorts: Each log was assigned a grade and sort. With one exception, grades followed the Official Rules of the Log Scaling and Grading Bureaus of the Pacific Northwest. The exception was applied to large, rough No. 3 Sawmill Sitka spruce and western hemlock sawlogs. 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 less than smaller No. 3 Sawmill logs. Unlike for sorts, grading specifications generally remain constant over time.

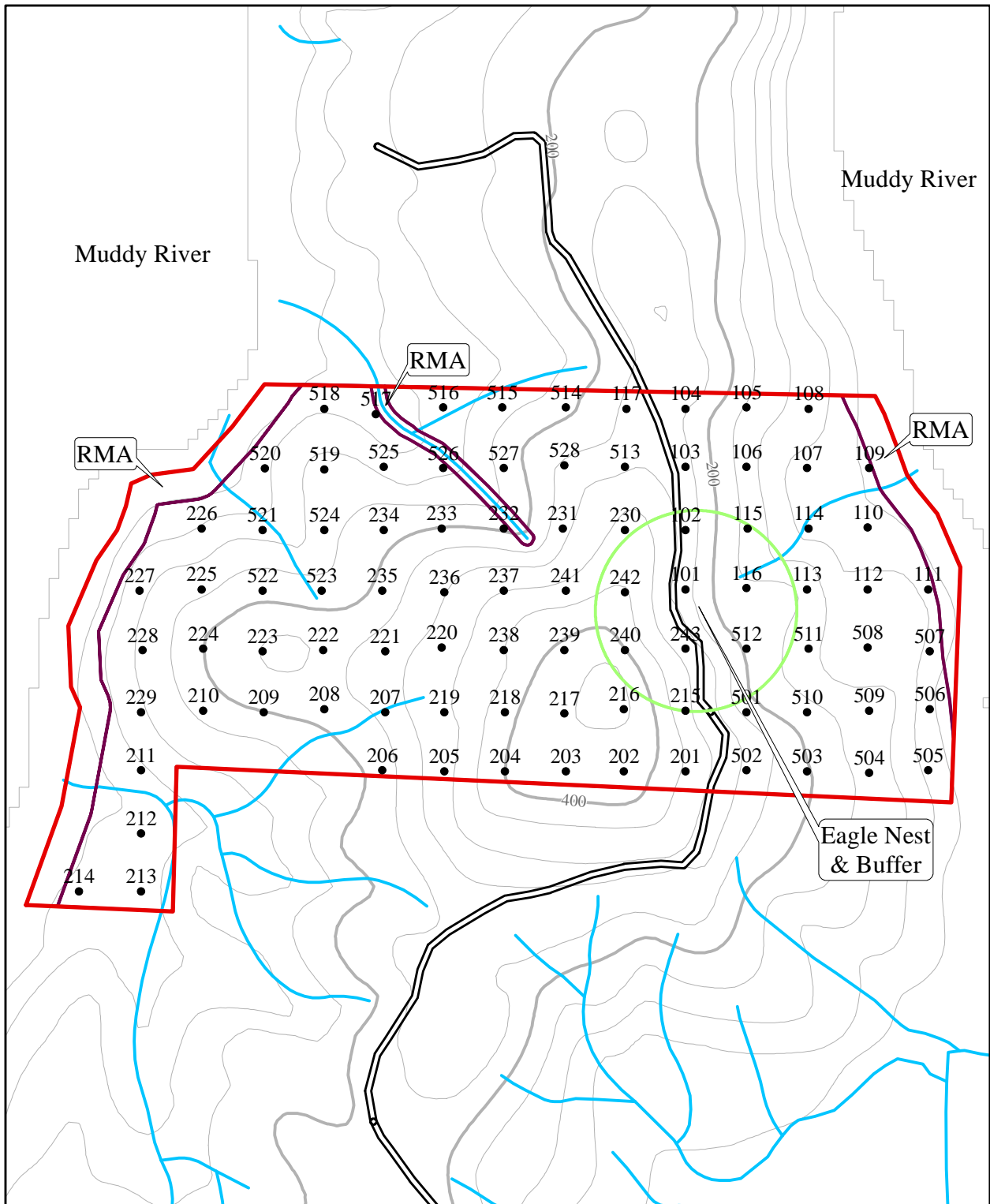
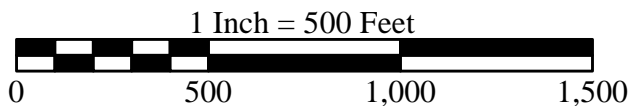


Figure 3. Plot Locations



Contour Interval
= 40 Feet



Sorts used in the cruise are described in Table 1. Sorts reflect current market conditions. Consequently, their specifications change over time. The first four in Table 1 apply to Sitka spruce and western hemlock export quality logs.

Table 1. Log Sort Definitions

CJ EX 12 – 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.

C EX 12 – Medium No. 2 Sawmill quality. No excessive taper or sweep. Defect deductions less than 15 percent of gross scale. Knots generally less than 2.5 inches, well distributed. Minimum scaling diameter 12 inches, minimum length 26 feet.

K EX 8 - No. 3 Sawmill quality. Some sweep allowable. Defect deductions less than 15 percent of gross scale. Scaling diameter between 8 and 11 inches, minimum length 26 feet.

CHINA - 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.

DOMESTIC – Sawlog quality. If Sitka spruce or western hemlock, either 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.

HWD SAW – Sawlog quality hardwood. Can be trimmed to a smooth appearance. Minimum scaling diameter 8 inches, minimum length 12 feet.

HWD SAW6 – Similar to HWD SAW, except scaling diameter 6” to 7” and minimum length 20 feet.

PULP – 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.

Site Index and Tree Ages: In addition to the above measurements, a total of eight red alders were bored in order to determine average age and site index. A sample of spruces also was bored in order to estimate the age range of the trees on the property.

Results: Tables 2 through 5 summarize the cruise results. Table 2 displays average stand data. It lists diameter, basal area, number of trees, number of logs, and cubic and board foot volumes by species. The Harder property contains an estimated 875 MBF (thousand board feet) of timber outside of the RMA, of which 42 percent is in Sitka spruce and 58 percent is in red alder. About 86 percent of the trees on the property are alder.

Table 3 breaks down board foot volume by species, sort, grade, and log length. About 63 percent of spruce volume qualifies for the export market, although most of this volume is in relatively low quality CHINA sort logs. On the other hand, about 22 percent of gross spruce volume is pulp quality, No. 3 Sawmill Rough grade, or cull. About 76 and 75 percent of alder net and gross volume, respectively, is sawlog quality. For spruce, these numbers indicate poorer than average quality, whereas for alder, they indicate about average quality.

Table 4 is a statistical summary. Calculated standard error of mean total net board foot volume is 10.6 percent. Standard error is a measure of the precision of the volume estimate. Based on sampling error alone, the probability that true volume is within one standard error of cruise volume is 68 percent. It is 95 percent that the true value is within two standard errors of cruise volume, and 99 percent that it is within three. Actual sampling error is likely lower than calculated, however. Standard error calculations are based on the assumption of a random sample. However, plots were installed on regular grid that sampled the entire area.

Table 5 is a stand table. It arrays average height, number of trees per acre, basal area per acre, number of logs, and net cubic and board foot volumes by species and diameter.

Table 2. Cruise Summary¹

Species	Avg. D4H (in.)	Basal Area/Ac (sq ft)	Trees /Ac	Logs /Ac	<----- Average Net Volume ----->				Property Totals (net)	
					Per Log: Cubic Feet	Per Log: Board Feet	Per Acre: Cubic Feet	Per Acre: Board Feet	Cunits	MBF
Sitka Spruce	19.0	38.8	19.8	32	42	151	1,345	4,774	1,034	367
Western Hemlock	27.0	0.3	0.1	<1	58	100	9	16	7	1
Red Alder	11.5	90.6	126.5	195	12	34	2,344	6,588	1,802	507
Totals/Averages	12.7	129.7	146.4	226	16	50	3,698	11,378	2,844	875

¹Definitions:

D4H = diameter at four feet above stump level

BA = Basal Area = cross-sectional area of stems at four feet above stump level

Cunit = 100 cubic feet

MBF = thousand board feet

Table 3. Log Sort, Grade, and Volume Data

Sort	Grade	Property Data				Average Log Data		Percentage of Net Bd Ft by Gross Log Length			
		Net MBF	Gross Bd Ft	Net Bd Ft	No. of Logs	Len. (ft.)	Net Bd Ft	12-14	16-24	26-34	36-40
<u>Sitka Spruce</u>											
CJ EX 12	2 SAW	4	52	51	<1	40	1,330				100
C EX 12	2 SAW	59	772	763	2	39	399				100
K EX 8	3 SAW	33	428	428	4	40	119				100
CHINA	2 SAW	108	1,528	1,399	2	39	591			11	89
CHINA	3 SAW	20	272	266	2	38	114			7	93
CHINA	3 SAW RGH	6	92	79	<1	38	1,025			7	93
DOMESTIC	2 SAW	41	586	539	1	30	560		34	22	44
DOMESTIC	3 SAW	18	237	232	3	34	73		15	17	68
DOMESTIC	3SAW RGH	22	377	283	1	32	358		16	14	70
DOMESTIC	4 SAW	21	273	273	9	28	32		29	41	30
PULP	UTILITY	36	463	463	8	25	59	4	35	17	44
CULL	CULL		208								
TOTALS/AVERAGES		367	5,288	4,774	32	32	151	<1	11	12	77
<u>Western Hemlock</u>											
PULP	UTILITY	1	16	16	<1	26	100		10		90
TOTALS/AVERAGES		1	16	16	<1	26	100		10		90
<u>Red Alder</u>											
HWD SAW	2 SAW	44	610	577	4	28	174	3	39	54	4
HWD SAW	3 SAW	46	616	603	6	31	122		23	36	40
HWD SAW	4 SAW	212	2,927	2,755	47	29	59		16	47	37
HWD SAW	6 4 SAW	84	1,118	1,097	35	25	32		43	44	13
PULP	UTILITY	120	1,556	1,556	103	26	15	<1	39	40	21
CULL	CULL		222								
TOTALS/AVERAGES		507	7,050	6,588	195	27	34	<1	29	44	27
<u>All Species</u>											
TOTALS/AVERAGES		875	12,354	11,378	226	27	50	<1	11	12	77

Table 5. Stand Table (page 1 of 3)

D4H (Inches)	Avg. Total Height (ft)	No. of Trees/Ac	Basal Area/ Acre (sq ft)	No. of Logs/Ac	Net Cubic Ft/Acre	Net Board Ft/Acre	Net Total Volume (MBF)
<u>Sitka Spruce</u>							
8	73	0.9	0.3	2	12	45	3
9	37	2.9	1.3	3	24	43	3
10	53	1.2	0.6	2	16	46	4
11	57	1.4	0.9	2	24	62	5
12	98	0.8	0.6	2	27	96	7
13	85	1.7	1.6	3	56	175	13
14	58	0.9	0.9	1	24	59	5
15	59	1.5	1.9	2	46	113	9
16	93	1.4	1.9	3	78	274	21
17	60	0.2	0.3	<1	8	26	2
18	56	1.1	1.9	1	46	107	8
19	68	0.3	0.6	<1	18	46	4
20	80	0.4	0.9	1	32	96	7
21	68	0.8	1.9	1	55	152	12
22	66	0.1	0.3	<1	6	14	1
23	94	0.2	0.6	<1	25	91	7
24	86	0.5	1.6	1	57	197	15
25	87	0.6	1.9	1	65	195	15
26	90	0.2	0.6	<1	22	72	6
27	106	0.3	1.3	1	55	208	16
28	104	0.3	1.3	1	50	224	17
29	98	0.4	1.9	1	78	270	21
30	93	0.2	0.9	<1	36	153	12
31	70	0.1	0.3	<1	10	33	3
32	83	0.2	1.3	<1	39	146	11
33	144	0.1	0.3	<1	18	90	7
34	89	0.1	0.6	<1	24	85	7
35	103	0.1	0.6	<1	26	103	8
36	111	0.2	1.3	<1	56	240	18
37	112	0.1	0.9	<1	38	153	12
38	98	0.2	1.3	<1	51	204	16

(continued on page 20)

Table 5. Stand Table (page 2 of 3)

D4H (Inches)	Avg. Total Height (ft)	No. of Trees/Ac	Basal Area/ Acre (sq ft)	No. of Logs/Ac	Net Cubic Ft/Acre	Net Board Ft/Acre	Net Total Volume (MBF)
<u>Sitka Spruce (continued)</u>							
39	119	0.1	0.9	<1	43	189	15
40	128	0.1	0.6	<1	30	124	10
42	119	0.0	0.3	<1	15	61	5
44	90	0.1	0.6	<1	24	109	8
45	90	0.1	0.6	<1	24	101	8
47	79	<0.1	0.3	<1	9	33	3
48	101	<0.1	0.3	<1	3	12	1
50	89	<0.1	0.6	<1	21	75	6
52	136	<0.1	0.3	<1	11	50	4
58	90	<0.1	0.3	<1	12	39	3
67	61	<0.1	0.3	<1	8	22	2
70	203	<0.1	0.3	<1	19	101	8
86	50	<0.1	0.3	<1	6	40	3
Totals		19.8	38.8	32	1,345	4,774	367
<u>Western Hemlock</u>							
27	65	0.1	0.3	<0.1	9	16	1
Totals		0.1	0.3	<0.1	9	16	1
<u>Red Alder</u>							
7	57	10.6	2.8	12	76	177	14
8	50	23.5	8.2	33	190	516	40
9	50	17.9	7.9	25	174	486	37
10	57	15.6	8.5	24	215	670	52
11	60	12.9	8.5	24	233	631	49
12	60	11.3	8.8	21	238	653	50
13	65	6.2	5.7	11	164	435	33
14	64	9.5	10.1	15	271	729	56
15	66	6.4	7.9	10	219	653	50
16	64	4.1	5.7	6	149	416	32
17	66	4.6	7.3	7	196	571	44

(continued on page 21)

Table 5. Stand Table (page 3 of 3)

D4H (Inches)	Avg. Total Height (ft)	No. of Trees/Ac	Basal Area/ Acre (sq ft)	No. of Logs/Ac	Net Cubic Ft/Acre	Net Board Ft/Acre	Net Total Volume (MBF)
<u>Red Alder (continued)</u>							
18	66	2.0	3.5	3	95	300	23
19	63	0.5	0.9	1	25	79	6
20	63	0.4	0.9	1	19	56	4
21	72	0.1	0.3	<1	10	29	2
22	79	0.4	0.9	<1	16	50	4
23	74	0.2	0.6	<1	20	70	5
25	48	0.1	0.3	<1	7	12	1
28	53	0.1	0.3	<1	8	11	1
29	33	0.1	0.3	<1	5	3	<1
30	80	0.1	0.3	<1	2	6	<1
34	91	0.1	0.3	<1	1	2	<1
36	77	<0.1	0.3	<1	10	33	3
Totals		126.5	90.6	195	2,344	6,588	507
<u>All Species</u>		146.4	129.7	226	3,698	11,378	875

VI. TIMBER VALUE

Valuation Methods: Timber market value was estimated by the conversion return approach, a variation of the income approach to appraisal. In the traditional income approach, a regular and predictable income stream is capitalized to estimate net worth. Small forestland properties generally do not produce a regular income stream, however. In the conversion return approach, market value is net revenue from hypothetical logging at the appraisal date, or as soon thereafter as feasible. Net revenue is the difference between delivered log prices and all costs associated with harvest. The conversion return approach is used by government agencies and by a majority of the timber industry. It is particularly applicable to small properties, which can be logged quickly after purchase.

Two other methods often are considered in appraising timber. Neither was used in this report. In the comparable sales approach, the appraiser analyzes transactions involving timber similar to that on the subject property. Finding sales comparable to the subject in species composition, stocking, and operability is difficult. In addition, parties in private sales rarely will share information about timber volume or price due to confidentiality concerns. Because of these problems, the comparable sales approach rarely is used for small properties. Adjustments to any transactions that could be found and verified would be based on data collected for the conversion return approach. Consequently, use of the conversion return approach is more direct and timely.

In the cost approach, the value of timber is its estimated replacement or reproduction cost. The cost approach generally is not applicable to established stands. The only point in the life of a forest in which replacement cost can be calculated reliably is at the establishment of a new plantation.

Harvest Scenario: In the appraisal scenario for the conversion return approach, all timber outside of the RMA and eagle nest buffer would be harvested as of the appraisal date. Figure 4 illustrates the hypothetical harvest scenario. It shows new road construction and the location of cable and shovel ground. The harvest unit covers an estimated 69.3 acres. About 64 percent of this acreage, containing about 73 percent of total net board foot volume, will require cable logging.

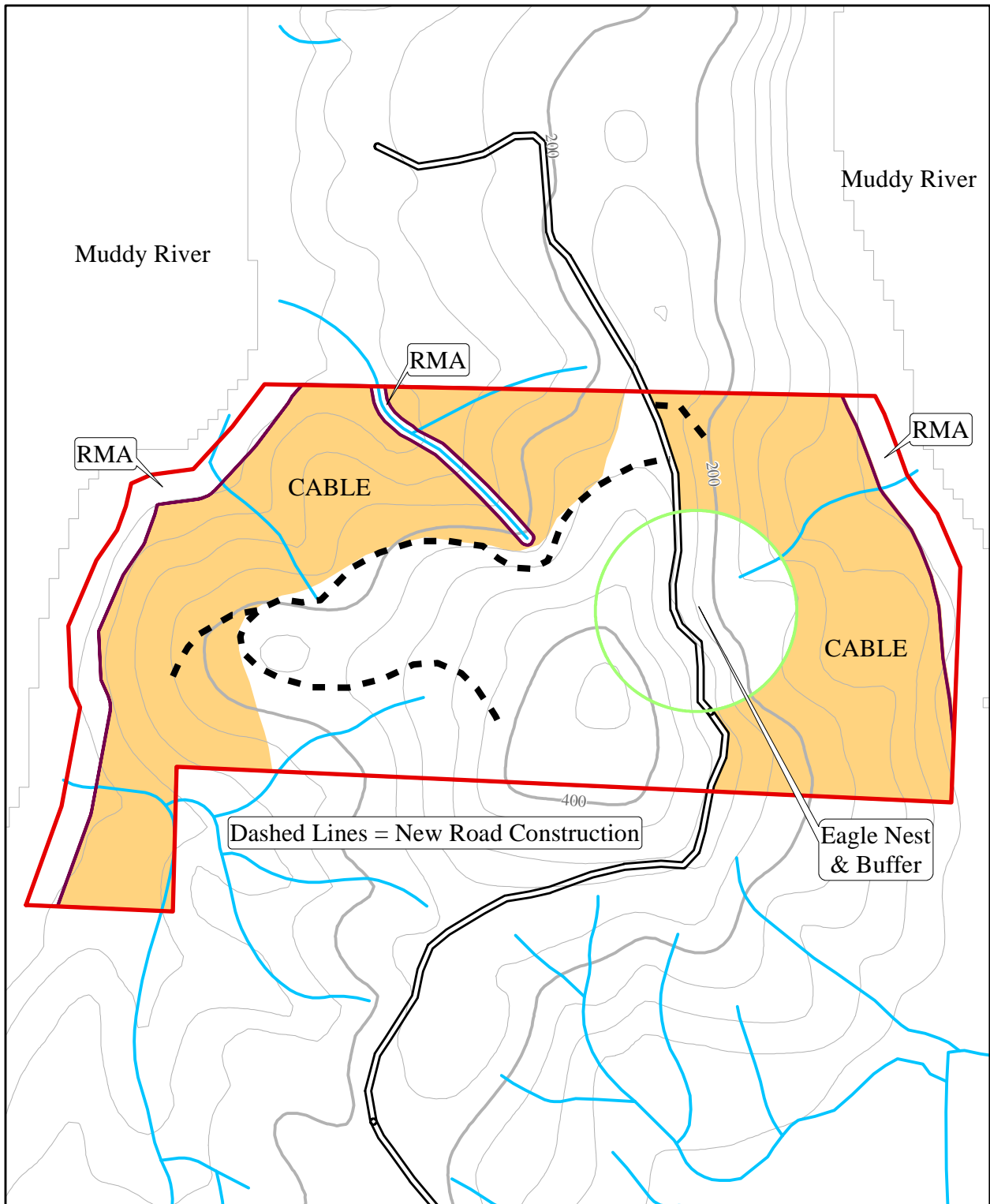
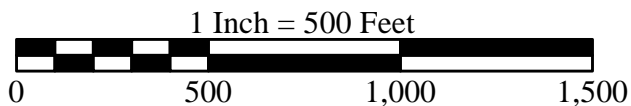


Figure 4. Hypothetical Logging Scenario



Contour Interval
= 40 Feet



Log Markets: Relatively few mills purchase Sitka spruce and red alder. The only mill within one hundred miles that regularly purchases spruce sawlogs is Stimson Lumber in Tillamook. However, the mill cannot use logs with a large-end diameter of greater than 22 inches. Other options include TMI Forest Products in Amanda Park, Washington, or mills in southern Oregon, such as DR Johnson Lumber Company in Roseburg, or in the Puget Sound region, such as Manke Lumber Company in Tacoma. These mills can handle larger spruce logs, but hauling costs obviously would be very high.

The export market is an attractive option for spruce sawlogs. Exporters will buy logs up to 40 inches in diameter. The closest export buyer is Westerlund Log Handlers in Astoria. Other options are Weyerhaeuser Company, Pacific Lumber and Shipping, and Merrill and Ring, all of which are located in Longview or across the Columbia River in Rainier.

In winter and early spring of 2011, most of the logs exported from local ports were going to China. Traditionally, only the highest quality logs have been exported, and the largest markets were in Japan and Korea. China was purchasing logs that generally had been considered unsuitable for export. That is, Chinese mills were accepting poor to average quality sawlogs. However, in the last few months, this market has evaporated. As of the appraisal date, exporters generally were not entering into new purchase agreements for the China market, although they were honoring commitments that they already have made. On the other hand, the markets for higher quality logs in Japan and Korea still were in existence as of the appraisal date.

The closest buyer of red alder sawlogs is Northwest Hardwoods in Garibaldi. Except for a few small specialty mills, no other alder sawmill is located within 100 miles of the subject. The closest pulp log buyers are Coastal Fibre in Willamina and Pacific Fibre Products in North Plains. These companies purchase logs of all species.

Log Price Trends: Conifer sawlog prices were declining as of the appraisal date. According to the Log Lines Log Price Reporting Service, the regional average price of No. 2 Sawmill whitewood sawlogs as of the appraisal date was about \$500 per MBF, compared with a peak of about \$520 per MBF in April. On the other hand, it had dipped as low as \$270 per MBF in the middle of 2009, during the recession. Whitewood includes Sitka spruce.

The peak in prices this spring was attributable to the surge in demand from China for both unprocessed logs and lumber. This demand affected both export and domestic log markets. Domestic producers raised prices in order to compete with the exporters. In addition, some of the logs purchased by domestic producers were being milled into lumber for the export market.

The recent decline primarily reflects the decline in demand from China. However, all of the log buyers with whom the appraiser has spoken expect purchases by China to pick up again in the fall. Without the export market, log prices likely will continue to decline due to the weak domestic housing market. Home construction is the major determinant of lumber prices, and log prices are directly correlated with lumber prices.

Gross Revenue: Gross revenue is the sum of delivered log prices. Some of the buyers listed above, as well as others in northwestern Oregon and southwestern Washington, provided price quotes. Some were provided to the appraiser directly. Others were from the Oregon and Washington Log Market Reports and from the Log Lines Log Price Reporting Service.

Table 6 shows the range of prices as of the appraisal date, as well as those selected. Selected prices were not necessarily the highest quoted, but were the most favorable considering handling and transportation costs. Most buyers base price on length, as well as on sort and grade. Prices selected in Table 6 reflect a predominance of long logs, which were preferred in the cruise. Pulp log and some alder sawlog prices were quoted on a per ton basis. They were converted to a per MBF basis in the table.

Due to the lack of markets, all spruce logs graded No. 3 Sawmill Rough were priced as pulp logs. CHINA sort logs were priced as DOMESTIC sawlogs. Those that were 22 inches or smaller on the large end were to be sold in the Tillamook area, and the larger logs were to be sold in southern Oregon.

From Table 6, estimated gross revenue from timber harvest as of the appraisal date was \$394,505. Net harvest volume was 825 MBF.

Harvest Costs – Logging: Harvest costs include logging, hauling, road construction, road maintenance and use fees, administration, harvest taxes, site cleanup, reforestation, profit, and risk. Cost data were obtained from logging companies, timberland owners, and log buyers, as well as from published materials.

Combined cost of falling, bucking, yarding, and loading varies with log size, species, timber volume, yarding distance, and other factors. It can range from \$70 to \$400 per MBF or more. The terrain is mixed, requiring a combination of relatively low cost ground-based equipment and a relatively high cost cable yarder. An estimated 73 percent of the volume would be logged by cable. Several other factors result in a relatively high logging cost. Per acre timber volume is low. In addition, relatively large and expensive machinery will be required to yard the large spruce logs. Use of this machinery will be inefficient when used on the smaller red alder.

Based on a cost of about \$4,000 per day for a large cable yarder and \$2,200 per day for a shovel yarder and production of about 24 MBF per day, weighted average yarding cost was about \$145 per MBF. Adding about \$30 MBF for falling and bucking gives an estimated average cost to fall, buck, yard, and load of \$175 per MBF.

Table 6. Gross Revenue by Species, Sort, and Grade
July 21, 2011

Species	Sort	Grade	Price Range (\$/MBF)	Selected Price (\$/MBF)	Net MBF	Total \$
Sitka Spruce	CJ EX 12	No. 2 Sawmill	525-550	550	4	2,200
	C EX 12	No. 2 Sawmill	525-550	550	57	31,350
	K EX 8	No. 3 Sawmill	520-525	520	32	16,640
	CHINA	No. 2 Sawmill >22"	425	425	93	39,525
	CHINA	No. 2 Sawmill <22"	440	440	12	5,280
	CHINA	No. 3 Sawmill <22"	420	420	18	7,560
	CHINA	No. 3 Sawmill Rough	205-270	255	3	765
	DOMESTIC	No. 2 Sawmill >22"	425	425	31	13,175
	DOMESTIC	No. 2 Sawmill <22"	440	440	4	1,760
	DOMESTIC	No. 3 Sawmill >22"	400	400	1	400
	DOMESTIC	No. 3 Sawmill <22"	420	420	17	7,140
	DOMESTIC	No. 3 Sawmill Rough	205-270	255	22	5,610
	DOMESTIC	No. 4 Sawmill	380	380	20	7,600
	PULP	Utility	205-270	255	29	7,395
	Western Hemlock	PULP	Utility	205-270	255	1
Red Alder	HWD SAW	No. 2 Sawmill	550-725	725	40	29,000
	HWD SAW	No. 3 Sawmill	550-675	675	41	27,675
	HWD SAW	No. 4 Sawmill	500-625	625	203	126,875
	HWD SAW6	No. 4 Sawmill	500	500	83	41,500
	PULP	Utility	200-210	200	114	22,800
Totals					825	394,505

Harvest Costs – Hauling: Hauling cost was based on a rate of \$550 per day per truck. Table 7 shows the assumed destinations and truck load volumes. From Table 7, weighted average hauling cost was \$82 per MBF.

Table 7. Hauling Cost

Product	Volume (net MBF)	Destination	Net MBF/load	No. of Loads/Day	Cost/ MBF (\$)
Sitka Spruce Sawlogs					
Export Sorts, except CHINA	93	Longview	4.6	1.4	85
DOMESTIC/CHINA >22”	125	Roseburg	5.0	1.0	110
DOMESTIC/CHINA <22”	71	Tillamook	3.9	3.0	47
Red Alder Sawlogs	367	Garibaldi	3.5	2.3	68
Spruce/Hemlock Pulp Logs ¹	55	Willamina	2.0	2.8	98
Red Alder Pulp Logs	114	North Plains	3.0	1.7	108
Weighted Average	825				82

¹Includes Sitka spruce logs grade No. 3 Sawmill Rough

Harvest Costs - Road Construction and Maintenance: About 34 stations (100 feet per station) of new roads will be needed for logging. Figure 4 shows the hypothetical road construction scenario. The new roads will lie almost entirely on gentle terrain and will cross no streams. In the appraisal scenario, all of the roads will be built to the minimum standards necessary for logging. Rock will be used only when necessary. The roads will be considered to be temporary and will be water-barred, seeded, and then abandoned after operations are complete. Estimated average cost for new construction, including road abandonment, was \$500 per station.

In addition to construction costs, a timber harvester will pay maintenance and fees for use of roads on other properties. Estimated cost for road maintenance and use was \$2 per MBF per mile for about one mile.

Other Harvest Costs: Estimated cost of harvest administration was \$5 per MBF. Administration includes locating and marking timber harvest boundaries, marketing, hiring and supervising a logger, bookkeeping, and other related activities.

Oregon's Forest Products Harvest Tax is due upon harvest. This tax is \$3.575 per MBF, with the first 25 MBF exempted.

Oregon's Forest Practices Rules require reforestation after timber harvest, unless the site is to be converted to other uses. Consequently, reforestation generally is considered a cost of harvest. Estimated cost for site cleanup, preparation for planting, and planting was \$400 per acre.

Profit and Risk: In addition to the above costs, a timber investor expects a reasonable allowance for entrepreneurial profit and for risk. Risk factors include sampling and other errors in the cruise that was relied upon to estimate value, changes in log prices, changes in fuel, labor, and other harvest costs, and damage to timber after purchase. Few markets exist for the logs on the subject, especially for the large Sitka spruces. In addition, harvest may have to be delayed due to the presence of the eagle nest site, as discussed in Section IV, thereby increasing uncertainty about prices. Consequently, risk is relatively high.

Profit for most businesses typically is expressed as a percentage of gross revenue. However, the method for calculating the allowance for profit and risk varies throughout the timber industry. ODF, for example, calculates the allowance as a percentage of harvest cost. For pulp logs, however, they add an additional percentage based on net revenue. In the appraiser's experience, most timber investors in the Pacific Northwest use net revenue as their basis. In any case, the allowance should reflect the market, regardless of the calculation method.

In this appraisal, allowance for profit and risk was based on net revenue. From discussions with timber investors, allowance for a transaction involving readily marketable species and good operability is around 5.0 percent of the difference between gross revenue and harvest costs. A factor of 10.0 percent was used in this appraisal.

Total Harvest Cost: Total estimated harvest cost was as follows:

Logging (\$175/MBF X 825 MBF)	\$144,375
Hauling (\$82/MBF X 825 MBF)	67,650
Road Construction (\$500/station X 34 Stations)	17,000
Road Maintenance – (\$2/MBF/Mile X 825 MBF X 1.0 Miles)	1,650
Administration (\$5/MBF X 825 MBF)	4,125
Forest Products Harvest Tax (\$3.575/MBF X (825 MBF – 25 MBF))	2,860
Reforestation (\$400/Acre X 69.3 Acres)	27,720
Profit and Risk (0.10 X (\$394,505 - \$265,380))	<u>12,912</u>
Total	\$278,292

Net Value: Estimated timber value is the difference between gross revenue of \$394,505 and harvest cost of \$278,292. This difference was \$116,213. Rounded to the nearest \$1,000, estimated timber value, as of July 21, 2011, was \$116,000.

CERTIFICATION

I certify that, to the best of my knowledge and belief:

- (1) The statements of fact contained in this report are true and correct.
- (2) The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
- (3) I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
- (4) I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- (5) My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- (6) My compensation for completing this assignment is not contingent upon the development or reporting of predetermined values or directions in value that favor the cause of the client, the amount of the value opinions, the attainment of stipulated results, or the occurrence of subsequent events directly related to the intended use of this appraisal.
- (7) The reported analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics & Standards of Professional Appraisal Practice of the Appraisal Institute.
- (8) The reported analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice.
- (9) The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
- (10) I have personally inspected the property that is the subject of this report.
- (11) Kevin Young and Matthew Sheehy were the only persons who provided significant real property appraisal assistance to the person signing this certification.



September 30, 2011

Jerry Witler

date

APPRAISER EXPERIENCE AND QUALIFICATIONS

JERRY WITLER

Education

Master of Science in Forest Management - Oregon State University (1975)

Bachelor of Arts in Psychology - University of California at Los Angeles (1970)

Numerous short courses in forest management, forestland appraisal, and real estate

Experience

More than 30 years experience in the Northwest forest products industry developing and utilizing such skills as forest management, timber cruising, appraisal, planning, budgeting, economic analysis, technical writing, supervision, negotiation, and silvicultural research. Positions held include the following:

Consulting Forester - Northwest Forestry Services, Tigard, Oregon (1985 to present) - Owner and manager of this consulting firm. The company provides services in all aspects of professional forestry, including forest management, inventory, appraisal, and geographic information systems.

Project Leader, Silvicultural Research - Crown Zellerbach Corporation, Wilsonville, Oregon (1980-1985) - Researched reforestation practices, forest protection problems, early stand spacing, and other aspects of conifer and hardwood silviculture for all of CZ's lands in western Oregon and Washington. Responsibilities included study plan and report preparation, installation and measurement of permanent research plots, data analysis, budgeting, and field crew supervision.

Project Leader, Land Acquisition - Crown Zellerbach Corporation, Wilsonville, Oregon (1983-1985) - Acquired land for short-rotation, intensively cultured hardwood plantations. Responsibilities included landowner contact, site evaluation, and negotiation (half-time position concurrent with Silviculturist position described below).

Assistant Research Forester - Crown Zellerbach Corporation, Wilsonville and Seaside, Oregon (1975-1980) - Assisted with research in thinning, fertilization, reforestation, nursery practices, genetics, and other areas of forestry. Duties included installation and measurement of permanent research plots, timber cruising, tree planting, data processing and analysis, economic analysis of silvicultural treatment alternatives, and field crew supervision.

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JERRY WITLER

Experience (continued)

Graduate Assistant - Oregon State University, Corvallis (1973-1974) - Investigated response of understory vegetation to thinning in young Douglas-fir stands. Assisted with instruction of forest recreation and forest economics courses.

Forestry Technician - U. S. Forest Service, Alsea, Oregon (1973) - Burned logging slash, built fire trails, fought wild fires.

Other Qualifications / Professional Affiliations

Member of the Association of Consulting Foresters of America; past Chair, Oregon Chapter

Member of the Society of American Foresters

Inspector – American Tree Farm System

Associate Member of the Appraisal Institute

Technical Service Provider – U. S. Department of Agriculture Natural Resources Conservation Service