

Pre-Operations Report

Operation Name: Coast Ford

County: Tillamook

Management Basin: Wilson

Legal: Portions of Sections 3, 4, 10 and 11 of T1S, R8W, W.M.

SAH Status: None

FDF: 100% CSL: 0%

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres ¹
1	Retention Cut	96	80
2	Modified clearcut	129	116
3	Modified clearcut	64	63
4	Partial Cut	19	19
Total		308	278

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

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

Slopes have predominantly north and south aspects and range from 10 to over 90%. Elevations range from 240 feet to 1,720 feet. The major soil types are Rye, Killam, and Enright.

II. CURRENT STAND CONDITION:

Table 2. Stand Inventory Information⁴

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	SDI	Net Acres ²
1	RC	111	DF/RA/SS/ WH	51	15	185	157	48	80
	Target		DF/SS/WH /RA		24.1	39	12	8	80
2	MC	112	DF/RA/SS/ WH/BM	51	14.4	180	154	57	116
3	MC	113	DF/RA/SS/ WH	51	13.6	209	206	56	63
4	PC	114	DF/WH/RA	51	14.6	208	180	55	19
	Target		DF/WH		19.0	112	56	26	19

1. The source of stand inventory information is from a timber cruise.

2. The net acres are based on orthophotos and GIS and exclude roads, and stream buffers, reserve areas and non-required thinning areas. Modified clear cut acres are not contiguous and do not exceed 120 acres.

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.

Most of the sale areas burned in the 1933 (Tillamook) and all of it burned in the 1939 (Saddle Mountain) fires. Area 1 was planted in 1955, Area 2 naturally regenerated and Areas 3 and 4 were planted in 1957. The sale areas have had no prior stand management. See Table 2 for specific stand data.

Stand Level Inventory (SLI) has been completed on Areas 1, 2, 3 and 4. Area 1 is classified as Understory (UDS). Areas 2, 3 and 4 are classified as Closed Single Canopy (CSC).

Areas 1, 2 and 3 are a mixed alder and Douglas-fir stands. These species are arranged at various densities throughout the sale area. Area 4 is predominately a Douglas-fir. There are scattered Sitka Spruce, western hemlock and other minor conifer species throughout all of the sale areas.

The Douglas-fir shows symptoms of Swiss needle cast (SNC). In Areas 1 and 4, the Douglas-fir has good live crown ratios (greater than 40%) in the dominant and co-dominant trees. The Douglas-fir in Areas 2 and 3 has poor live crown ratios (less than 40%) in the dominant and co-dominant trees. The Douglas-fir stands are becoming overstocked resulting in the loss of live crown ratios on the suppressed trees.

Due to stand age and site quality, the alder in all of the areas have poor height and diameter growth.

No other significant insect or disease problems have been discovered at this time. The brush component is comprised primarily of sword fern, vine maple and huckleberry.

In Area 1, SLI information shows 75 cubic feet of down wood in decay Class 1 and 2 and a total of 2,073 cubic feet of down wood. In Areas 2, 3 and 4, SLI information shows a total of 4,130 cubic feet of down wood.

III. DESIRED STAND CONDITION AND VISION:

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest ¹	Desired Future	Net Acres
1	111	UDS	REG	OFS	77
				GEN	3
2	112	CSC	REG	GEN	28
				OFS	88
3	113	CSC	REG	GEN	29
				OFS	34
4	114	CSC	UDS	GEN	19

1. The stand is expected to develop into this condition in the five to ten years after this operation is completed except in REG stands which occur after harvest.

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 goals.

Sub-Basin

The sale areas are in the middle of the Wilson River corridor and along the North Coast Range Road system. Stands in this part of the forest have shown severe symptoms of Swiss needle cast in the past which greatly impacts stand growth. Much of the alder in this area was also sprayed in the past, however this sale was not. Over the last seven years, approximately 1000 acres have been harvested through modified clearcut and retention cuts to remove SNC Douglas-fir and sprayed alder and establish healthy mixed conifer stands.

After the Coast Ford sale there is few future sales planned in the area. Future sales will likely focus more on partial cutting opportunities.

Areas 1-The DFC for Area 1 is Older Forest Structure (OFS).

Short Term Vision:

After the retention cut (a variety of variable density patches of trees within a regeneration harvest) the stands will be composed of legacy structures retained from the present stand and will be planted with a new cohort of western hemlock, cedar, and Douglas-fir.

Long Term Vision:

Long term vision is to create a mixed conifer stand with patches of hardwood in the stand. The stand will also have large over story legacy trees from the current planned harvest as well as down wood and snags added over time from the residual trees.

As the future stand matures the residual trees from this entry will add to complexity of sizes, species and densities. The residual trees will also add to snags and down wood over time and through the life of the next stand. Down wood and snags created and reserved in this entry will become more decayed components for the future OFS stand.

Areas 2 and 3- The DFC's for Area 2 are General (GEN) for 23% and OFS for 77% of the area. The DFC's for Area 3 are GEN for 44% and OFS for 56% of the area.

Short Term Vision:

The short term objective for the planned operation is to remove alder and Douglas-fir due to the reasons mentioned in Section II, Current Stand Conditions. After the regeneration harvest the stands will be composed of legacy structures retained from the present stand and will be planted with a new cohort of cedar, western hemlock and Douglas-fir.

Long Term Vision:

The future stand will be made up of large decadent overstory trees, down wood and snags developing over time and mixed species conifer. Hardwoods will be found in patches and strips (headwalls and along streams) throughout the stand. Density management opportunities will be used to move the stand toward DFC complex and portions managed on shorter rotation in the GEN classification.

As the future stand matures the residual trees from this entry will add to complexity of sizes, species and densities. The residual trees will also add to snags and down wood over time and through the life of the next stand. Down wood and snags created and reserved in this entry will become more decayed components for the future stand.

Area 4- The DFC for Area 4 is General.

Short Term Vision:

The short term vision for Area 4 is to partial cut the stand to reduce density and continue growth of the healthy stand. The first entry thinning will keep the stands on the pathway toward more complex structure and increase individual tree growth and provide a buffer between clearcut areas.

Long Term Vision: Area 4 will be managed through multiple entry, partial cuts or gap cuts to create a second cohort in the stand over time. The increased growing space will not only create a second cohort but also increase shrub growth adding to vertical and horizontal diversity.

IV. PROPOSED MANAGEMENT PRESCRIPTION and VISION:

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

See Table 2 for prescription targets.

Area 1

Prescription: Retention Cut

Prescription:

Harvest merchantable alder and partial cut the conifer patches to an average basal area of 120 to 140 square feet.

Green Trees:

Regeneration harvests require 5 green trees per acre be left on the harvest unit. Non-merchantable (small diameter) conifer and non-merchantable hardwoods along with minor species of conifer will be left scattered across the unit. In addition there will be patches of dominate and co-dominant conifer left in clumps where the dense conifer currently exists. These patches will equate to approximately 12 conifer trees per acre for the sale area. A component of alder and conifer will also be retained in the stream buffers and high landslide hazard locations (HLHL). The additional green trees above FMP requirements will become the older cohort in the future OFS stand.

Snags:

Two snags per acre will be created by girdling Douglas-firs with a DBH of 15" and greater. The trees for snag creation will be selected from the reserved trees after thinning objectives are met. Small non-merchantable hardwood and conifer will also be retained where possible in harvest units with the expectation they will become short term snags.

Down Wood:

Two conifer trees per acre with a DBH of 24" and greater will be felled to create down wood. Small non-merchantable hardwood will be retained where possible with the expectation they will become short term down wood. Existing snags that are determined to be a safety hazard will be felled and left for down wood. Tops resulting from ground yarding will also be left in the unit. Additional future down wood recruitment is expected through wind throw of residual and leave trees and tops left during harvest.

Pathway: The regeneration areas will be reforested with a mixture of conifer species: western hemlock, SNC tolerant Douglas-fir, 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. It is expected another commercial thinning will be done in 10 to 15 years in the conifer stands. At this time managers will review density, stand health to determine the management prescription to move the stand to OFS structure.

Area 2 and Area 3

Prescription: Modified Clearcuts

Merchantable Douglas-fir and alder will be removed. All other species will be reserved.

Green Trees: Approximately 5 trees per acre, both scattered and in small clumps, will be left for green tree retention. In addition to that non-merchantable (small diameter) conifer and hardwoods will be left scattered across the unit. A component of alder and other conifer will also be retained in the stream buffers and high landslide hazard locations (HLHL).

Snags: An additional two trees per acre, averaged over the sale area, will be left for snag creation. Snags will be created, by girdling or topping at 60 feet, from Douglas-fir trees with a DBH of 15" and greater. Small non-merchantable hardwood will be retained where possible in harvest units with the expectation they will become short term snags.

Down Wood: Additional conifer trees, averaging two trees per acre, with a DBH of 24" and greater will be reserved for down wood creation. These trees will be felled after the harvest is completed to create down wood. Additional green trees will be left in buffers and High Landslide Hazard Locations to supplement future down wood levels. Small non-merchantable hardwood and conifer which has been felled will be retained where possible in harvest units to supplement the short term down wood. Existing snags that are determined to be a safety hazard will be felled and left for down wood. Additional down wood recruitment is expected through wind throw of residual and leave trees and tops left during harvest.

Pathway: The area will be reforested with a mixture of conifer species: western hemlock, SNC tolerant Douglas-fir, 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.

Area 4

Prescription: Partial Cut

Prescription: Conifer will be thinned to a basal area range of 100 to 120 square feet. Where the opportunity exists to select for hemlock over Douglas-fir, it will be implemented to create more species diversity in the stand. Alder and other hardwoods will be reserved.

Snags: No snags will be created at this entry. Creation of snags will occur when the stand is larger diameter, likely the second entry.

Down Wood: Due to the current stand size there will be no additional down wood will be created in this area. Some down wood recruitment will occur from tops and cull logs during harvest and from windthrow after harvest. Snags that are felled will not be yarded and reserved toward down wood goals.

Pathway: Area 4 will be ready for a second entry partial cut in 15-20 years. At the time of the next commercial entry diameter and species selection will be made to continue development of stand structure components like down wood, snags and minor conifer species.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	%		X
Planned Quarter:		4	

	Conifer	Hardwood	Total
Net Volume (MBF)	983	2,638	3,621
Stumpage Value (\$/MBF)*	\$151	\$200	
Estimated Gross Value	\$ 148,125	\$527,600	\$675,725
		Project Costs:	\$266,000
		Estimated Net Value:	\$409,725

Combined Douglas-fir stumpage values based on harvest type.

VI. HARVESTING AND ACCESS CONSIDERATIONS:

The sale areas are accessed via the Coast Range Road. It is an all weather, crushed rock roads. See maps for specific road locations and conditions.

Approximately 1.42 miles of existing surfaced road will be improved which includes grading, rocking, widening, culvert replacement, spot rocking, sidecast

pullback, and/or adding new culverts. This work will bring all roads up to standards described in *the Forest Roads Manual*.

Constructed roads will consist of 0.99 miles of reconstructed legacy roads and 1.46 miles of new road will be constructed to provide access to cable and ground yarding areas. Rock for road surfacing will come from the Fisherman’s Access pit on Coast Range Road. Some rock crushing may be required as part of the project work depending on stockpile amounts at the rock pit. Ground yarding roads will be closed and water-barred following harvest. Following reforestation the roads within the sale areas will be reviewed for closure.

The operation will be approximately 10 % ground yarding and 90% cable yarding.

Table 5. Transportation Planning Summary (Miles)⁴

Activity	Mainline	Collector	Rocked Spur ¹	Dirt Spur ¹
Construct			0.76 Reconstruct 1.46 New Constr.	0.23 Spurs 1A1 and 1D
Improve			1.42	
Maintain ²				
Close/Block ³				0.23 Spurs 1A1 and 1D
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:

A watershed analysis is being conducted for the Wilson River basin at this time. Recommendations from this assessment will be incorporated into the sale where feasible.

An unnamed small Type F tributary to Zig Zag Creek is within and/or adjacent to the sale areas. There are additional unnamed small perennial and seasonal

Type N streams within the sale areas. These streams will be reviewed and protected appropriately during sale layout based on flow, topography, and terrain.

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

The ODFW fish biologist will work with ODF to identify possible stream enhancement project areas in the sale vicinity.

In order to protect water quality during active operations, a variety of methods will be used to prevent sediment from entering live streams. These methods include (but are not limited to) maintaining culverts and other road drainage structures, using sediment control devices in road ditches when necessary, and monitoring logging and hauling operations. Culvert installment and replacement in live streams will be conducted between July 1 and September 15. Operations outside of this period will be reviewed with ODFW.

VIII. T&E SPECIES CONSIDERATIONS:

The sale areas have been reviewed with the ODF Northwest Oregon Area Biologist. Surveys for marbled murrelets and Northern spotted owls were conducted in 2007 and will be conducted in 2008. The 2007 surveys resulted in no detections for either 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). No listed plants were identified within or adjacent to the sale areas. A plant on the state candidate list was identified as being in the general location of the sale. As such, this plant is not given special legal protection, but ODF is documenting its occurrence and managing around it where possible.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

This assessment is based on analysis of USGS 1:24,000 topographic maps.

There are high landslide hazard locations scattered throughout the sale. Area 1 and portions of Area 2 drain into unnamed tributaries of the Wilson River. The rest of Area 2I and all of Area 3 drain into Zigzag Creek. The risk of landslides delivering directly from Area 1 to unnamed tributaries of the Wilson River ranges

from low to high. The risk of landslides delivering directly from Areas 2 and 3 to unnamed tributaries of the Wilson River and Zigzag Creek is high. Portions of the sale appear to be located on large, deep-seated landslide landforms.

The geotechnical specialist will be consulted if evidence of recent landslide activity is identified during sale layout.

X. RECREATION RESOURCES:

The sale areas are designated as Motorized in the *Tillamook State Forest Comprehensive Recreation Plan* (1993). This sale has been reviewed by the District Recreation Coordinator.

Recreational use common to this area includes hunting and OHV use. No designated trails or dispersed campsites are within or adjacent to the sale area. There is a planned westward extension of the Wilson River non-motorized trail shown on Map C2. This trail is tentatively planned for construction in 2015.

XI. CULTURAL RESOURCES:

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

XII. SCENIC RESOURCES:

Portions of the sale areas have a visual classification of Level 1, high sensitivity and can be seen from Highway 6. The sale was reviewed by the Public Use Coordinator. Visual impact will be reduced in the sale areas by the topography, stream buffers and non-harvestable areas.

XIII. OTHER RESOURCE CONSIDERATIONS:

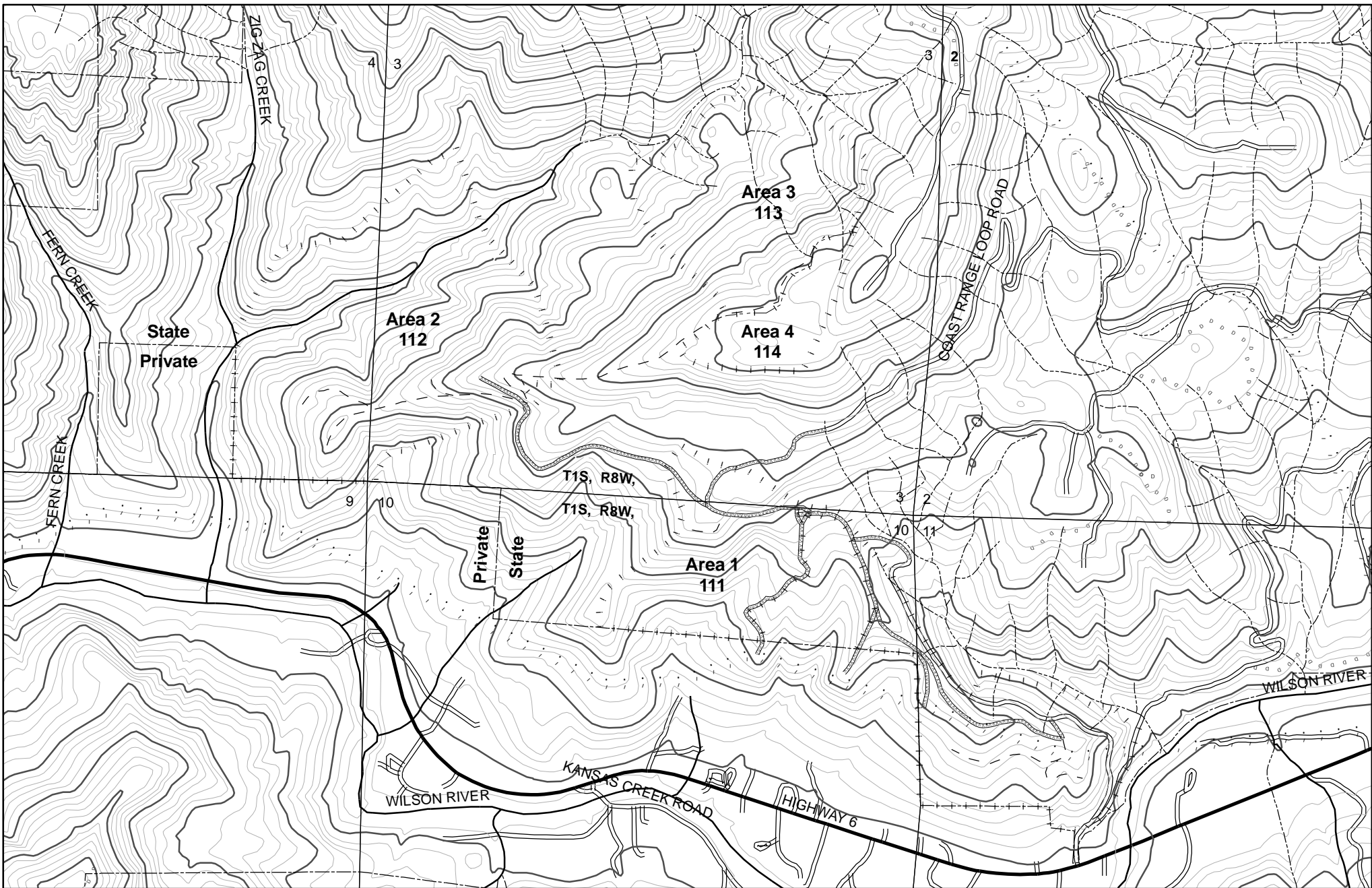
Bonneville Power Administration (BPA) transmission lines run through Area 1. The BPA should be contacted during sale prep to review safety issues when working in proximity to the towers and transmission lines.

In addition, property lines need to be established on the southern portion of the sale adjacent to private landowners. Some corner markers have been found near roads but additional work will be completed prior to sale prep.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

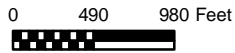
The sale areas contain Focused and Special Stewardship, Aquatic and Riparian Habitat. See Section VII, Aquatic Resources and Water Quality, for management guidelines to be utilized. The sale areas contain Focused Stewardship, Visual. See Section XII, Scenic Resources, for management guidelines to be utilized. Area 1 also contains Other Resource Considerations. See Section XIII, Other Resources Considerations, for management guidelines to be utilized.

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
- Legacy road
- o o o Blocked road
- - - Road construction
- County road
- ; ; Transmission line



3

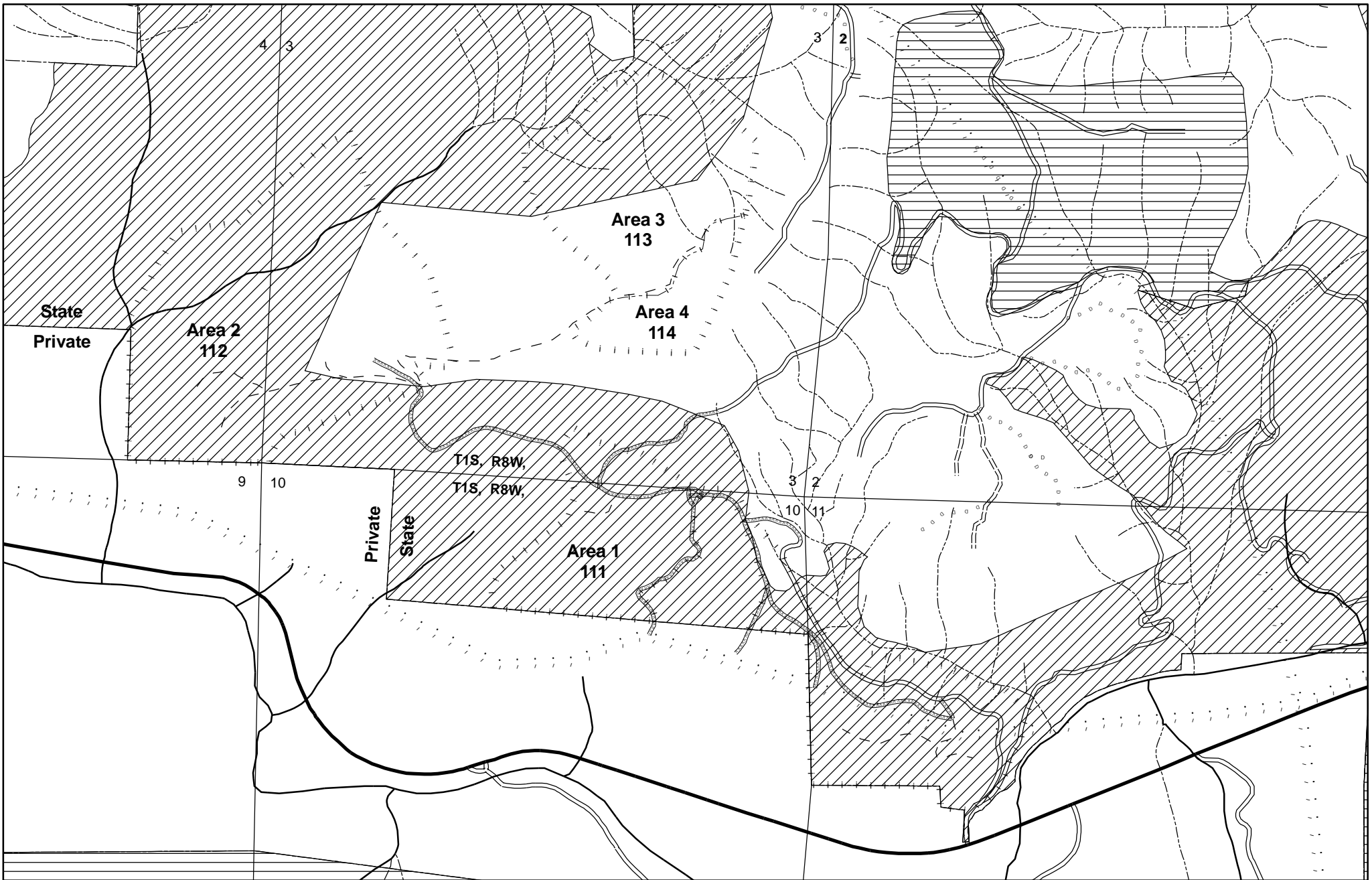
**Coast Ford
-- Topography --
2009 SALE PLAN
TILLAMOOK DISTRICT**

Portions of Sections 3, 4, 10 and 11
T1S, R8W, W.M.,
Tillamook County, Oregon

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

Tillamook District GIS
10/22/2007
This product is for informational use and may not have been prepared for, or suitable for legal, engineering, or surveying purposes.

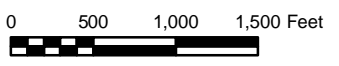
Area	Type of Operation
1	Retention Cut
2	Modified Clearcut
3	Modified Clearcut
4	Partial Cut-M



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

Legacy road
 Blocked road
 Road construction
 County road
 Transmission line

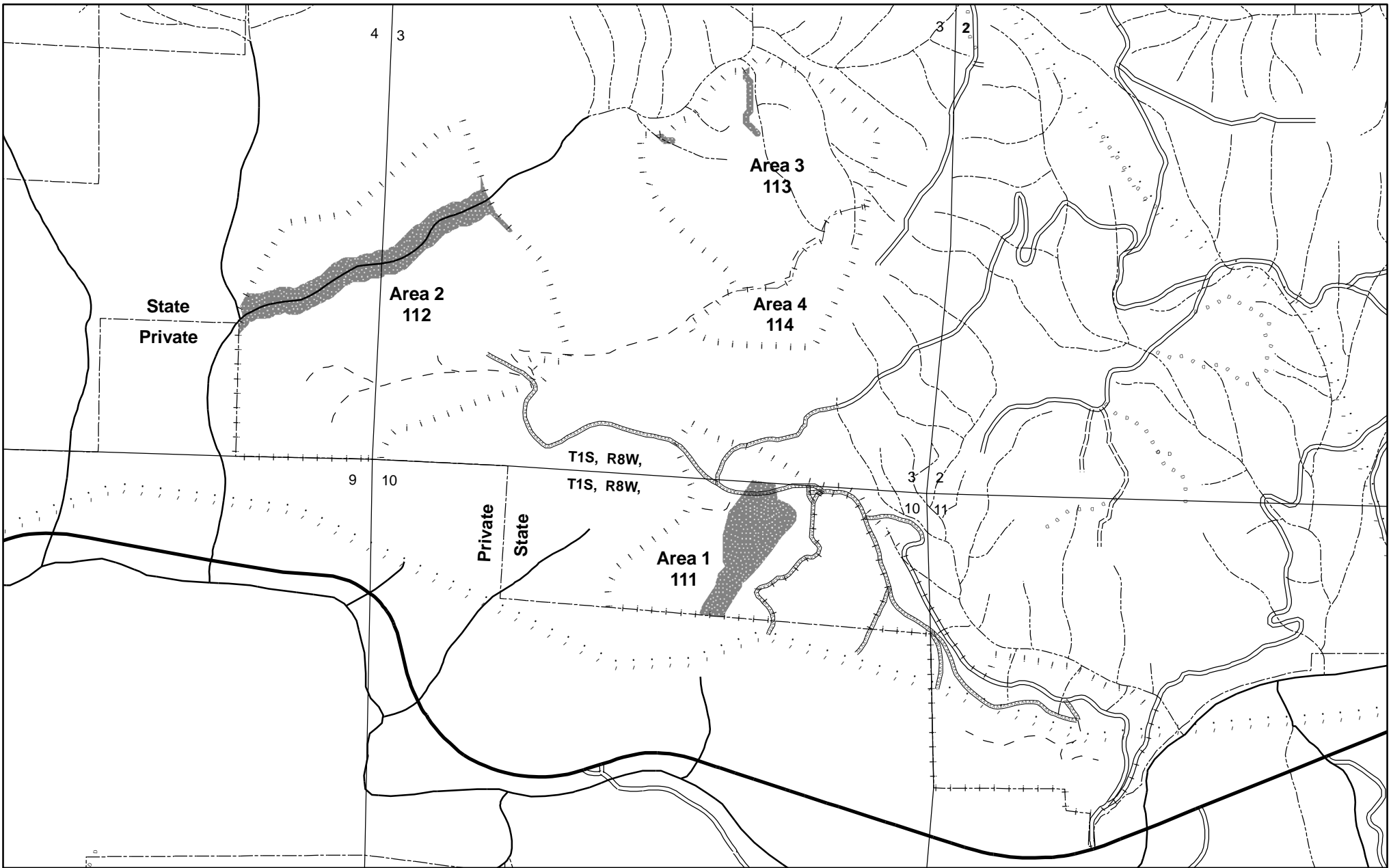


















3

Coast Ford
-- Current and Future Condition --
2009 SALE PLAN
TILLAMOOK DISTRICT
 Portions of Sections 3,4,10 and 11
 T1S, R8W, W.M.,
 Tillamook County, Oregon

*Streams of unknown fish presence are not shown but will be surveyed prior to the sale
 Tillamook District GIS
 01/08/2008
 This product is for informational use and may not have been prepared for, or suitable for legal, engineering, or surveying purposes.

Area	Type of Operation
1	Retention Cut
2	Modified Clearcut
3	Modified Clearcut
4	Partial Cut-M

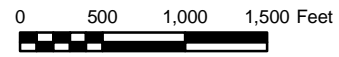


-  Buffer
-  Green Tree Retention
-  Non-required thinning
-  Area boundary
-  Sale boundary
-  Ownership boundary
-  Perennial Type-F stream*
-  Perennial Type-N stream*
-  Unsurfaced road
-  Surfaced road
-  State/Federal highway
-  Legacy road
-  Blocked road
-  Road construction
-  County road
-  Transmission line

3

Coast Ford
-- Key Resources --
2009 SALE PLAN
TILLAMOOK DISTRICT

Portions of Sections 3,4,10 and 11
 T1S, R8W, W.M.,
 Tillamook County, Oregon

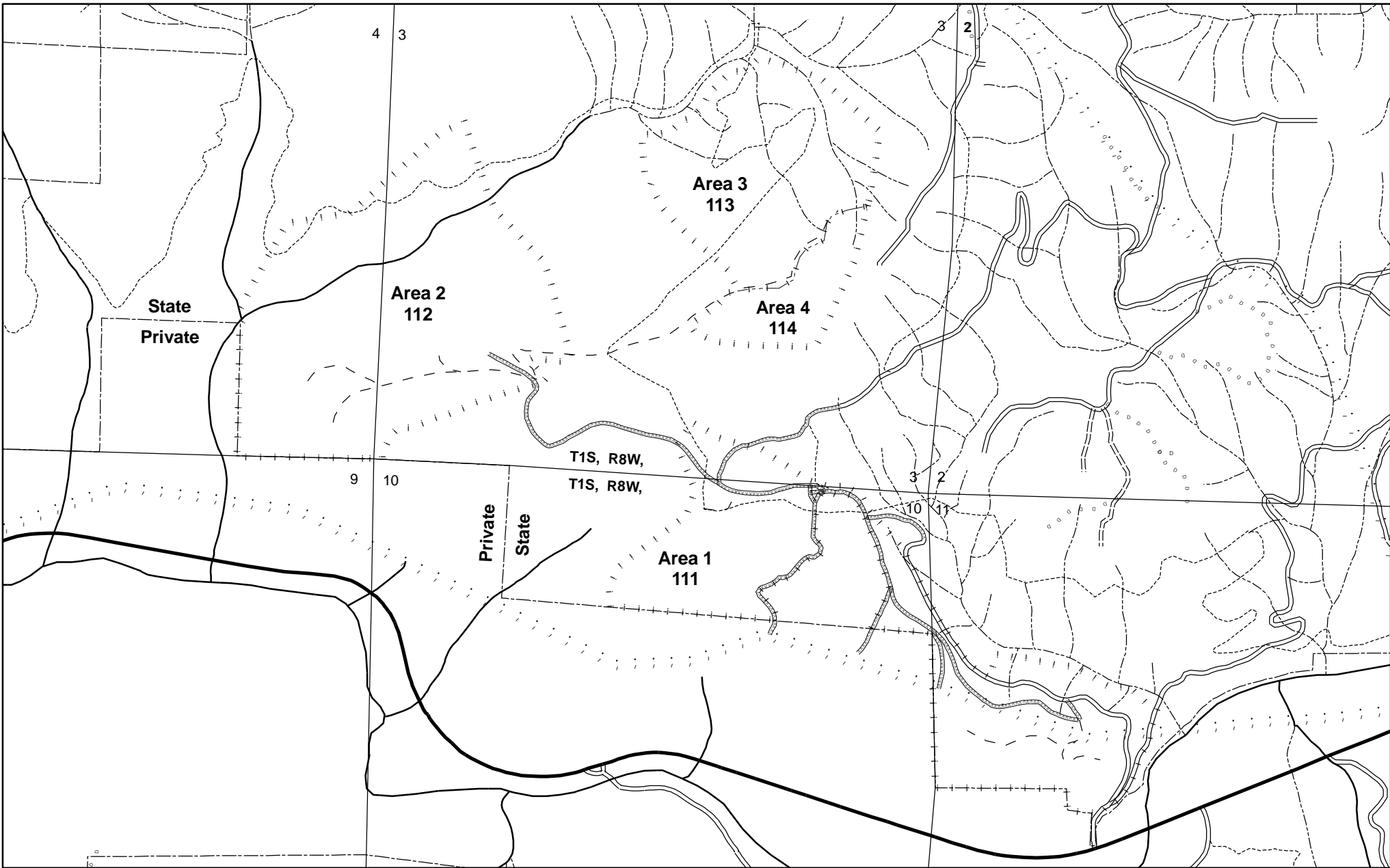


*Streams of unknown fish presence are not shown but will be surveyed prior to the sale

Tillamook District GIS
 01/08/2008

This product is for informational use and may not have been prepared for, or suitable for legal, engineering, or surveying purposes.

Area	Type of Operation
1	Retention Cut
2	Modified Clearcut
3	Modified Clearcut
4	Partial Cut-M

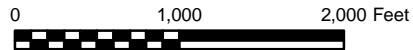


- Ⓔ Administrative
- Ⓕ Boat Launch
- Ⓖ Campground
- Ⓗ Day Use
- Ⓘ Interpretive Site
- Ⓚ OHV Staging Area
- Ⓛ Trail Head

- - - Area boundary
- ! ! ! Sale boundary
- - - Ownership boundary
- Perennial Type-F stream*
- - - Perennial Type-N stream*
- ≡≡≡ Unsurfaced road
- ==== Surfaced road
- State/Federal highway
- ⋯ Recreation Trails

- ⋯ Legacy road
- ⊠ Blocked road
- - - Road construction
- County road
- ⋯ Transmission line

3



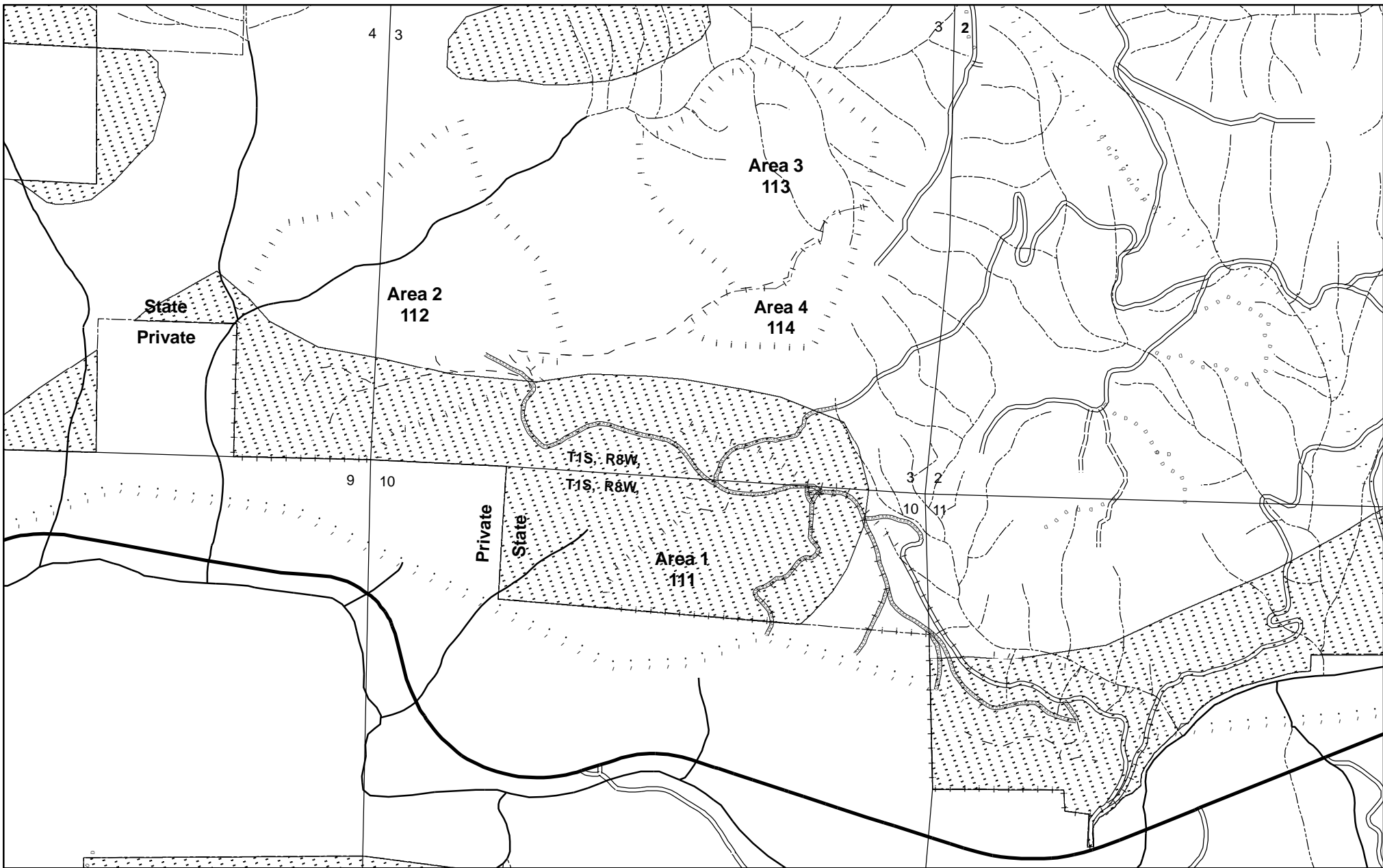
Coast Ford
-- Key Resources /Recreation --
2009 SALE PLAN
TILLAMOOK DISTRICT
 Portions of Sections 3,4,10 and 11
 T1S, R8W, W.M.,
 Tillamook County, Oregon

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

Tillamook District GIS
01/08/2008

This product is for informational use and may not have been prepared for, or suitable for legal, engineering, or surveying purposes.

Area	Type of Operation
1	Retention Cut
2	Modified Clearcut
3	Modified Clearcut
4	Partial Cut-M



Stewardship



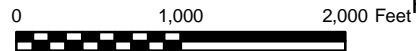
Focused



Special

- - - Area boundary
- | | | Sale boundary
- - - Ownership boundary
- Perennial Type-F stream*
- - - Perennial Type-N stream*
- ≡≡≡ Unsurfaced road
- Surfaced road
- State/Federal highway

- ▬ Legacy road
- ◻◻◻ Blocked road
- - - Road construction
- County road
- ⋮ Transmission line



3

**Coast Ford
-- Key Resources/Visual--
2008 SALE PLAN
TILLAMOOK DISTRICT**

Portions of Sections 3,4,10 and 11
T1S, R8W, W.M.,
Tillamook County, Oregon

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

Tillamook District GIS
01/08/2008

This product is for informational use and may not have been prepared for, or suitable for legal, engineering, or surveying purposes.

Area	Type of Operation
1	Retention Cut
2	Modified Clearcut
3	Modified Clearcut
4	Partial Cut-M