

# Pre-Operations Report

**Operation Name: Musical (Alternate)**  
**County: Tillamook**  
**Management Basin: Wilson**

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

Area	Type of Operation	Gross Acres	Net Acres <sup>1</sup>
1	Modified Clearcut	221	120
2	Modified Clearcut	208	120
Total		429	240

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

## I. PHYSICAL DESCRIPTION OF OPERATION AREA:

Slopes have varied aspects and range from 10 to over 90%. Elevations range from 350 feet to 1,450 feet. The major soil type is Rye, Killam, and Enright.

The sale is located on the north flank of the Wilson River along the lower reaches of Muesial Creek and in the headwaters of Keenig Creek, Holm Creek and Rhem Creek. It is below the ridgeline divide between the headwaters of Muesial Creek and the other three tributaries to the Wilson River. There are steep to very steep side slopes and draws in the lower (eastern) portions of both areas 1 and 2. The sale is underlain by igneous intrusive origin rocks in the lower portion (eastern) of both Areas 1 and 2 and sedimentary origin rocks of the Yamhill Formation in the upper (western) portions of both Areas 1 and 2. Refer to the Overview of Harvest Operations in the Summary document for information.

## II. CURRENT STAND CONDITION:

**Table 2. Stand Inventory Information<sup>3</sup>**

Area	Prescription	Stand ID <sup>1</sup>	Species	Age	DBH	BA	TPA	SDI	Net Acres <sup>2</sup>
1	MC	123	DF/RA	51	14	173	164	47	120
2	MC	124	DF/WH/RA	51	13.5	170	171	46	120

1. The source of stand inventory information is from SLI cruise plots in 2002 and 2003..

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. 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 areas burned in the 1933 (Tillamook) and 1939 (Saddle Mountain) fires. The north portion of Area 1 also burned in the 1945 (Wilson River) fire. The sale areas were planted in 1955 to 1957 with a small area in the southwest portion of Area 1 replanted in 1973. The sale areas have had no prior stand management. Stand Level Inventory (SLI) has not been completed on the sale areas but they are classified as 100% Closed Single Canopy (CSC) according to the district stand summary information (1999). Both areas will be further evaluated (as defined by the July 2004 guidance, “*Planned Sale Inventory Requirements – Alternative to Full Stand Level Inventory*”). See Table 2 for specific stand data.

Areas 1 and 2 are very similar stand types that are comprised of a mix of alder and Douglas-fir. The Douglas-fir is primarily located on the ridges and upper slopes. The alder is mainly located on the mid to lower slopes and in the riparian areas. There are scattered hemlock and other minor conifer species throughout the sale areas. All of the species are arranged at various densities throughout the sale areas. There is alder mixed in with the conifer pockets and conifer mixed in the alder pockets.

Due to site quality, symptoms of Swiss needle cast (SNC), and stand density the Douglas-fir has slowed diameter and height growth. The alder in both of these areas have poor height and diameter growth due to stand age and site quality. The alder in Area 1 was aerially sprayed in the 1970’s to release the planted conifer, resulting in alder trees with short boles and many tops. No other significant insect or disease problems have been discovered at this time. The brush component is comprised primarily of swordfern, vine maple and huckleberry.

There are some large snags in various states of decay and some hard snags created from natural causes. 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. Stand Level Inventory in the vicinity of the sale areas shows total down wood ranging from 2,590 to 4,971 cubic feet per acre. Down wood in class 1 and 2 ranges from 21 to 240 cubic feet per acre. Snags greater than or equal to 24” diameter range from .07 to 4.24 per acre. Snags greater than or equal to 12” diameter range from 0.55 to 5.46 snags per acre. No large down wood or snags greater than or equal to 15” DBH in decay classes 1 and 2 were reported.

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

**Table 3. Stand Structure Information**

Area	Stand ID	Current	Post Harvest <sup>1</sup>	Desired Future	Net Acres
1	123	CSC	REG	LYR	120
2	124	CSC	REG	GEN	70
				LYR	50

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.

Area1: The DFC for this stand is Layered (LYR). The present stand is not a good candidate for establishing a pathway that maintains productivity due to the slow growing alder and the Douglas-fir has small live crown ratios, poor growth, and symptoms of Swiss needle cast. After the regeneration harvest the stand will be composed of legacy structures retained from the present stand and a young cohort of Douglas-fir, western hemlock and Douglas-fir trees. The green trees, including some hardwoods retained on the site, provide a scattered overstory and also contribute to the down wood and snag recruitment as mortality occurs.

Area 2: The DFC for this stand is General (GEN) and LYR. The present stand is not a good candidate for establishing a pathway that maintains productivity and reach the DFC in a reasonable amount of time due to the slow growing alder and the Douglas-fir has small live crown ratios, poor growth, and symptoms of Swiss needle cast.

After the regeneration harvest the stand will be composed of legacy structures retained from the present stand and a young cohort of Douglas-fir, western hemlock and Douglas-fir trees. The green trees, including some hardwoods, retained on the site, provide a scattered overstory and also contribute to the down wood and snag recruitment as mortality occurs. In approximately 60 years the combination of residual trees, multiple species and trees size will provide a Layered stand.

#### **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.

**Area 1 and 2:** Merchantable Douglas-fir and alder will be removed. An average of 7 to 9 conifer trees per acre will be left for green tree retention using a diameter limit. All other species are reserved.

This harvest will remove the slow growing Douglas-fir and alder. Due to difficult topography this prescription has also been designed to facilitate logging. The residual trees will be distributed both in groups and scattered across the area. A component of alder and other conifer will be retained in the sale areas and stream buffers. 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

precommercial thinning is anticipated at 12 to 17 years when the crowns begin to close. A commercial thinning at age 40 will produce a stand that has an average diameter of about 16 inches and 125 trees per acre. This will keep the stand on the desired trajectory, and produce revenue.

### **Green Tree, Down Wood and Snag Strategies**

A variety of methods will be used to achieve green tree retention requirements. These residual green trees will supplement the future stand by promoting growth of dominant/co-dominant leave trees. Small non-merchantable hardwood and conifer will also be retained where possible. These leave trees function as future source of snags and down wood recruitment across the landscape. Green trees will be left on precipitous slopes, headwalls, and those areas not reached by conventional logging methods. Stream buffers adjacent to small perennials and the outer Riparian Management Area (RMA) of Muesial Creek and the unnamed Type F tributary to Muesial Creek will also contribute additional green trees. Many of these areas will be posted so they are outside of the timber sale boundary.

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.

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.

Due to the size of the trees it is unrealistic to expect that the snag and down wood targets in the FMP will be met with this operation. During sale layout an assessment will be done to help determine the best green tree retention prescription to help meet these goals in the future.

**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:		Alt	

	Conifer	Hardwood	Total
Net Volume (MBF)	2,132	934	3066
Stumpage Value (\$/MBF)*	\$250	\$250	
Estimated Gross Value	\$533,000	\$233,500	\$766,500
		Project Costs:	\$88,100
		Estimated Net Value:	\$678,400

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

**VI. HARVESTING AND ACCESS CONSIDERATIONS:**

The sale areas are accessed via Cedar Butte, Muesial Creek, and Upper Muesial Creek Roads. These are all weather, crushed rock roads. See maps for specific road locations and conditions.

Approximately 2.78 miles of existing surfaced road and 0.54 miles of legacy 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*.

Approximately 0.62 miles of road will be constructed to provide access to cable yarding areas. It is anticipated that these roads will be closed after harvest. Following reforestation, the roads remaining within the sale areas will be reviewed for closure. Ground yarding roads will be closed and water-barred following harvest. No other project work is currently planned with this sale. See summary document for more information on road closure. The operation will be approximately 10 % ground yarding and 90% cable yarding.

**Table 5. Transportation Planning Summary (Miles)<sup>4</sup>**

Activity	Mainline	Collector	Rocked Spur <sup>1</sup>	Dirt Spur <sup>1</sup>
Construct			0.62	
Improve		0.85	2.47	
Maintain <sup>2</sup>		1.4	0.25	
Close/Block <sup>3</sup>			0.62	
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:**

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.

Muesial Creek, a Large Type F stream, and an unnamed small Type F tributary to Muesial Creek are adjacent to the sale. 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 inner and outer riparian zones of these Type N streams will be managed towards mature forest condition where feasible.

The Oregon Department of Fish and Wildlife (ODFW) will be requested to complete stream surveys prior to sale layout. 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.

The ODFW fish biologist has identified this sale as having some possible stream enhancement project areas along the Wilson River. These opportunities will be looked at during sale contract preparation.

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 areas have been reviewed with the ODF Northwest Oregon Area Biologist. Surveys for marbled murrelets are not required due to the absence of potentially suitable habitat. Spotted owl surveys 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*).

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:**

There are steep and very steep side slopes and draws in the lower portions (eastern) of Areas 1 and 2. The initial risk assessment by the geotechnical specialist for the sale is high. The geotechnical specialist will be consulted during sale layout field work.

#### **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.

Muesial Creek, Phycopath, and two unnamed trails are OHV trails that are within the sale areas. Short term closure of these trails will occur to facilitate logging and public safety. Portions of these trails will be improved for logging access. A plan will be developed in conjunction with the District Recreation Coordinator to address these situations. Slash will be removed from the trails upon completion of the operation. Recreational use common to this area includes hunting and OHV use.

#### **XI. CULTURAL RESOURCES:**

The *Tillamook State Cultural Assessment* does list a cultural site adjacent to the proposed sale boundary. This resource is described as a bridge. The classification for this site is Class III-No protection required. The bridge was replaced after the 1996 floods. If a site is identified, the Public Use Coordinator will be contacted for appropriate protection and tracking.

#### **XII. SCENIC RESOURCES:**

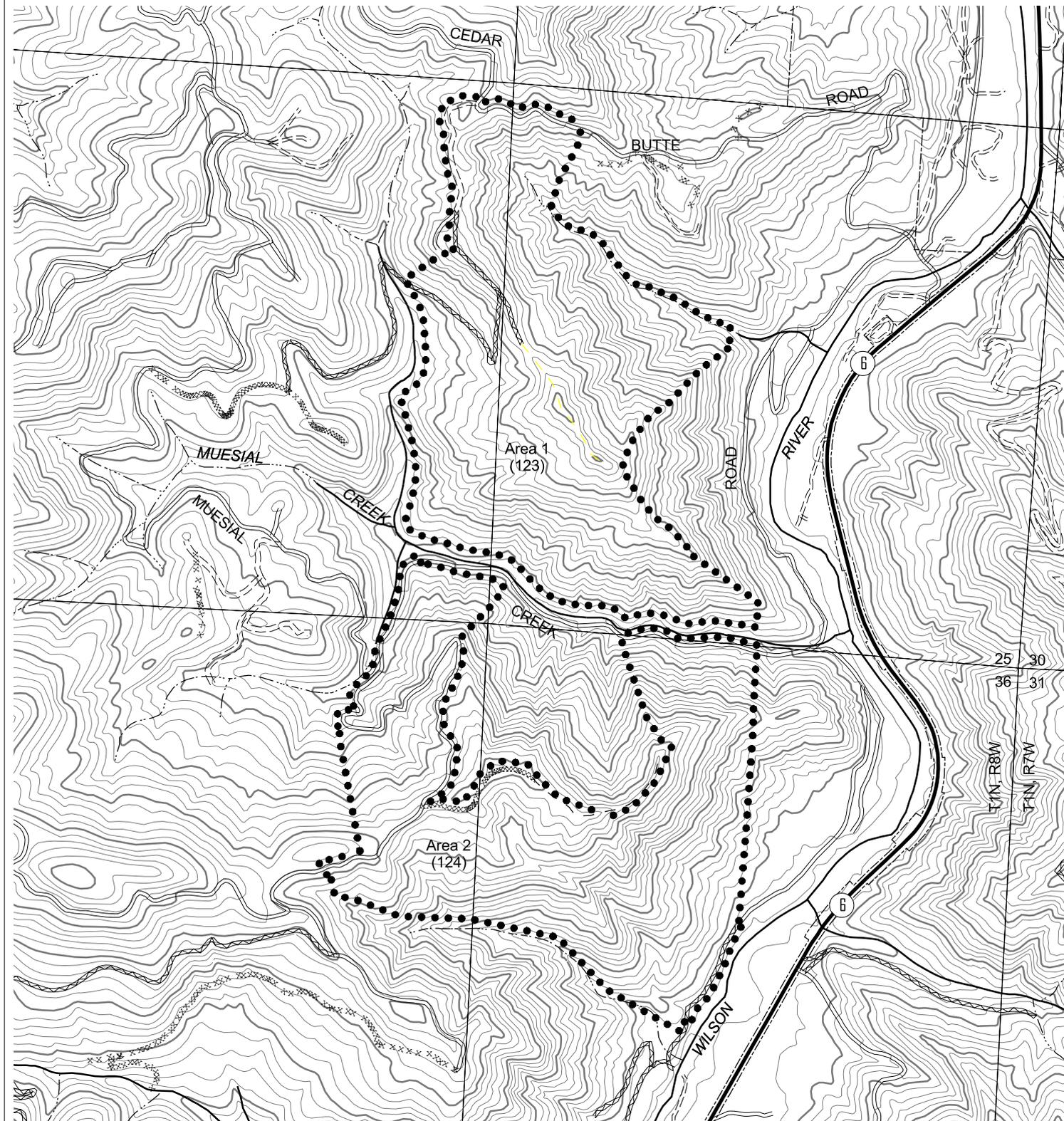
Portions of the sale areas have a visual classification of Level 1, high sensitivity and can be seen from Highway 6. The remaining portions of the sale have a visual classification of Level 3, low sensitivity. The sale will be reviewed by the Public Use Coordinator to determine methods to minimize visual impact. Visual impact will be reduced in the sale areas by the topography, stream buffers and non-harvestable areas.

**XIII. OTHER RESOURCE CONSIDERATIONS:**

A permanent inventory plot is adjacent to the west boundary of Area 2. Permanent plot markings will be protected according to guidelines. The eastern boundary of the sale areas is adjacent to land with a deeded restriction for recreation management and should be excluded from the harvest areas.

**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 also contain Focused Stewardship, Recreation (see Section X), Focused Stewardship, Visual (See Section XII), and Focused Stewardship, Deeds (see Section XIII). 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
- xxxxxx Blocked road
- - - Road construction
- County road
- T T Transmission line

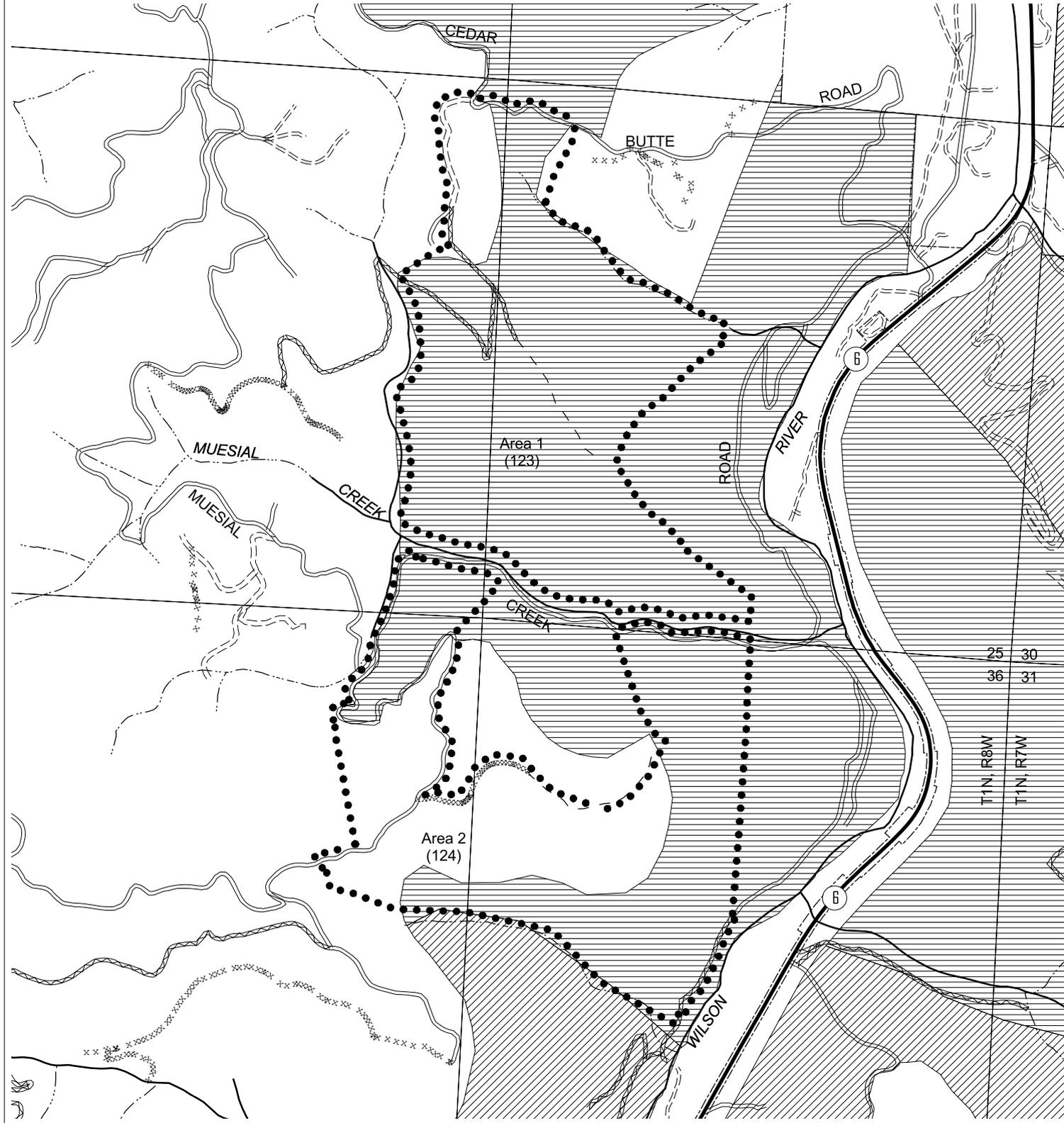
**Musical**  
**-- Topography --**  
**2008 SALE PLAN**  
**TILLAMOOK DISTRICT**  
 Portions of Sections 25, 26, 35,  
 and 36, T1N, R8W, W. M.  
 Tillamook County, Oregon



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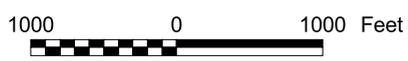
Area	Type of Operation
1	Modified clearcut
2	Modified clearcut

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



- 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

**Musical**  
**-- Current and Future Condition --**  
**2008 SALE PLAN**  
**TILLAMOOK DISTRICT**  
 Portions of Sections 25, 26, 35,  
 and 36, T1N, R8W, W. M.  
 Tillamook County, Oregon

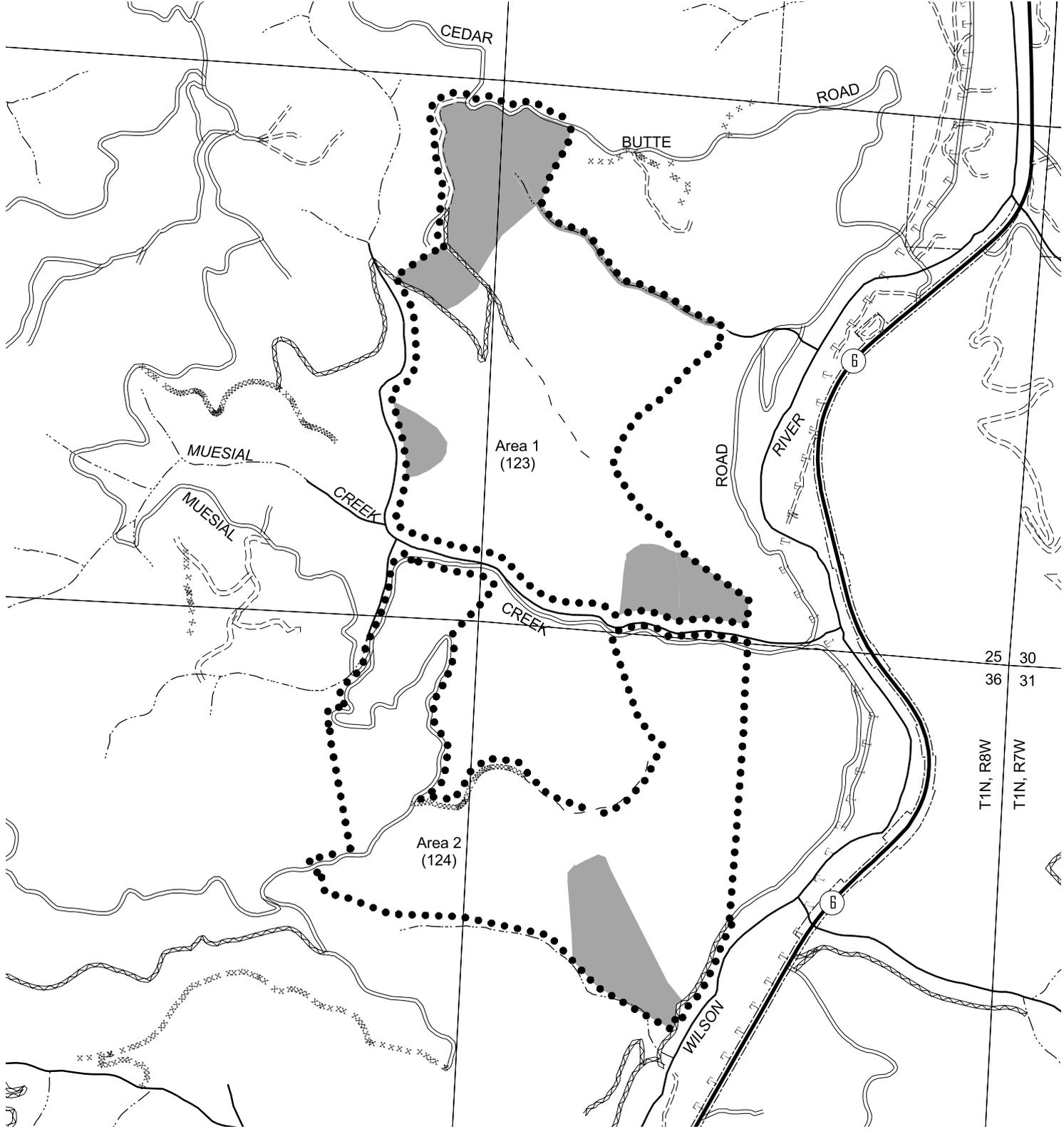


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Area	Type of Operation
1	Modified clearcut
2	Modified clearcut

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



- 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
- Blocked road
- Road construction
- County road
- Transmission line

**Musical**  
**-- Key Resources --**  
**2008 SALE PLAN**  
**TILLAMOOK DISTRICT**  
 Portions of Sections 25, 26, 35,  
 and 36, T1N, R8W, W. M.  
 Tillamook County, Oregon

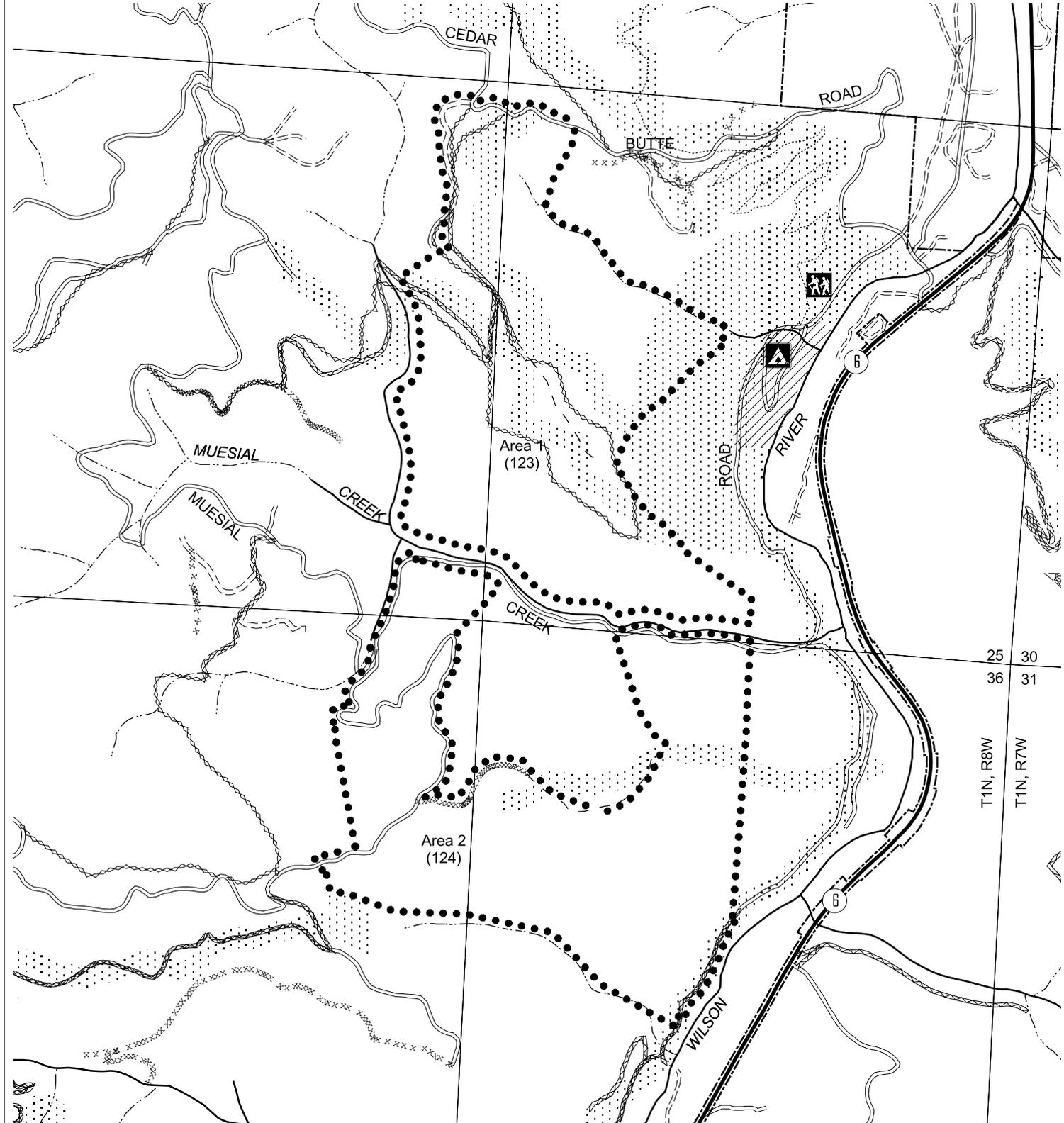


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Area	Type of Operation
1	Modified clearcut
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- Campground
- Day Use Site
- OHV Staging Area
- Trail Head
- Boat Launch
- Interpretive or Administrative Site
- Stewardship
- Focused
- Special
- OHV trail
- Non-motorized trail
- 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

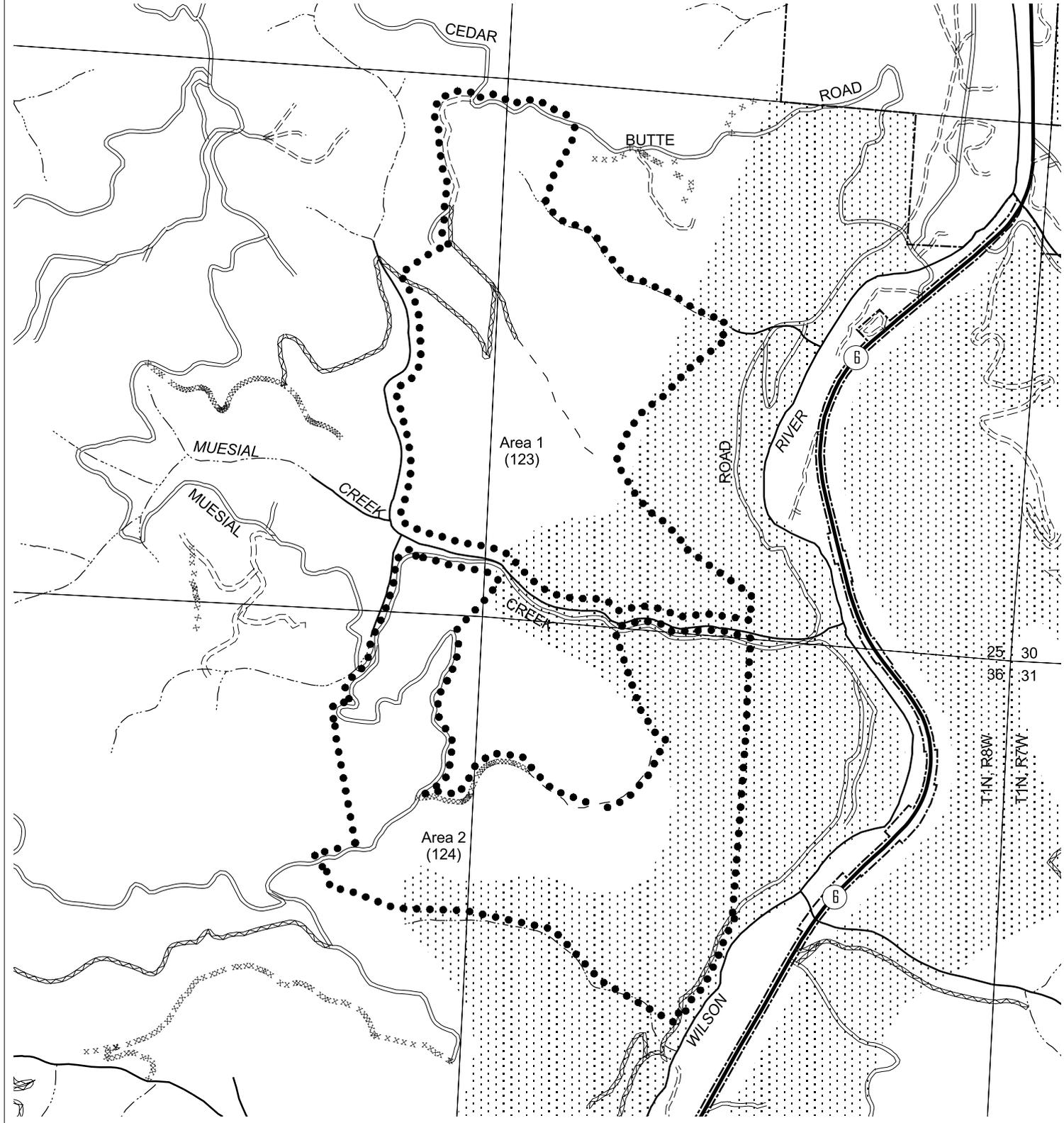
**Musical**  
**--Key Resources/Recreation --**  
**2008 SALE PLAN**  
**TILLAMOOK DISTRICT**  
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 and 36, T1N, R8W, W. M.  
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Area	Type of Operation
1	Modified clearcut
2	Modified clearcut

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



- |  |                     |  |                           |
|--|---------------------|--|---------------------------|
|  | Stewardship Focused |  | Area boundary             |
|  | Special             |  | 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         |

**Musical**  
**-- Key Resources/Visual --**  
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**TILLAMOOK DISTRICT**  
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Area	Type of Operation
1	Modified clearcut
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