Pre-Operations Report

Operation Name: Jordan Bound
Legal: Portions of Sections 19 and 30 of T1N, R6W, W. M.,
Tillamook County
Management Basin: Wilson

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres[1]
1	Modified Clearcut	108	97
2	Modified Clearcut	153	120
Total		261	217

1. The net acres are based on orthophotos and GIS and exclude roads and stream buffers.

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

Slopes have varied aspects and range from 10 to over 100+%. Elevations range from 1040 feet to 2400 feet. The major soil types are Jewell, Killiam, Osweg and Rye.

II. CURRENT STAND CONDITION:

Table 2. Stand Inventory Information[4]

Area	Prescription	Stand ID [1]	Species	Age	DBH	BA	TPA	SDI	Net Acres [2]
1	MC	213	DF/RA	54	13.5	178	185	49	97
2	MC	212	DF/WH/RA	54	16	180	128	46	120

1. The source of stand inventory information is from cruise plots.
2. The net acres are based on GIS and exclude roads and stream buffers.
3. The Target identifies expected stand characteristics (DBH, BA, TPA and SDI) after harvesting has been completed.
4. These numbers are based on plot data taken to this point and final numbers may differ significantly. The directive for minor and major modifications will be followed for further review.

Burn History

Area 1 - All of this area burned in the 1933 Tillamook Fire.

Area 2 - All of this area burned in the 1933 Tillamook Fire except for the southeast corner.

Stand Conditions

All of the sale areas had some level of natural regeneration. The natural regeneration consists mainly of Douglas-fir with varying amounts of red alder, scattered western hemlock and minor amounts of noble fir and western red cedar. Areas1 and 2 were also aerially seeded in 1961. This aerial seeding appears to have failed since the birth year for these three areas is 1954.

Even though the Douglas-fir naturally regenerated, it shows symptoms of Swiss needle cast (SNC) and poor growth especially on the south facing slopes where the soils are poor and rocky. Due to stand age and poor site, the red alder has slowed height and diameter growth. No other significant insect or disease problems have been discovered at this time.

The brush component is comprised primarily of Oregon grape, vine maple, huckleberry, salal and sword fern in varying amounts.

The lack of stocking control, which includes the lack of inter-planting in poorly stocked areas and pre-commercially thinning the over stocked areas, and low site caused by shallow soils and exposed rock, caused the overall growth of the conifer in the following areas to be low over the life of the stands.

Area 1 is a mixed Douglas-fir and red alder stand with the red alder scattered across the sale areas and located in the draws. Area1 has a SDI of 49%. However a large percent of the basal area, 25% and 43%, is red alder.

Area 2 is predominately a Douglas-fir stand with scattered western hemlock and red alder, which is generally located in the draws. In Area 2, the SDI's are just now 46% and the respective basal area of the conifer is 169 ft^2.

The brush component is comprised primarily of Oregon grape, vine maple, huckleberry, salal and sword fern in varying amounts.

III. DESIRED STAND CONDITION AND VISION:

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest	Desired Future	Net Acres
1	213	UDS	REG	GEN	97
2	212	UDS	REG	GEN	120

See Section IV: Proposed Management Prescription for more information on Green Tree, Down Wood, and Snag Strategies during operation. Also refer to Landscape Design in the Summary document for more information on strategies to move the district toward Desired Future Condition (DFC) goals.

Jordan Creek Sub-Basin Landscape View:

The Phipps Headwater sale is within the Jordon Creek sub-basin. Much of the basin is mixed species conifer stands and recent management has focused on partial cuts of mixed conifer stands and regeneration harvest of stands severely impacted by Swiss needle cast.

Modified Clearcuts: The DFC for Areas 1 and 2 are designated as General (GEN).

Short Term Vision: The regeneration harvest will remove the current slow growing alder and Douglas-fir. After the regeneration harvest these stands will be composed of legacy structures retained from the present stand and have a young thriving new cohort of Douglas-fir and western hemlock. A component of red alder will exist along streams and in steep draws and will regenerate naturally with the planted Douglas-fir and hemlock. The residual Douglas-fir in the regeneration harvests will also serve as a source for future recruitment of larger snags and down wood.

Long Term Vision: The vision for these stands is to have a fully stocked mixed species stand that has both vertical and horizontal diversity. The stands will be pre-commercial thinned (PCT) 10 - 15 years after planting. At 35-40 years the stand will be commercially thinned to maintain productivity to maximize revenues at final harvest.

IV. PROPOSED MANAGEMENT PRESCRIPTION AND PATHWAY:

The prescription described below are based on the current stand conditions such as overall tree and stand growth, species mix, stand density and stand health.

Modified Clearcut

Areas 1 and 2:

Prescription:

The regeneration harvest will remove the slow-growing Douglas-fir and red alder All other conifer and hardwoods will be reserved.

Green Tree: 5 green trees will be left, portions within the sale areas and portions in Green Tree Retention Areas. A component of conifer and red alder will also be retained in the stream buffers and HLHL's adding additional green trees within and adjacent to the sale area.

Snags
Snag creation will be done with this harvest operation. Approximately 2 snags per acre greater than 15" will be created within the sale area. Snags currently present in the stand will be reserved from felling as long as the snags are not a safety issue. If snags are cut, they will be left to contribute to down wood goals.

Down Wood
The existing down wood will be reserved in the sale areas and additional down wood will be created during this harvest operation to meet the goal of 600 cubic feet of logs in decay classes 1-2 per acre. The goal for down wood creation will be completed by bucking and leaving obvious defect from butt logs of felled Douglas-fir.

Pathway:

These areas will be reforested with a mixture of conifer species: western hemlock, SNC tolerant Douglas-fir, and possibly western red cedar and/or noble fir. A pre-commercial thinning is anticipated at 12 to 17 years when the crowns begin to close. A commercial thinning will then be planned at age 35 to 40. These stands will be managed for timber volume and revenue and will be harvested between ages 60 to 70years.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	%	☐	☐
Planned Quarter:		1	

	Conifer	Hardwood	Total
Net Volume (MBF)	3896	339	4235
Stumpage Value ($/MBF)	$121.61	$200	
Estimated Gross Value	$473,800	$67,800	$541,600
		Project Costs:	$143,116
		Estimated Net Value:	$398,484

Combined Douglas-fir and hemlock stumpage values based on harvest type.

VI. HARVESTING AND ACCESS CONSIDERATIONS:

Areas 1 and 2 are accessed via the C-Line, Boundary Road and roads located on private ownership. These are currently surfaced, all-weather roads except the

0.1 miles of the Boundary Road. See maps for specific road locations and conditions.

Approximately 1.19 miles of road will be constructed to provide access to the harvest areas. During the sale prep process roads within the sale areas will be reviewed for closure at the completion of the sale. Ground yarding roads will be closed and water-barred following harvest. See summary document for more information on this topic.

The operation will be 80% cable harvested and 20% ground harvested.

Activity	Mainline	Collector	Rocked Spur[1]	Dirt Spur[1]
Construct			1.19	
Improve			0	
Maintain[2]		11.3		
Close/Block[3]				
Vacate[3]				

1. *Additional roads may be built by the operator at the time of harvest and will be approved by the State through the Operations Plan. These will be short dead end spurs and closed or blocked after harvest*
2. *All roads accessing the sale area will be maintained during the life of the timber sale contract. Maintenance miles in the table are those roads not being constructed or improved.*
3. *Roads not closed/blocked or vacated at the end of the sale will be reviewed for closure after reforestation is established.*
4. *The numbers in this table reflect planned Project Work associated with the sale.*

VII. AQUATIC RESOURCES AND WATER QUALITY

Between Area 1 and Area 2 there are medium, unnamed Type F streams and their tributaries which include additional unnamed, small, perennial and seasonal Type N streams. These streams will be reviewed and protected appropriately during sale layout based on flow, topography, and terrain.

Other known aquatic habitat within the sale areas includes seeps, springs and waterfalls.

Oregon Department of Fish and Wildlife (ODFW) will be requested to complete stream surveys before sale layout begins. Streams of unknown status will be treated as Type F until surveys are completed to verify fish use.

Stream buffers within or adjacent to harvest unit boundaries will be managed according to *Forest Management Plan* Riparian Strategies. The riparian areas will be reviewed during sale layout for current stand conditions and/or operational

constraints for implementing FMP strategies. A sub-set of those standards are highlighted below.

A 25' no-harvest buffer will be established along the small type N streams. Additional trees including some wildlife trees will be retained resulting in a 30 - 35 foot buffer. The potential debris flow streams have a high probability of delivering wood to downstream fish-bearing streams. No harvest will be allowed within 25' horizontal distance of debris-flow prone type N streams. In addition, a minimum of 10 trees/acre will be retained within 100 feet of the stream to promote potential large wood recruitment.

The buffer between Areas 1 and 2, Areas will be extended either side of the Type F streams so that the combined buffer is at least 300 feet in width to separate the modified clearcuts in Areas 1 and 2.

Riparian management areas result in leave trees adjacent to the stream which protect stream temperature, provide nutrients, protect stream banks, and eventually provide wood to improve fish habitat.

Currently a watershed analysis is being done on the Wilson River. When this report is completed the recommendations for the watershed will be included.

VIII. T&E SPECIES CONSIDERATIONS:

The sale has been reviewed with the ODF Northwest Oregon Area Biologist. Surveys for marbled murrelets are not required for this sale due to the absence of potentially suitable habitat. Surveys for northern spotted owls are not required as the sale is within the Tillamook Burn (see November 2002 ODF Policy Guidance: Northern Spotted Owl Surveying on State Forest Lands).

Streams in this sale are in the headwaters of the Wilson basin. As of March 2008, coastal coho salmon are listed as threatened for the Oregon Coast. The riparian and aquatic strategies combined with road and harvest practices described in this Annual Operations Plan and our Northwest Oregon State Forests Management Plan (FMP) are designed to minimize impacts and or restore aquatic habitats that influence aquatic species.

T & E Plant species: The sale areas were checked against the Oregon Natural Heritage Program (ONHP) database of known threatened or endangered listed plant locations as well as local records in the Land Management Classification System (LMCS).

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

This assessment is based on a LiDAR-generated 1 m digital elevation model and available geologic maps. There are high landslide hazard locations throughout

the sale area. Areas 1 and 2 drain to Jordan Creek and unnamed tributaries to Jordan Creek. The risk of landslides delivering to these streams from the sale area is high. Portions of the sale area appear to be located on large, deep-seated landslide landforms. The geotechnical specialist will be consulted during sale layout.

X. RECREATION RESOURCES:

The sale area is designated as non-motorized in the *Tillamook State Forest Comprehensive Recreation Plan* (1993). This sale has been reviewed by the District Recreation Coordinator. No OHV trails or campsites were identified within or adjacent to the sale area. The upper part of Jordan Creek Road has recently been vacated and converted into an OHV trail. It is located on the north side of Jordan Creek, opposite the sale areas. Recreational use common to this area is hunting.

XI. CULTURAL RESOURCES:

The *Tillamook State Cultural Assessment* does not list any cultural sites within or adjacent to the proposed sale boundary.

XII. SCENIC RESOURCES:

The sale area has a visual classification of Level 3 – Low sensitivity. No visual impact is expected.

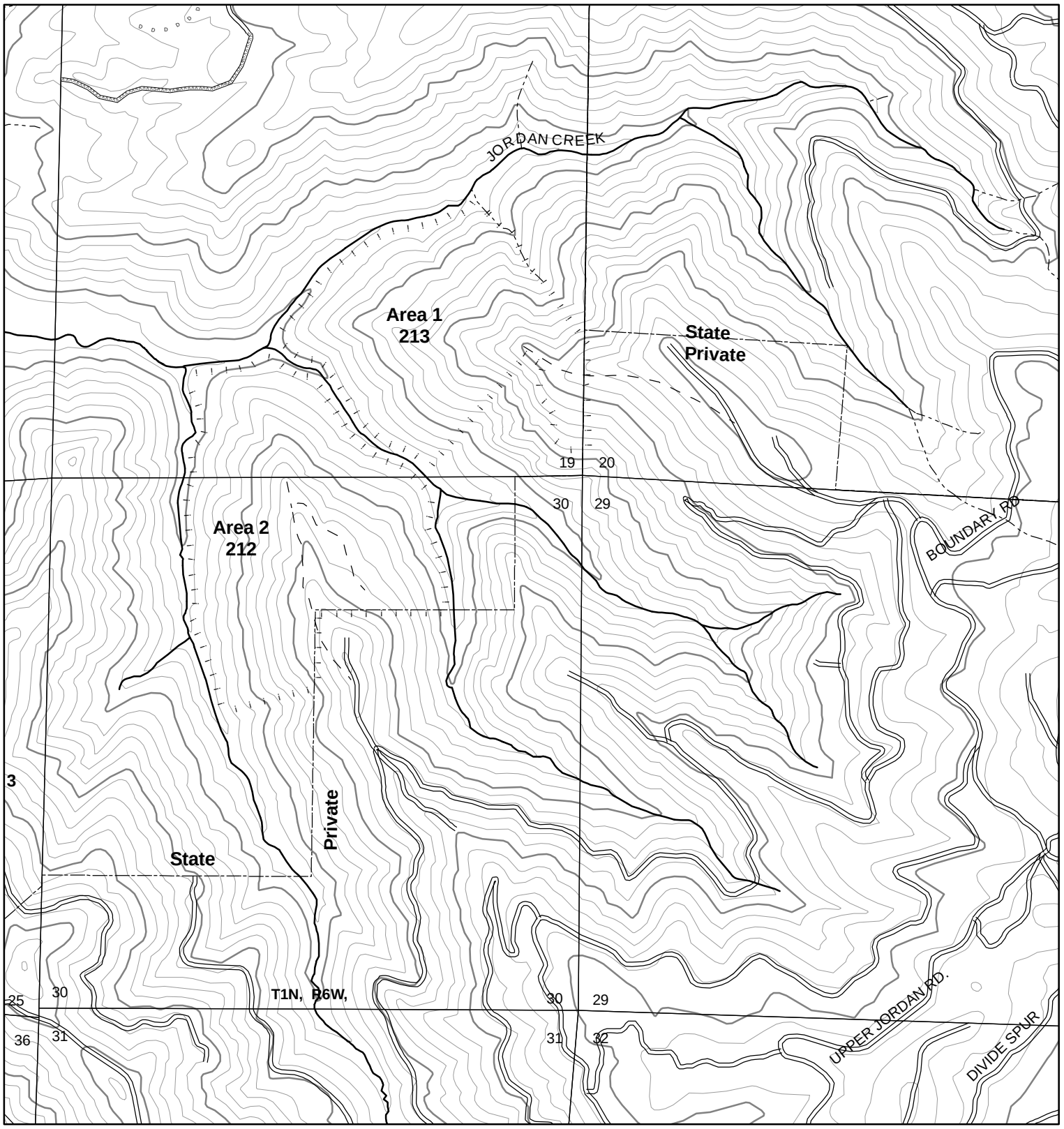
XIII. OTHER RESOURCE CONSIDERATIONS

Easements will be needed to use existing roads, to build new a new road, to create a landing and yard through an existing plantation all located on private ownership. The boundaries of Areas 1 and 2, where they are adjacent to private land, will need to be identified in the field by the Engineering Unit prior to posting of the sale boundaries.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

The sale area contains Focused and Special, Aquatic and Riparian Habitat (See section VII. Aquatic Resources and Water Quality, for the management guidelines to be utilized). This sale also includes Special Stewardship, Operationally Limited. This area will be evaluated further with the geotechnical specialist to determine if this classification shows in the correct location. See Section IX, Slope Stability and Geotechnical Issues, for additional information.

Boundary lines depicted on Attachment C are approximate; exact locations and site specific management activities will be determined during the sale preparation process.



Contour Interval 40'

- Area boundary
- Sale boundary
- Ownership boundary
- Perennial Type-F stream*
- Perennial Type-N stream*
- Unsurfaced road
- Surfaced road
- State/Federal highway
- Abandoned road
- Blocked road
- Road construction
- County road
- Transmission line

*Streams of unknown fish presence are not shown but will be surveyed prior to the sale

3

Jordan Bouond
-- Topography --
2010 SALE PLAN
TILLAMOOK DISTRICT

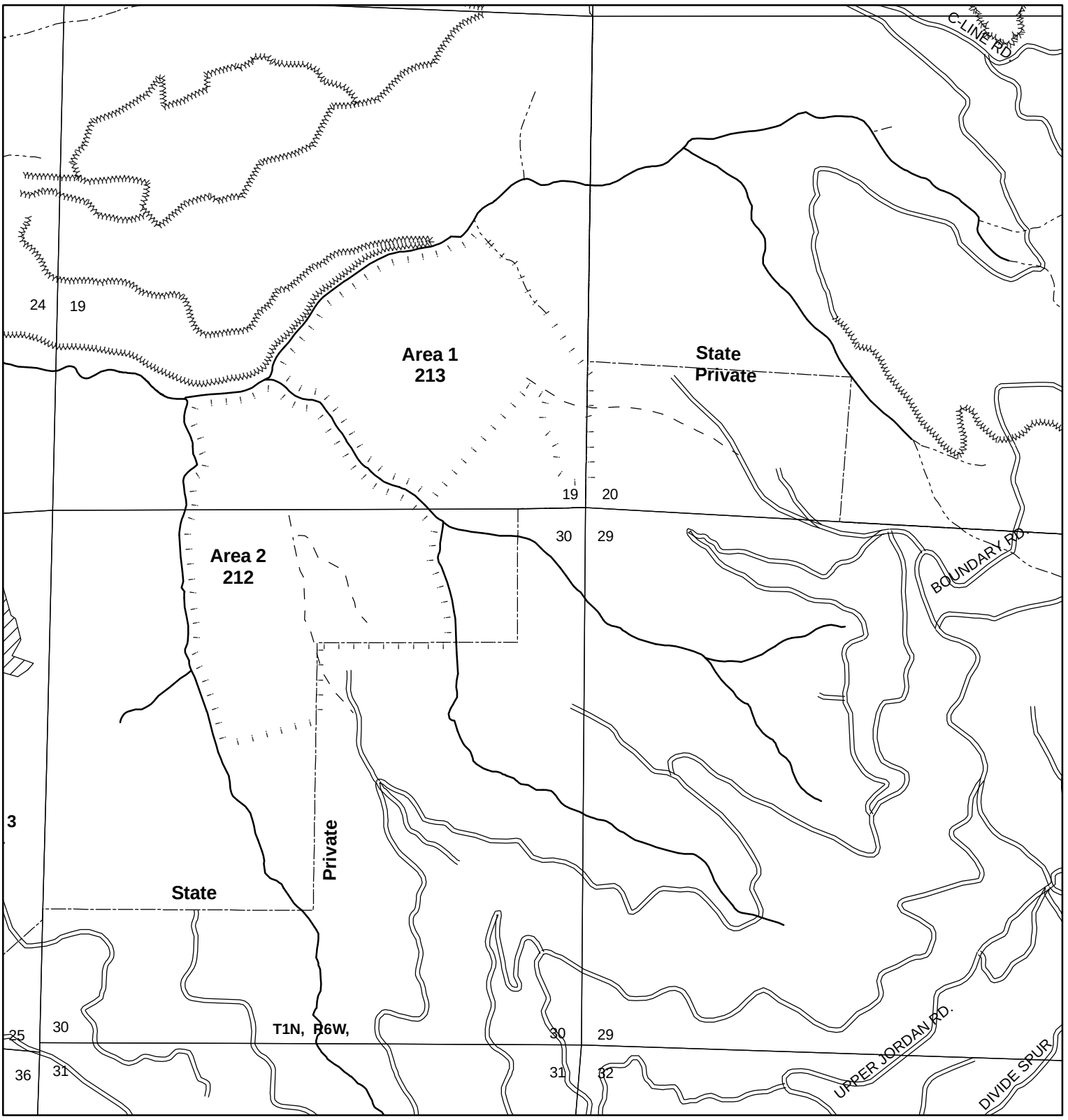
Portions of Sections 19 and 30
T1N, R6W, W.M.,
Tillamook County, Oregon

0 1,000 2,000 Feet

Area	Type of Operation
1	Modified Clearcut
2	Modified Clearcut

Tillamook District GIS
3/20/2009
This product is for informational use and may not have been prepared for, or suitable for legal, engineering, or surveying purposes.

Attachment A



Desired future condition
- Layered
- Older forest

- Area boundary
- Sale boundary
- Ownership boundary
- Perennial Type-F stream*
- Perennial Type-N stream*
- Unsurfaced road
- Surfaced road
- State/Federal highway
- Abandoned road
- Blocked road
- Road construction
- County road
- Transmission line

- OHV trail
- Non-motorized trail

Jordan Bound
-- Current and Future Condition --
2010 SALE PLAN
TILLAMOOK DISTRICT

Portions of Sections 19 and 30
T1N, R6W, W.M.,
Tillamook County, Oregon

0 1,000 2,000 Feet

3

Area	Type of Operation
1	Modified Clearcut
2	Modified Clearcut

*Streams of unknown fish presence are not shown but will be surveyed prior to the sale

Tillamook District GIS
6/20/2009
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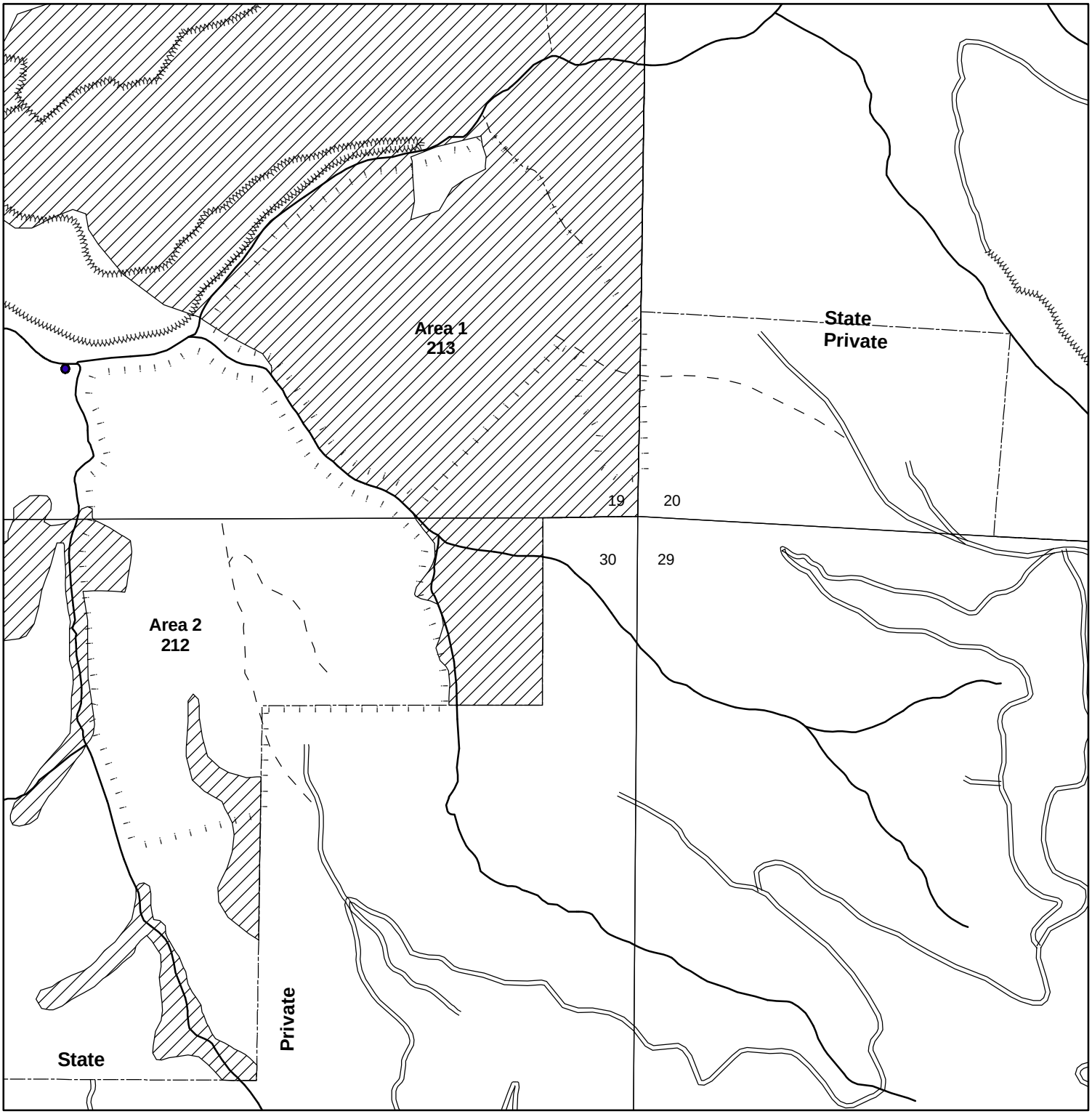
Attachment B



Buffer
Focused
Special

Area boundary
Sale boundary
Ownership boundary
Perennial Type-F stream*
Perennial Type-N stream*
Unsurfaced road
Surfaced road
State/Federal highway
Abandoned road
Blocked road
Road construction
County road
Transmission line
OHV trail
Non-motorized trail

Jordan Bound
-- Key Resources/Operationally Limited/ Research/Monitoring --
2010 SALE PLAN
TILLAMOOK DISTRICT

3

Portions of Sections 19 and 30
T1N, R6W, W.M.,
Tillamook County, Oregon

0 1,000 2,000 Feet

Area	Type of Operation
1	Modified Clearcut
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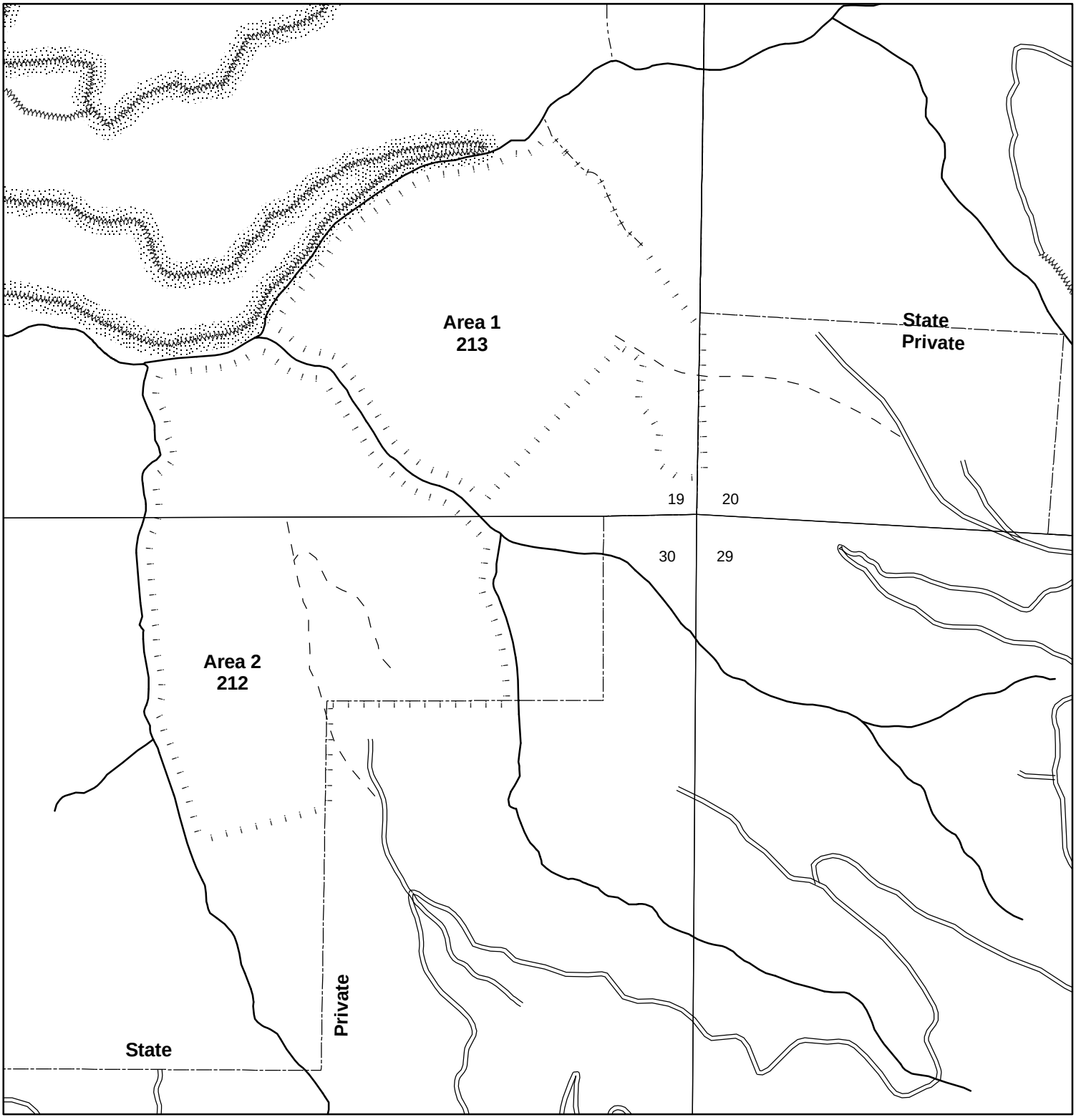
Attachment C



Focused

- Area boundary
- Sale boundary
- Ownership boundary
- Perennial Type-F stream*
- Perennial Type-N stream*
- Unsurfaced road
- Surfaced road
- State/Federal highway
- Abandoned road
- Blocked road
- Road construction
- County road
- Transmission line
- OHV trail
- Non-motorized trail

3

Jordan Bound
-- Key Resources/Recreation --
2010 SALE PLAN
TILLAMOOK DISTRICT

Portions of Sections 19 and 30
T1N, R6W, W.M.,
Tillamook County, Oregon

0 1,000 2,000 Feet

Area	Type of Operation
1	Modified Clearcut
2	Modified Clearcut

*Streams of unknown fish presence are not shown but will be surveyed prior to the sale

Tillamook District GIS
6/20/2009
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Attachment C2