

# Pre-Operations Report

Operation Name: Phipps Headwater

County: Tillamook

Legal: Portions of Sections 19, 30 and 31 of T1N, R6W, 24, 25 and 36 of T1N, R7W, and 1 of T1S, R7W, W. M.

**Table 1. Operation Areas, Types and Acres**

Area	Type of Operation	Gross Acres	Net Acres <sup>1</sup>
1	Modified Clearcut	144	120
2	Modified Clearcut	119	117
3	Partial Cut - Heavy	68	67
4	Partial Cut - Moderate	20	19
5	Modified Clearcut	17	17
6	Partial Cut - Moderate	103	101
7	Modified Clearcut	28	27
8	Partial Cut - Moderate	80	79
Total		579	547

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<sup>4</sup>**

Area	Prescription	Stand ID <sup>1</sup>	Species	Age	DBH	BA	TPA	SDI	Net Acres <sup>2</sup>
1	MC	211	DF/RA/WH	54	14.5	173	149	46	120
2	MC	214	DF/RA	55	14	143	131	38	117
3	PC	215	DF/RA/WH/ NF	55	14	200	187	53	67
	Target <sup>3</sup>		DF/RA/WH/ NF		17	102	63	25	67
4	PC	216	DF	55	16	274	191	64	19
	Target <sup>3</sup>		DF		19.5	133	64	31	19
5	MC	217	DF/RA	55	14.5	188	160	49	17
6	PC	218	DF/RA	55	14.5	213	181	56	101
	Target <sup>3</sup>		DF/RA		18.5	113	60	27	101
7	MC	219	DF/WH	55	15	165	139	43	27
8	PC	220	DF/WH/RA	55	13	247	276	69	79
	Target <sup>3</sup>		DF/WH/RA		15.5	101	77	26	79

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 and the northwest ¼ of burned in the 1939 Saddle Mountain Fire.

### Area 2, 3, 4, 5, and 6

All of these areas burned in the 1933 Tillamook Fire.

### Area 7

The west half of this area burned in the 1933 Tillamook Fire.

### Area 8

Only a small portion of this area burned in the 1933 Tillamook Fire. Most of the private ownership to the east and south and of the sale areas did not burn. There were also many pockets left across the landscape in various locations and density following the fires that were skipped by the burns. These pockets of unburned areas, along with the snags, were logged in the 1940's and early 1950's. By the early 1960's, the private ownership had also been logged. However, these unburned areas and scattered pockets of legacy trees on both ODF's and private ownership naturally regenerated all of the sale areas.

## 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. Area 1 was 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 slowing 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 predominately Douglas-fir stands with scattered western hemlock and red alder which is generally located in the draws. In Area 1 the SDI is just now 46% and the basal area of the conifer is 165 ft<sup>2</sup>.

**Area 2 and 7** are predominately Douglas-fir stands with scattered western hemlock and red alder which is generally located in the draws. The poor stand growth is even more noticeable for Areas 2 and 7. Their SDI's are even lower, 38% and 43% with a basal area of the conifer at 129 ft<sup>2</sup> and 160 ft<sup>2</sup>, respectively.

**Area 3** is predominately a Douglas-fir stand with scattered western hemlock and red alder which is generally located in the draws. Area 3 also contains a minor component of noble fir. The SDI is 53% with a conifer basal area of 194 ft<sup>2</sup>. The conifer stand in this area has finally become dense enough to result in the loss of live crown ratios on the suppressed trees.

**Area 5** is a mixed stand of Douglas-fir and red alder with the red alder scattered across the sale area and concentrated in the draws. Area 5 has a SDI of 49%. However a large percent of the basal area, 43%, is red alder.

**Area 4 and 6** are Douglas-fir stands with minor components of red alder. These areas appear to have grown much better than the rest of the stands in the proposed sale areas. These two areas have a SDI of 64% and 56%, basal area of 253ft<sup>2</sup> and 210ft<sup>2</sup> and a QMD of 16" and 14.5", respectively. The conifer is

becoming overstocked resulting in the loss of live crown ratios on the suppressed trees making these stands excellent candidates for commercial thinning.

**Area 8** is predominately a Douglas-fir stand with scattered western hemlock and red alder which is generally located in the draws. The SDI of the stand is 69% with a basal area of 228 ft<sup>2</sup> and a QMD of just 13". The conifer stands in this area are overstocked resulting in the loss of live crown and reduced growth.

### **III. DESIRED STAND CONDITION AND VISION:**

**Table 3. Stand Structure Information**

Area	Stand ID	Current	Post Harvest	Desired Future	Net Acres
1	211	UDS	REG	GEN	120
2	214	UDS	REG	GEN	117
3	215	UDS	REG	GEN	67
4	216	UDS	UDS	GEN	19
5	217	UDS	REG	GEN	17
6	218	UDS	UDS	GEN	101
7	219	UDS	REG	GEN	27
8	210	UDS	UDS	GEN	79

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 Jordan Creek sub-basin. Much of the basin is mixed species conifer stands and recent management has focused on partial cut of mixed conifer stands and regeneration harvest of stands severely impacted by Swiss needle cast.

**All Areas:** The sale areas are all designated as General (GEN).

#### **Modified Clearcuts: Areas 1, 2, 5, and 7:**

**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 a young thriving new cohort of SNC tolerant Douglas-fir and western hemlock will provide both horizontal and vertical diversity. 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 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.

#### **Partial Cut: Areas 3, 4, 6, and 8**

**Short Term Vision:** These partial cuts will reduce the conifer stocking which will maintain the conifer crown ratios, stand vigor, and develop healthier and larger Douglas-fir and other conifers in the residual stand. Since the red alder is such a minor component, it will be reserved adding to the complexity of the residual stands. These stands are on a pathway that maintains productivity that provides for a complex structure and will be managed for stand density by providing more growing space while capturing anticipated tree mortality in order to allow for individual tree growth as well as developing understory diversity.

**Long Term Vision:** The vision for these areas is to have productive mixed species stands of Douglas-fir with minor components of red alder and other minor conifer species. After this thinning, in approximately 15 to 20 years, these stands will be ready for a 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, 2, 5, and 7:**

##### **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 within the sale areas. A component of conifer and red alder will also be retained in the stream buffers and HLHL's 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. At this time managers will review density, stand health and landscape goals to decide future management prescriptions. Stands whose DFC is GEN will be managed for timber volume and revenue and will be harvested between ages 60 to 70 years.

### **Partial Cut**

#### **Areas 3, 4, 6, and 8:**

#### **Prescription:**

A partial cut will remove a portion of the Douglas-fir reducing the stand basal area resulting in a SDI ranging from 23% to 33%. Areas 3, 6, and 8 will be partial cut to 100 ft<sup>2</sup> to 120 ft<sup>2</sup> basal area (SDI Area 3 – 23% to 27%, SDI Area 6 – 25% to 29%, and SDI Area 8 – 24% to 28%) and Area 4 will be partial cut to 120 ft<sup>2</sup> to 140 ft<sup>2</sup> basal area (SDI of 28% to 33%). All other conifer and hardwood species including the red alder will be reserved. A component of hardwoods and conifers will also be retained in the stream buffers and high landslide hazard locations (HLHL).

**Snags and Down Wood:** Snag or down wood creation in these areas will occur through standard harvesting practices. Snags currently present in the stands 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. It is expected that there will be mortality and/or wind throw over time. No snag creation projects will be done in the next entry, however, lift trees and tail trees will be retained as snags. Down wood creation will be completed by bucking and leaving obvious defect from butt logs of felled Douglas-fir.

**Pathway:** The stands in GEN will continue to grow after being released by this thinning. When the crowns close again, in 15 to 20 years, the stands will be ready for a final harvest.

**V. ESTIMATED TIMBER AND REVENUE INFORMATION:**

**Table 4. Timber and Revenue**

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	%	<input type="checkbox"/>	<input type="checkbox"/>
Planned Quarter:		1	

	Conifer	Hardwood	Total
Net Volume (MBF)	7,939	366	8,305
Stumpage Value (\$/MBF)	\$87.60	\$150	
Estimated Gross Value	\$695,475	\$54,900	\$750,375
		Project Costs:	\$329,727
		Estimated Net Value:	\$420,648

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

**VI. HARVESTING AND ACCESS CONSIDERATIONS:**

The sale areas are accessed by the Jordon Creek and Phipps Creek Roads. These are currently surfaced, all-weather roads. See maps for specific road locations and conditions.

Approximately 1.33 miles road will be improved which includes grading, rocking, widening, culvert replacement, spot rocking, side cast pullback, and adding new culverts. This work will bring all roads up to standards described in *the Forest Roads Manual*.

Approximately 2.32 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 <sup>1</sup>	Dirt Spur <sup>1</sup>
Construct			2.32	
Improve			1.33	
Maintain <sup>2</sup>		11.3		
Close/Block <sup>3</sup>			2.00	
Vacate <sup>3</sup>				

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**

The east boundary of Area 1 is a medium, unnamed Type F stream and its tributaries which include additional unnamed, small, perennial and seasonal Type N streams. Between Areas 6 and 8 is Phipps Creek, a large Type F and its tributaries which include additional unnamed, small and large, perennial and small 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. Many of the seasonal type N 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.

Small Type N streams can influence stream temperature of downstream fish-bearing streams. Sufficient trees will be retained within 500' of the confluence with type F streams to achieve 80% shade over streams. A 170' riparian management area is established on all fish streams. Management is allowed beyond 25' in the "inner zone". The goal for harvesting within 100 feet (inner zone) of type F streams is to achieve mature forest condition in a timely manner. Management in the inner zone will result in larger diameter trees in a shorter time

frame than if no harvesting were to take place and will maintain all snags and downed wood. Once mature forest condition is achieved there will be no management in the inner zone of type F streams.

The sale boundary on the east side of Area 1 will be extended to at least 150 feet of the Type F stream to separate the area from another modified clearcut on the east side of the stream.

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.

A watershed analysis has recently been completed on the Wilson River. The sale areas will be reviewed with the recommendations for the watershed and these will be included in the sale preparation.

#### **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, 2, and 3 drain to Jordan Creek and unnamed tributaries to Jordan Creek. Areas 4, 5, 6, 7, and 8 drain to Phipps 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. 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.

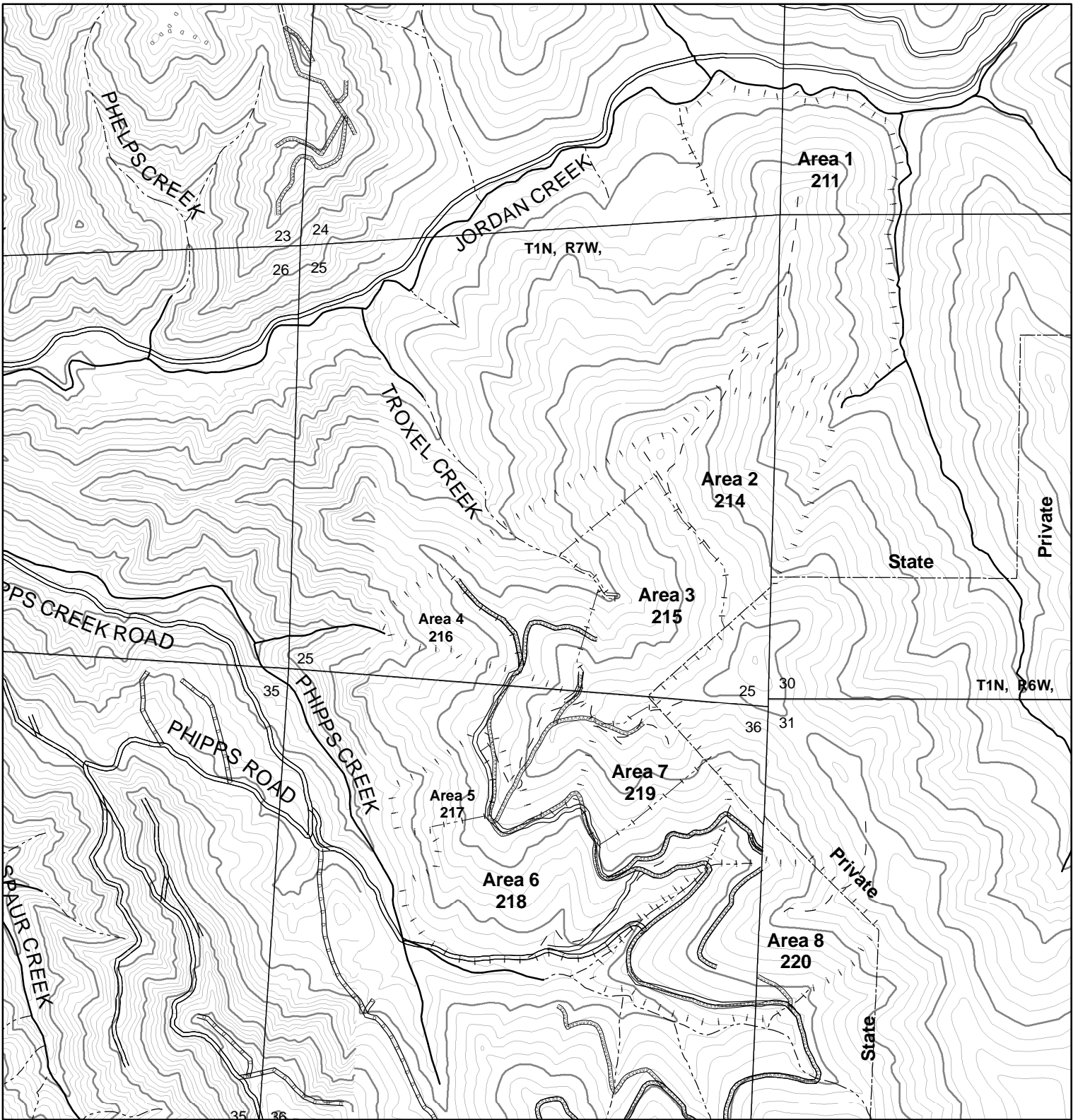
## **XIII. OTHER RESOURCE CONSIDERATIONS:**

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 2, 3, 7, and 8 will need to be identified in the field by the Engineering Unit prior to posting of the sale boundaries

## **XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:**

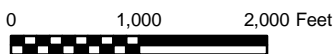
The sale area contains Focused and Special, Aquatic and Riparian Habitat (See section VII. Aquatic Resources and Water Quality, for the management guidelines to be utilized). This sale also includes Special Stewardship, Operationally Limited. This area will be evaluated further with the geotechnical 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
- o o Blocked road
- - Road construction
- County road
- ; ; Transmission line



# 3

## Phipps Headwater -- Topography -- 2010 SALE PLAN TILLAMOOK DISTRICT

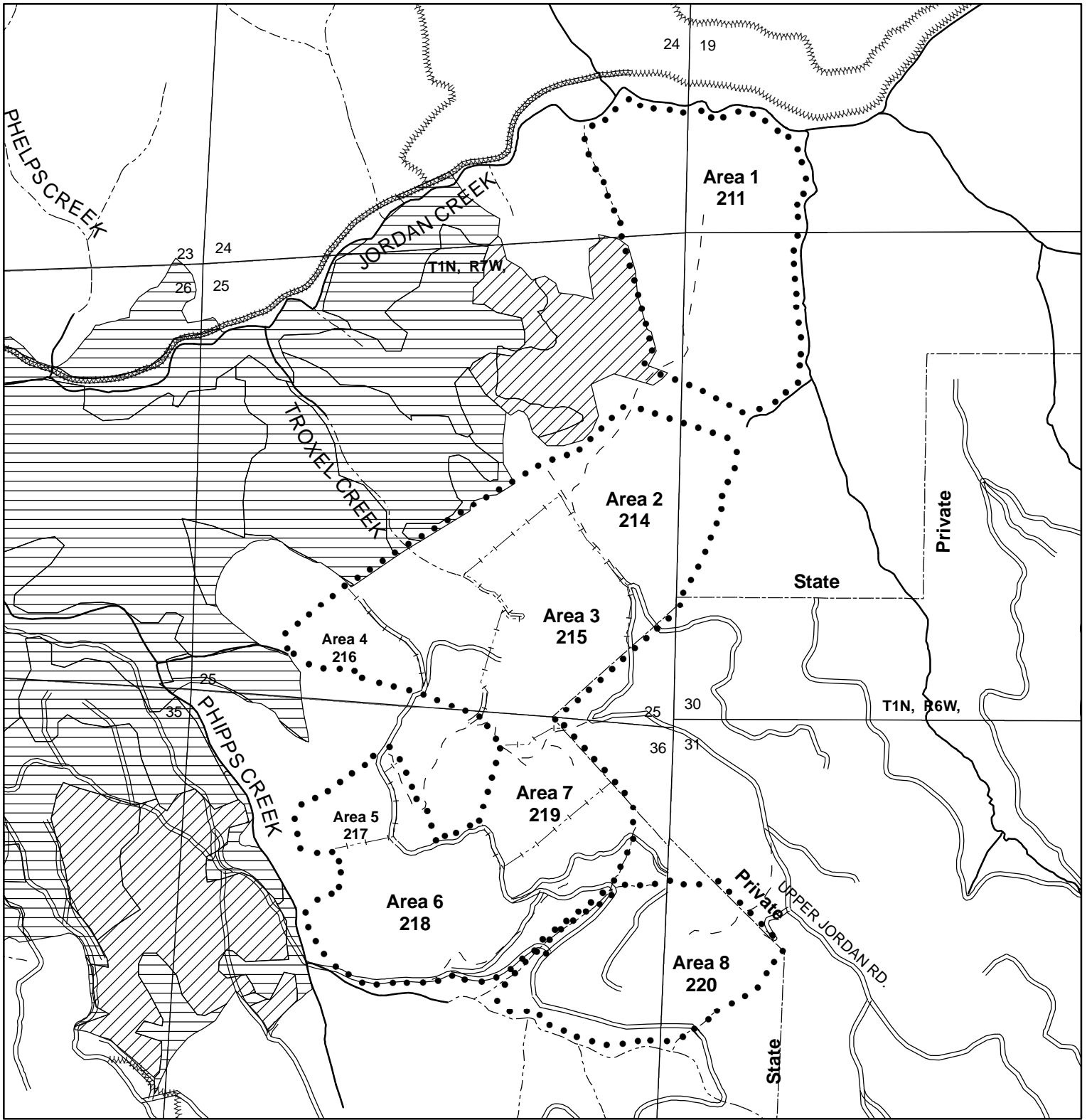
Portions of Sections 19, 30 and 31  
T1N, R6W, W.M.,  
Portions of Sections 24, 25, and 36  
T1N, R7W, W.M.,  
Tillamook County, Oregon

Area	Type of Operation
1	Modified Clearcut
2	Modified Clearcut
3	Partial Cut
4	Partial Cut
5	Modified Clearcut
6	Partial Cut
7	Modified Clearcut
8	Partial Cut

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

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.



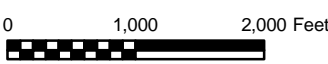
- Desired future condition
- Layered
- Older forest
- Area boundary
- - - Sale boundary
- - - Ownership boundary
- Perennial Type-F stream\*
- - - Perennial Type-N stream\*
- == Unsurfaced road
- Surfaced road
- State/Federal highway
- Abandoned road
- o o o Blocked road
- - Road construction
- County road
- ; ; Transmission line
- OHV trail
- Non-motorized trail

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

**Phipps Headwater  
-- Current and Future Condition --  
2010 SALE PLAN  
TILLAMOOK DISTRICT**

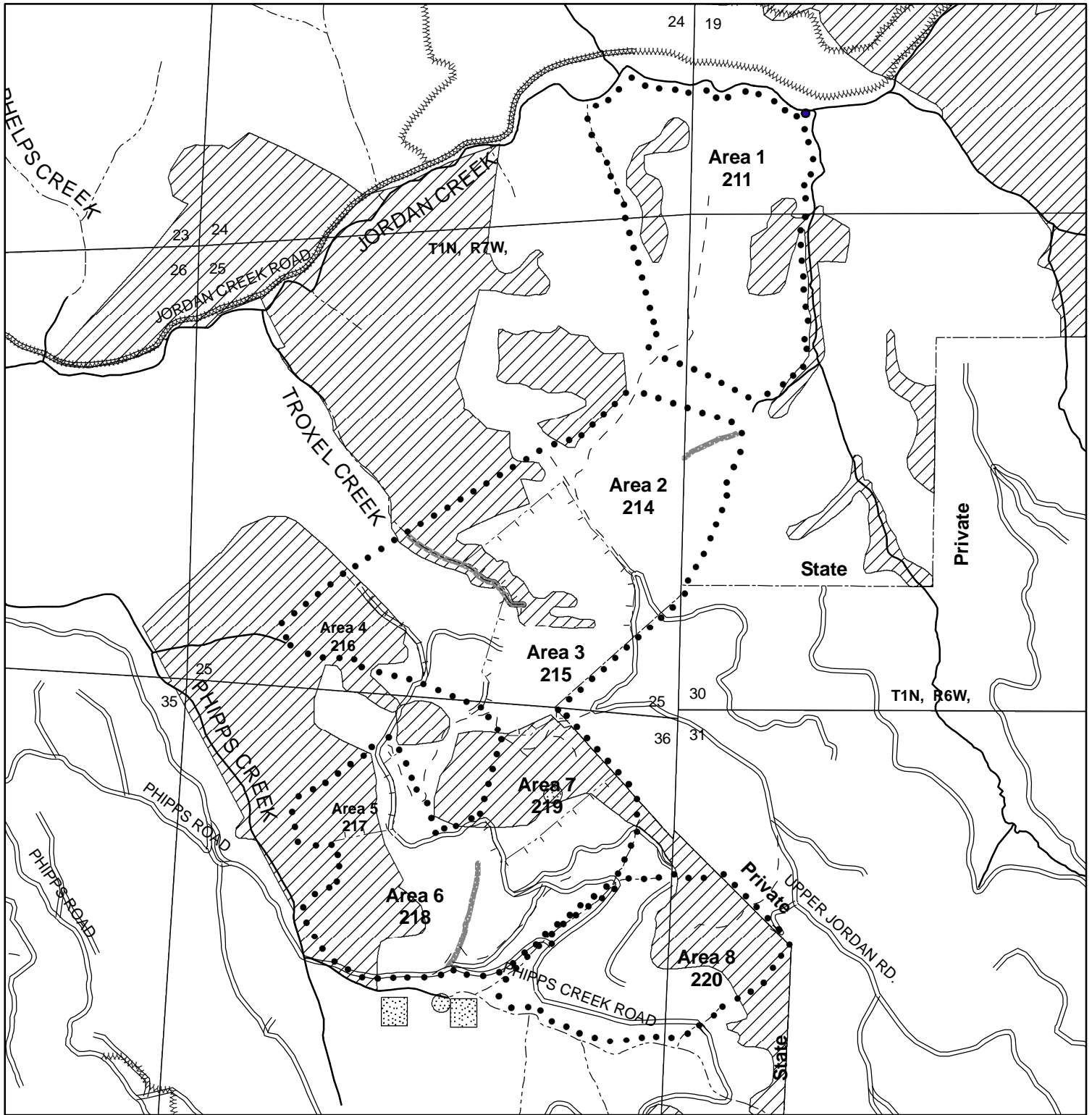
Portions of Sections 19, 30 and 31  
T1N, R6W, W.M.,  
Portions of Sections 24, 25, and 36  
T1N, R7W, W.M.,  
Tillamook County, Oregon

**3**



Area	Type of Operation
1	Modified Clearcut
2	Modified Clearcut
3	Partial Cut
4	Partial Cut
5	Modified Clearcut
6	Partial Cut
7	Modified Clearcut
8	Partial Cut




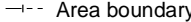


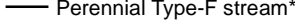

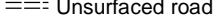
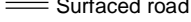
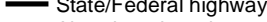
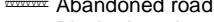

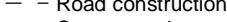
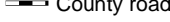
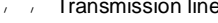

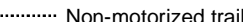
Tillamook District GIS  
6/20/2009  
This product is for informational use and may not have been prepared for, or suitable for legal, engineering, or surveying purposes.



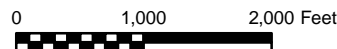
**Phipps Headwater  
-- Key Resources/Operationally Limited/  
Research/Monitoring --  
2010 SALE PLAN  
TILLAMOOK DISTRICT**

**3**

Portions of Sections 19, 30 and 31  
T1N, R6W, W.M.,  
Portions of Sections 24, 25, and 36  
T1N, R7W, W.M.,  
Tillamook County, Oregon

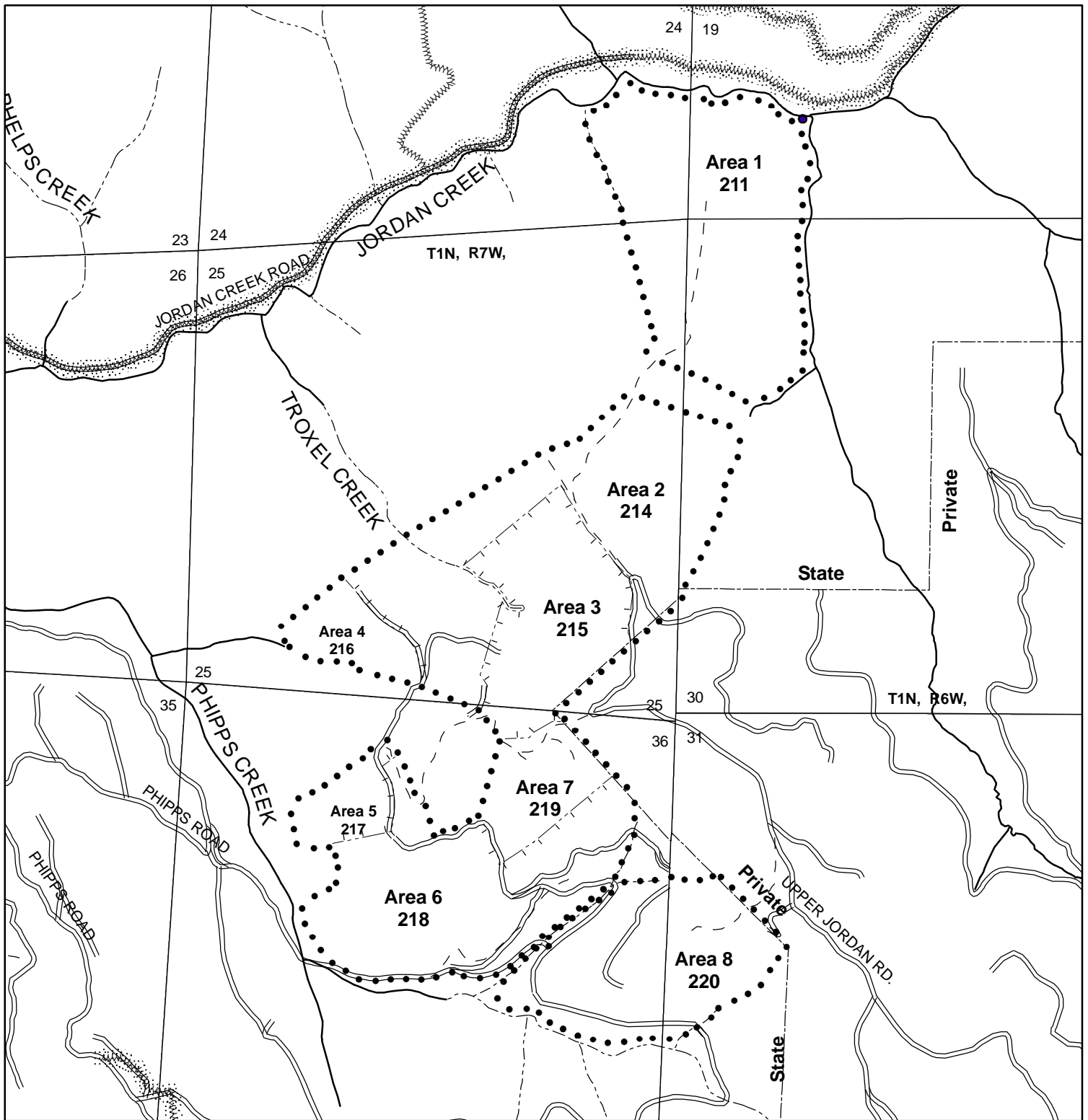
-  Buffer
-  Focused
-  Special
-  Area boundary
-  Sale boundary
-  Ownership boundary
-  Perennial Type-F stream\*
-  Perennial Type-N stream\*
-  Unsurfaced road
-  Surfaced road
-  State/Federal highway
-  Abandoned road
-  Blocked road
-  Road construction
-  County road
-  Transmission line
- 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

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



Area	Type of Operation
1	Modified Clearcut
2	Modified Clearcut
3	Partial Cut
4	Partial Cut
5	Modified Clearcut
6	Partial Cut
7	Modified Clearcut
8	Partial Cut

Tillamook District GIS  
6/20/2009  
This product is for informational use and may not have been prepared for, or suitable for legal, engineering, or surveying purposes.



Focused

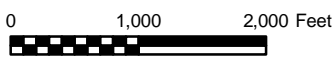
- Area boundary
- Sale boundary
- Ownership boundary
- Perennial Type-F stream\*
- Perennial Type-N stream\*
- Unsurfaced road
- Surfaced road
- State/Federal highway
- Abandoned road
- Blocked road
- Road construction
- County road
- Transmission line
- OHV trail
- Non-motorized trail

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

**Phipps Headwater**  
**-- Key Resources/Recreation --**  
**2010 SALE PLAN**  
**TILLAMOOK DISTRICT**

Portions of Sections 19, 30 and 31  
 T1N, R6W, W.M.,  
 Portions of Sections 24, 25, and 36  
 T1N, R7W, W.M.,  
 Tillamook County, Oregon

**3**



Area	Type of Operation
1	Modified Clearcut
2	Modified Clearcut
3	Partial Cut
4	Partial Cut
5	Modified Clearcut
6	Partial Cut
7	Modified Clearcut
8	Partial Cut

Tillamook District GIS  
 6/20/2009  
 This product is for informational use and may not have been prepared for, or suitable for legal, engineering, or surveying purposes.