

Pre-Operations Report

Operation Name: Beaver Power
County: Tillamook
Management Basin: Wilson/Kilchis

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres ¹
1	Partial cut - Moderate	97	94
Total		97	94

1. The net acres are based on orthophotos and GIS and exclude roads, stream buffers, and non-required thinning areas.

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

Slopes have varied aspects and range from 10% to 70%. Elevations range from 40 to 400 feet. The major soil type is Pittsburg.

The sale is located on and below the gentle ridgeline divide between the headwaters of Coal Creek and the tributaries of the Wilson and Kilchis River (just above Juno Creek) and the mouths of both rivers at the Tillamook Bay. There are a few bands of steep side slopes in the southwest portion of the sale. The sale is underlain by sedimentary origin rocks of the Alsea Formation. Refer to the Overview of Harvest Operations in the Summary document for information.

II. CURRENT STAND CONDITION:

Table 2. Stand Inventory Information⁴

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	SDI	Net Acres ²
1	PC - Heavy	101	WH,SS, DF	75	21	225	91	67	94
		Target ³	WH, SS, DF	75	24	147	46	25	94

1. The source of stand inventory information is from field reconnaissance cruise plots from 2006.

2. The net acres are based on orthophotos and GIS and exclude roads, stream buffers, and non-required thinning areas.

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.

The sale area was logged in the late 1920's and naturally regenerated. They have had no prior stand management. There is no Stand Level inventory (SLI) available for this area. The stand is classified as 100% Closed Single Canopy

(CSC) according to the district stand summary information (1999). See Table 2 for specific stand data.

Area 1 is predominately a hemlock stand that has a major component of spruce and stringers of alder scattered throughout. There is also a small component of Douglas-fir and cedar in the sale area. The conifer is very dense (approx. 67% SDI) and is causing mortality in the understory conifer and shrub species, receding live crown ratios on dominant trees, and reduced diameter growth. Height to diameter ratios may be an issue and will need to be looked at closer during sale layout. The brush component in the sale area is comprised primarily of vine maple, sword fern, and huckleberry. Brush is fairly continuous throughout the understory with higher concentrations in the draws and gaps in the canopy.

There are some large snags in various states of decay and some hard snags created from wind damage. Down wood consists of scattered large old logs (36"+) in Class 3 and 4 stages of decay and some windthrow in decay classes 1 and 2.

III. DESIRED STAND CONDITION AND VISION:

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest ¹	Desired Future	Net Acres
1	101	CSC	UDS	GEN	15
1	101	CSC	UDS	OFS	79

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 (DFC) goals.

The DFC for this area is Older Forest Structure (OFS). The vision is for a stand of scattered Douglas-fir, western hemlock and alder. The stand will be composed of a mixture of species, size classes, and densities. A new cohort of western hemlock, alder, spruce, and cedar in the larger gaps and areas of low stand density will provide both horizontal and vertical diversity. After thinning in approximately 15 - 20 years the stand will have a mixture of sizes, species and densities and likely be in a Layered (LYR) condition. Periodic thinnings will produce a multilayered stand with some of the larger tree trees approaching 32 inches in diameter. In about 60 years there is a high probability that this stand will meet the requirements of OFS.

IV. PROPOSED MANAGEMENT PRESCRIPTION AND PATHWAY:

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: Merchantable western hemlock and Sitka spruce will be thinned to a basal area range of 140 to 160 square feet. All other species will be reserved. An unthinned buffer will be considered on the portions bordering the recent private regeneration harvest to minimize potential windthrow.

This partial cut prescription will reduce the amount of overstocking. The resulting stand will have a stand density of approximately 25-30% which will maintain stand vigor, and develop healthier and larger trees in the residual stand. The hardwoods and other conifer remaining in the stand will add to the species diversity. This is a first entry partial cut that will which will begin to move the stand along the pathway to more complex structures. It is likely that another thinning in 10-15 years will be needed to keep the stand on this trajectory. At this time managers will review density, stand health, and landscape goals to develop future management prescriptions.

Down Wood and Snag Strategies

Existing down wood will be left in the sale areas. Down wood recruitment is expected through mortality and windthrow of residual or leave trees, felled snags and tops left during harvest. Obvious defect in conifer logs will be bucked out in all harvest areas to enhance down wood levels. Small non-merchantable hardwood and conifer will be retained where possible in harvest units with the expectation they will become short term snags and down wood. Tops resulting from ground yarding will also be left in the unit. This area is very susceptible to wind events which are anticipated to keep generating down wood in the future.

Existing snags not determined to be a safety hazard will be retained and any felled snags will be left for down wood. Creation of snags is expected during harvest activities (rub trees, lift trees, or tail trees) and over time by natural processes. Snags will be created in the sale area. A prescription will be developed after the cruise has been completed.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	0%	<input type="checkbox"/>	x
Planned Quarter:		1	
		Conifer	Hardwood
Net Volume (MBF)		1107	1107
Stumpage Value (\$/MBF)*		\$96	
Estimated Gross Value		\$106,272	\$106,272
		Project Costs:	\$40,600
		Estimated Net Value:	\$65,672

***Combined hemlock and spruce stumpage values based on harvest type.**

VI. HARVESTING AND ACCESS CONSIDERATIONS:

The sale areas are accessed via Alder Crest Road and Beaver Creek Road. These are currently all-weather and crushed rock roads. Alder Crest Road is a county road which passes through a high-density residential area. Beaver Creek Road is gated west of the 4H Loop Road junction. See maps for specific road locations and conditions.

Approximately 0.2 miles of legacy road and 1.5 miles of existing surfaced road will be improved. Improvement may include 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*.

Approximately 0.7 miles of road will be constructed to provide access to cable yarding areas. Following harvest, roads within the sale areas will be reviewed for closure. It is anticipated that the new construction and reconstruct spurs will be closed with the sale. Ground yarding roads will be closed and water-barred following harvest. See summary document for more information on road closure. The entire sale area is behind a locked gate. No other project work is currently planned with this sale.

The operation will be approximately 15% ground yarding and 85% cable yarding. Logging in proximity to transmission lines will need to be addressed in the logging plan layout.

Table 5. Transportation Planning Summary (Miles)⁴

Activity	Mainline	Collector	Rocked Spur ¹	Dirt Spur ¹
Construct			0.7	
Improve		0.5	1.2	

Maintain ²		0.4	0.3	
Close/Block ³			0.9	
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 assessment is being conducted for the Wilson River basin at this time. Recommendations from this assessment will be incorporated into the sale where feasible.

The Oregon Department of Fish and Wildlife (ODFW) has completed stream surveys in the sale area. Juno Creek, a small Type F stream is adjacent to the sale area. There are additional unnamed, small, perennial and seasonal Type N streams within the sale area. These streams will be reviewed and protected appropriately during sale layout based on flow, topography, and terrain. A wetland created by a beaver dam on Juno Creek lies to the south and southwest of the sale. The inner and outer riparian zones of these Type N streams will be managed towards mature forest condition.

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.

Refer to Aquatic Resource Protection Strategies in the Summary document for information on in the “in stream work period” road work and stream improvement projects.

VIII. T&E SPECIES CONSIDERATIONS:

The sale area has been reviewed with the ODF Northwest Oregon Area Biologist. It was determined that there is potential marbled murrelet habitat within or adjacent to the sale boundary. All surveys for marbled murrelets were and will be conducted in accordance with Pacific Seabird Group (PSG) protocol. There were no marbled murrelet detections during the 2006 survey season.

It was determined that there is potential northern spotted owl habitat within or adjacent to the sale boundary. Surveys have been conducted during the 2006

survey season and will be conducted during the 2007 survey season for northern spotted owls. All northern spotted owl surveys were and will be conducted in accordance with USFWS endorsed protocol. There were no northern spotted owl detections during the 2006 survey season.

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.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

There are a few bands of steep side slopes in the southwest portion of the sale. The initial risk assessment by the geotechnical specialist for the sale is moderate. The geotechnical specialist will be consulted during sale layout field work to determine if a field visit is necessary.

X. RECREATION RESOURCES:

The sale areas are designated as Non-Motorized in the *Tillamook State Forest Comprehensive Recreation Plan* (1993). This sale has been reviewed by the District Recreation Coordinator. No Off Highway Vehicle (OHV) trails were identified within or adjacent to the sale areas. Recreational use common to this area includes hunting, mountain biking, and OHV use.

XI. CULTURAL RESOURCES:

The *Tillamook State Cultural Assessment* does not list any cultural sites within or adjacent to the proposed sale boundary. The district will consult the Public Use Coordinator for appropriate protection and tracking if any are noted during sale preparation or administration.

XII. SCENIC RESOURCES:

The sale area is not identified in LMCS as having a visual classification however portions of the north end of the sale will be visible from Highway 101 and should be classed Level 1, high sensitivity. Visual impact will be minimal due to the thinning prescription for the area. The sale has been reviewed by the Public Use Coordinator. The remainder of the sale has a visual classification of Level 3, low sensitivity

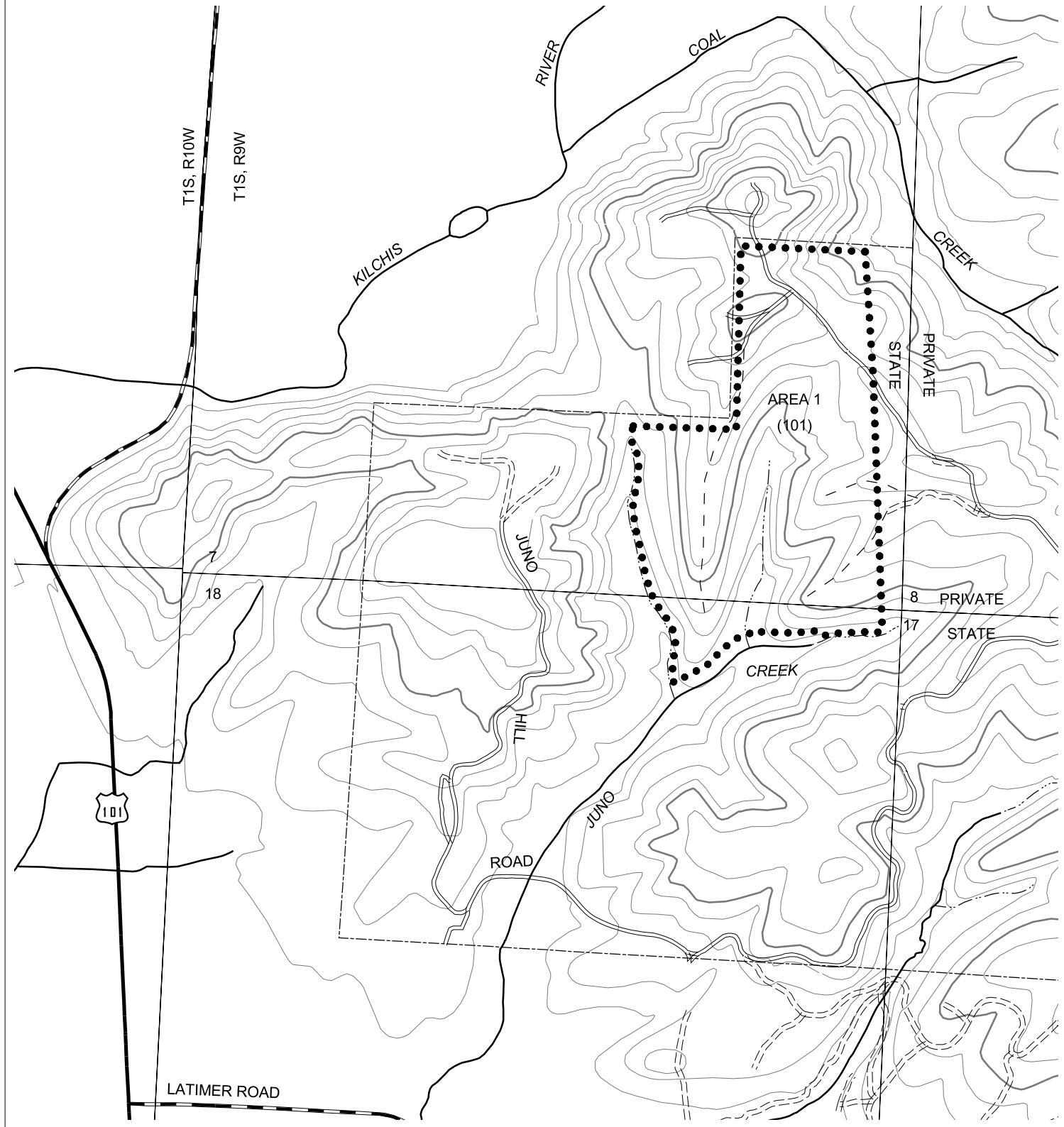
XIII. OTHER RESOURCE CONSIDERATIONS:

BPA transmission lines run along the eastern edge of the sale area. Spur roads to access the southeast portion of the sale will go under these lines. The BPA should be contacted during sale prep to review logging safety and access issues when working in proximity to transmission lines.

In order to harvest this sale area a special use permit will need to be obtained for guyline trees and tailholds that may be needed on private land.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

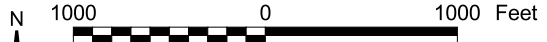
The sale area contains Focused and Special Stewardship, Aquatic and Riparian Habitat. See Section VII, Aquatic Resources and Water Quality, for the management guidelines to be utilized.



- Area boundary
- Sale boundary
- Contour Interval 40'
- Ownership boundary
- Perennial Type-F stream *
- Perennial Type-N stream *
- === Unsurfaced road
- ==== Surfaced road
- State/Federal highway
- ▨ Legacy road
- - Road construction
- County road

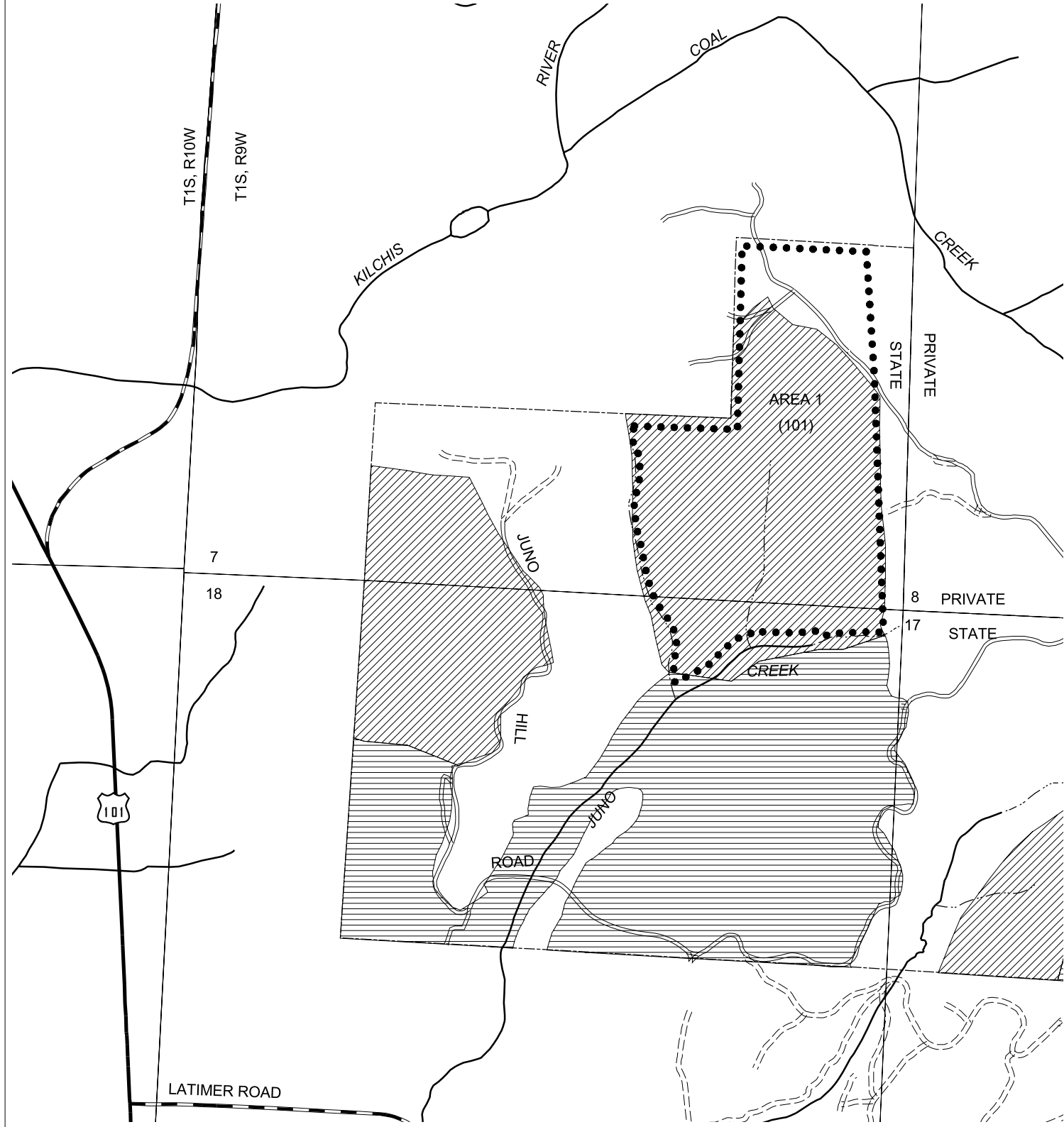
BEAVER POWER
-- Topography --
2007 SALE PLAN
TILLAMOOK DISTRICT
 Portions of Sections 7 and 18,
 T1S, R9W, W. M.
 Tillamook County, Oregon

Area	Type of Operation
1	Partial cut



Tillamook District GIS
 02/06/2007
 This product is for informational use and
 may not have been prepared for, or suitable
 for legal, engineering, or surveying purposes.

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



- 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
 - Road construction
 - County road

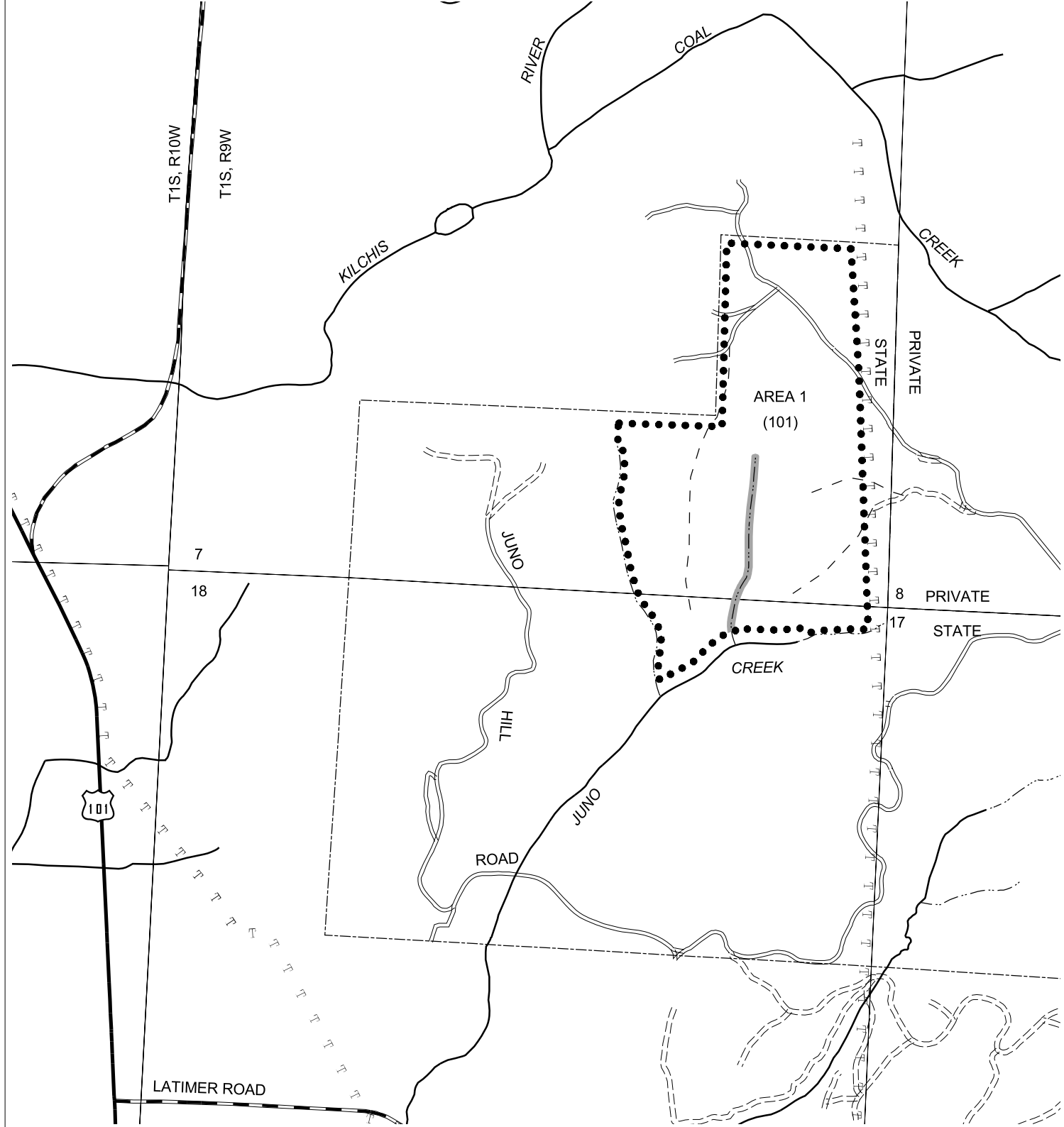
BEAVER POWER
-- Current and Future Condition --
2007 SALE PLAN
TILLAMOOK DISTRICT
 Portions of Sections 7 and 18,
 T1S, R9W, W. M.
 Tillamook County, Oregon

Area	Type of Operation
1	Partial cut



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- Buffer
- 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
- Road construction
- County road
- Transmission line

BEAVER POWER
-- Key Resources --
2008 SALE PLAN
TILLAMOOK DISTRICT
 Portions of Sections 7 and 18,
 T1S, R9W, W. M.
 Tillamook County, Oregon



Tillamook District GIS
 02/06/2007
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Area	Type of Operation
1	Partial cut

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