

Pre-Operations Report

Operation Name: Between Wolves

Legal: Portions of Sections 11, 12, and 14, T1N, R8W, W.M., Tillamook County

Management Basin: Wilson

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres ¹
1	Modified Clearcut	76	68
2	Modified Clearcut	103	100
Total		179	168

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 a predominantly north aspect and range from 10 to 90%. Elevations range from 900 to 2,250 feet. The major soil type is Humbug with minor areas of Nedonna.

The sale is located on the moderate to very steep slopes below Wolf Point, in the upper end of Cedar Creek. There are steep to very steep side slopes throughout Area 2 and some in the lower portions of Area 1. The sale is underlain by igneous origin rocks, of the Tillamook Volcanics Formation. There is a “landslide deposit” mapped (Wells et. al.) in the northwestern portion of Area 2. Refer to the Overview of Harvest Operations in the Summary document for information.

II. CURRENT STAND CONDITION:

Table 2. Stand Inventory Information³

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	SDI	Net Acres ²
1	MC	102	DF/RA	43	11	162	231	47	68
2	MC	103	DF/RA	43	11	155	237	46	100

1. The source of stand inventory information is from field reconnaissance cruise plots taken in 2006 and SLI cruise plots taken in 2003.

2. The net acres are based on orthophotos and GIS and exclude roads, stream buffers, and reserve 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 sale areas were aerially seeded in 1957-58 and reseeded in 1962-63. The stands have had no prior stand management. Stand Level Inventory (SLI) is only available on a portion of Area 2 and it is classified as Understory (UDS). Area 1 and 17 acres of Area 2 are classified as Closed Single Canopy (CSC) according to the district stand summary information (1999). Both Areas 1 and 2 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.

Area 1 is primarily a Douglas-fir plantation that has alder dominated riparian areas. There are also several small pockets of alder (less than 2 acres) scattered in the west portion of this area.

Area 2 is a mix of two stand types. The northwest corner (approximately 35 acres) is an alder stand with scattered Douglas-fir. The rest of Area 2 is a Douglas-fir plantation with small pockets of scattered alder (less than 1 acre).

The Douglas-fir in both of these areas are overstocked, have symptoms of Swiss needle cast (SNC), and have crown ratios of 25-35% resulting in slowed diameter and height growth. The alder in the northwest corner of Area 2 was aerially sprayed in the 1970's to release the planted conifer, resulting in alder trees with short boles and many tops. The remaining alder in the stands did not appear to have spray damage. No other significant insect or disease problems have been discovered at this time.

The brush component in both areas is comprised primarily of swordfern, salmonberry and huckleberry. Salmonberry is concentrated in draws and alder patches with swordfern as the primarily understory under the denser conifer.

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. On the portion of Area 2 that had SLI measurements, the down wood level in decay classes 1 and 2 is 193 cubic feet per acre and the total down wood is 3,704 cubic feet per acre.

There are some large snags in various states of decay and some hard snags created from natural processes. According to the Stand Level Inventory measurements in there are not any snags greater than 15 inches in decay classes 1 and 2. There are a total of 5.65 snags per acre in this area.

III. DESIRED STAND CONDITION AND VISION:

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest ¹	Desired Future	Net Acres
1	102	CSC	REG	GEN	68
2	103	CSC	REG	GEN	14
2	103	CSC	REG	LYR	2
2	103	UDS	REG	GEN	84

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.

The Desired Future Condition for these stands is General (GEN). Because of small live crown ratios, poor growth, and Swiss needle cast; the present stand is not a good candidate for establishing a pathway that maintains productivity. 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 cedar trees. The green trees retained on the site, including some hardwoods, provide a scattered overstory and also contribute to the down wood and snag recruitment as mortality occurs.

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. A diameter limit will be used to select an average of 9 conifer trees per acre. All other species will be reserved.

This harvest will remove the slow growing sprayed alder and overstocked Douglas-fir that has poor crown ratios. The residual trees will be distributed both in groups and scattered across the area. A component of alder will also be retained in the 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 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.

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 legacy trees, snags and down wood 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 Cedar Creek and the Type F tributary of Cedar Creek will also contribute additional green trees. Many of these areas will be posted so they are outside of the timber sale boundary.

Existing down wood will be left in the sale areas. Down wood recruitment is expected through mortality and windthrow of residual 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 harvesting in ground yarding areas will also be left in the unit.

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.

Due to the size of the trees in these areas 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 retention prescription for additional green trees to help meet snag and down wood goals in the future.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	%	<input type="checkbox"/>	x
Planned Quarter:		3	

	Conifer	Hardwood	Total
Net Volume (MBF)	1257	665	1922
Stumpage Value (\$/MBF)	\$75	\$200	
Estimated Gross Value	\$94,275	\$133,000	227,275
		Project Costs:	94,500
		Estimated Net Value:	132,775

VI. HARVESTING AND ACCESS CONSIDERATIONS:

The sale areas are accessed via North Fork Wilson, Cedar Creek, and Wolf Point Roads. These are currently all-weather, crushed rock roads. See maps for specific road locations and conditions.

Approximately 2.7 miles of existing surfaced road and 1.2 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 0.3 miles of road will be constructed to provide access to cable yarding areas. It is anticipated that the new construction roads will be closed with the sale. Following harvest the remaining roads within the sale areas will be reviewed for closure. Ground yarding roads will be closed and water-barred following harvest. See summary document for more information on road closure. No other project work is currently planned with this sale.

Both Areas 1 and 2 will be approximately 5% ground yarding and 95% cable yarding.

Table 5. Transportation Planning Summary (Miles)⁴

Activity	Mainline	Collector	Rocked Spur ¹	Dirt Spur ¹
Construct			0.3	
Improve		2.2	1.7	
Maintain ²		3.4	1.0	
Close/Block ³			0.3	
Vacate ³				

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

VII. AQUATIC RESOURCES AND WATER QUALITY:

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.

Cedar Creek, a large Type F, and a small, unnamed, Type F tributary to Cedar Creek are 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 inner and outer riparian zones of these Type N streams will be managed towards mature forest condition where possible.

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 entire sale area is within the Cedar Creek sub-basin. This sub-basin has been identified as a Salmon Anchor Habitat (SAH) Basin. The SAH Basin Strategies will be used in addition to the FMP Riparian Strategies at the time of sale layout and contract development. See the Salmon Anchor Summary Table for tracking of acres managed in each basin.

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.

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.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

There are steep and very steep side slopes in Areas 1 and 2. The initial risk assessment by the geotechnical specialist for Area 1 is moderate and for Area 2 is high. The geotechnical specialist will be consulted during sale layout field work. The landslide deposit mapped in the northwestern portion of Area 2 is not expected to represent significant risk for the timber sale due to the deep-seated nature of the deposit, however should any signs of active movement be observed during timber sale layout field work the geotechnical specialist will be consulted.

The sale areas have been identified as within a SAH Basin and the slope stability SAH Strategies will be used at the time of contract development. See the Summary Document for more information.

X. RECREATION RESOURCES:

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

Frankenstein is an OHV trail that is within the sale areas. Short term closure of this trail 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 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 sites are noted during sale preparation or administration.

XII. SCENIC RESOURCES:

Area 1 and the majority of Area 2 have a visual classification of Level 3, low sensitivity. A two acre strip below Wolf Point Road in Area 2 has a visual classification of Level 1, high sensitivity. This portion of the sale will be reviewed by the Public Use Coordinator to determine methods to minimize visual impact.

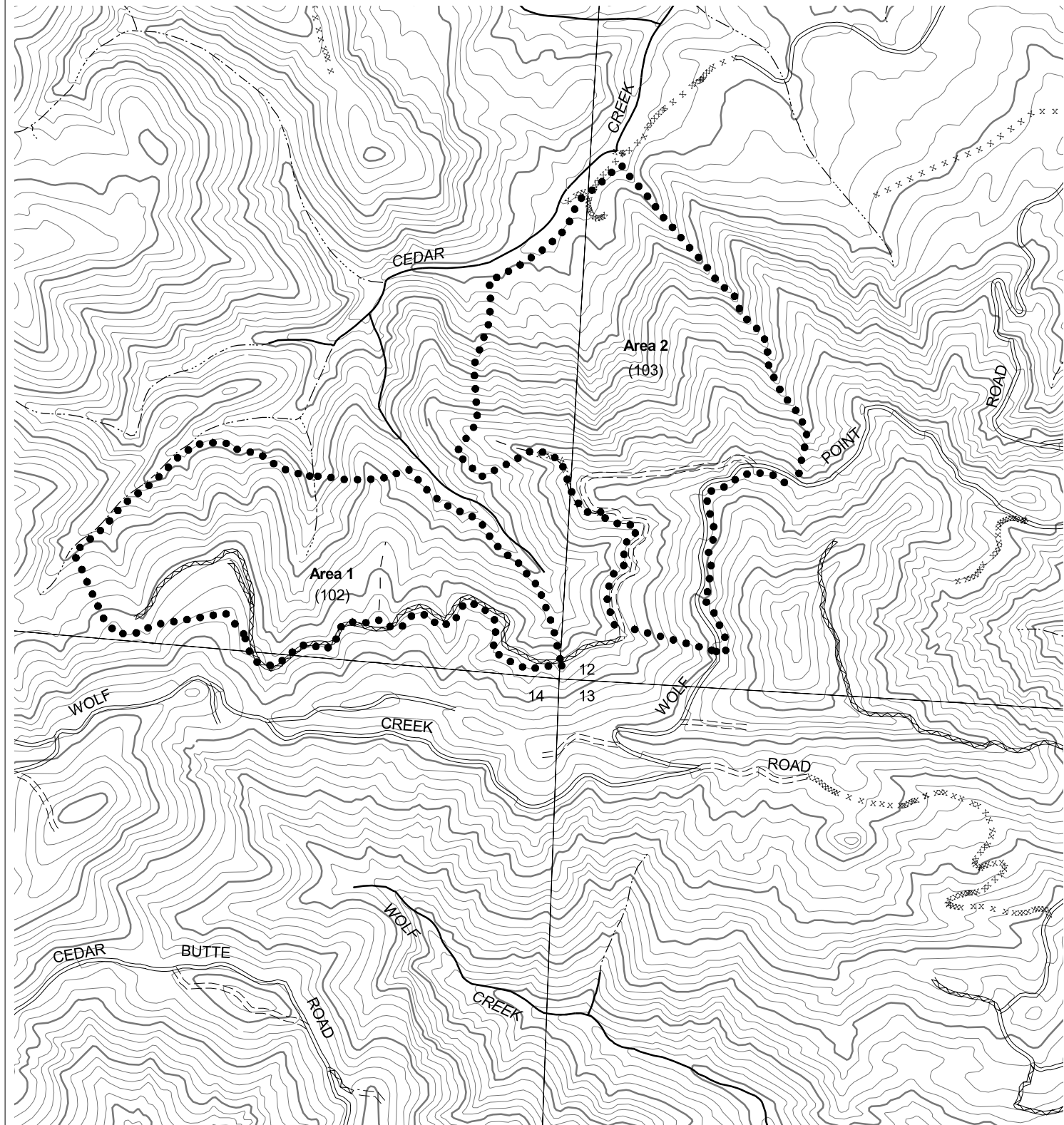
XIII. OTHER RESOURCE CONSIDERATIONS:

A permanent inventory plot is within Area 1. Permanent plot markings will be protected according to guidelines.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

The sale areas contain Focused and Special Stewardship, Aquatic and Riparian Habitat. Both areas contain Focused, Wildlife because they are entirely within the Cedar Creek Salmon Anchor Habitat Basin See Section VII, Aquatic Resources and Water Quality, for the management guidelines to be utilized. The sale areas contain Focused, Recreation. See Section X, Recreation Resources. Area 1 contains Special, Operationally Limited. This acreage is within the buffer. Area 2 also contains Focused Stewardship, Visual. See Section XII, Scenic Resources.

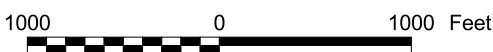
Boundary lines depicted on Attachment C are approximate; exact locations and site specific management activities will be determined during the sale preparation process.



- 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
- x x x Blocked/closed road

Between Wolves
-- Topography --
2008 SALE PLAN
TILLAMOOK DISTRICT
 Portions of Sections 11, 12, and 14,
 T1N, R8W, W. M.
 Tillamook County, Oregon

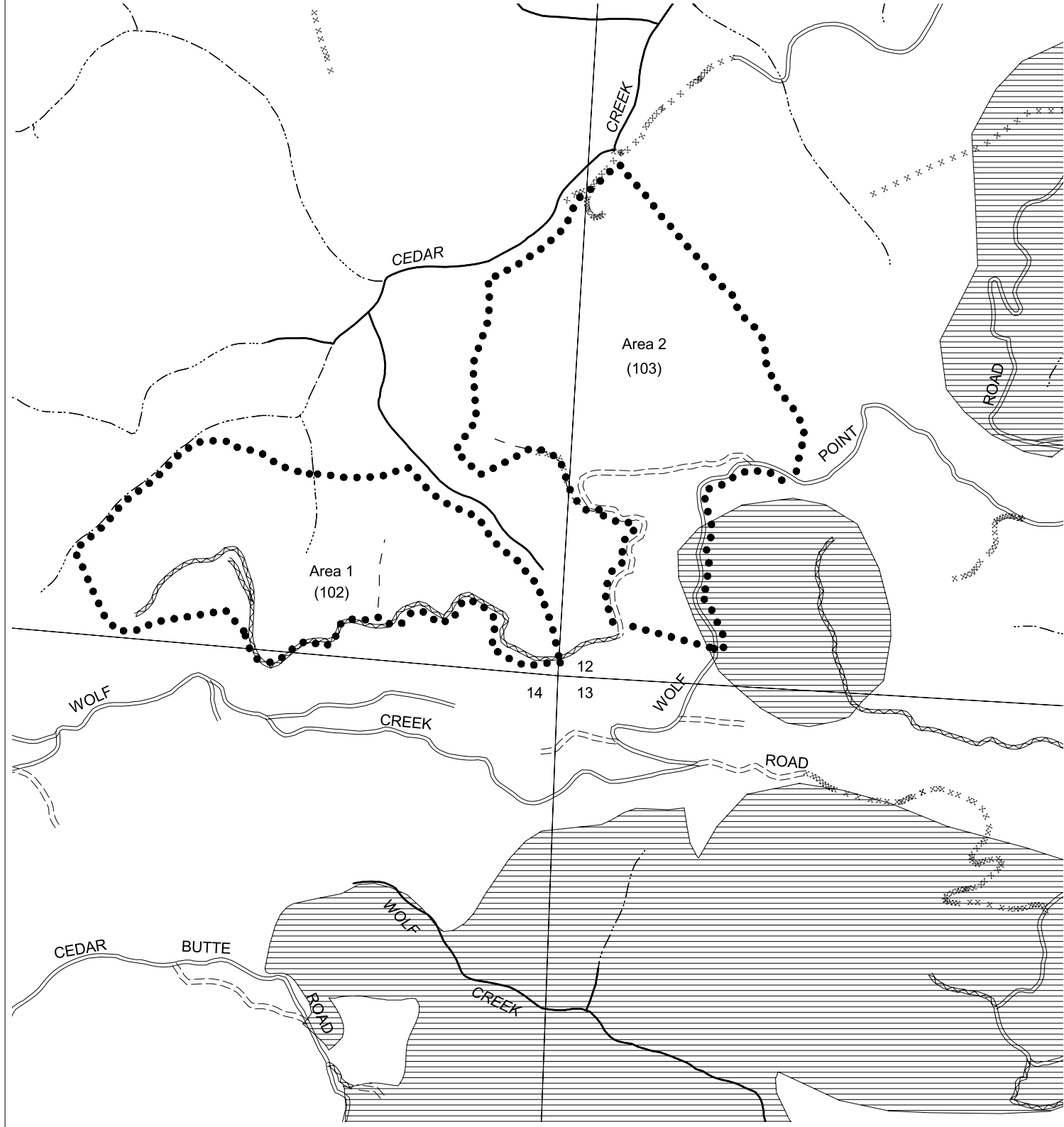
Area	Type of Operation
1	Modified clearcut
2	Modified clearcut



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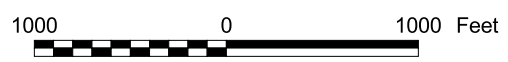
* Streams of unknown fish presence are not shown but will be surveyed prior to the sale



- 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
 - Blocked/closed road

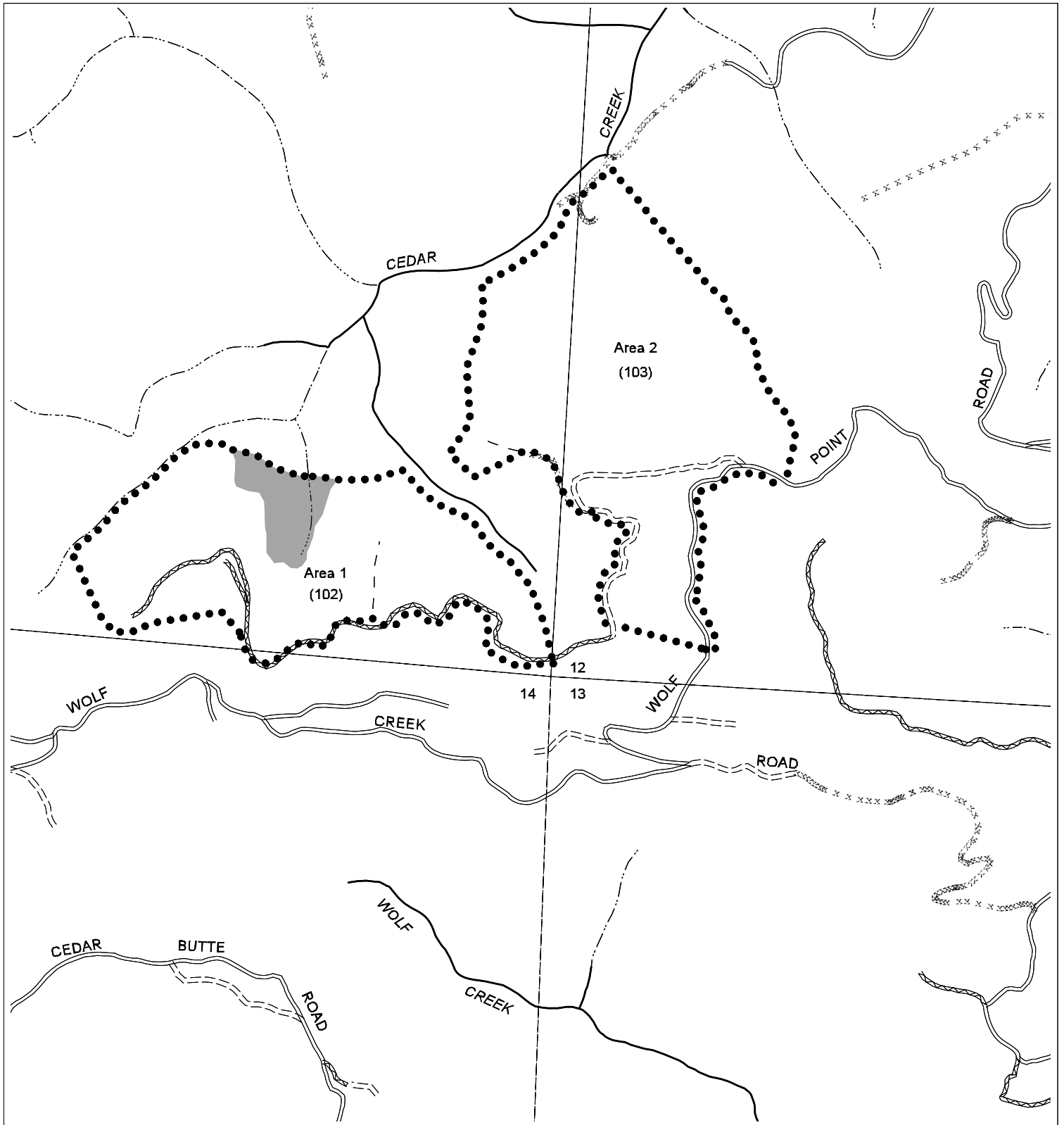
Between Wolves
-- Current and Future Condition --
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












Area	Type of Operation
1	Modified clearcut
2	Modified clearcut



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 02/06/2007
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* 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
-  Road construction
-  County road
-  Blocked/closed road

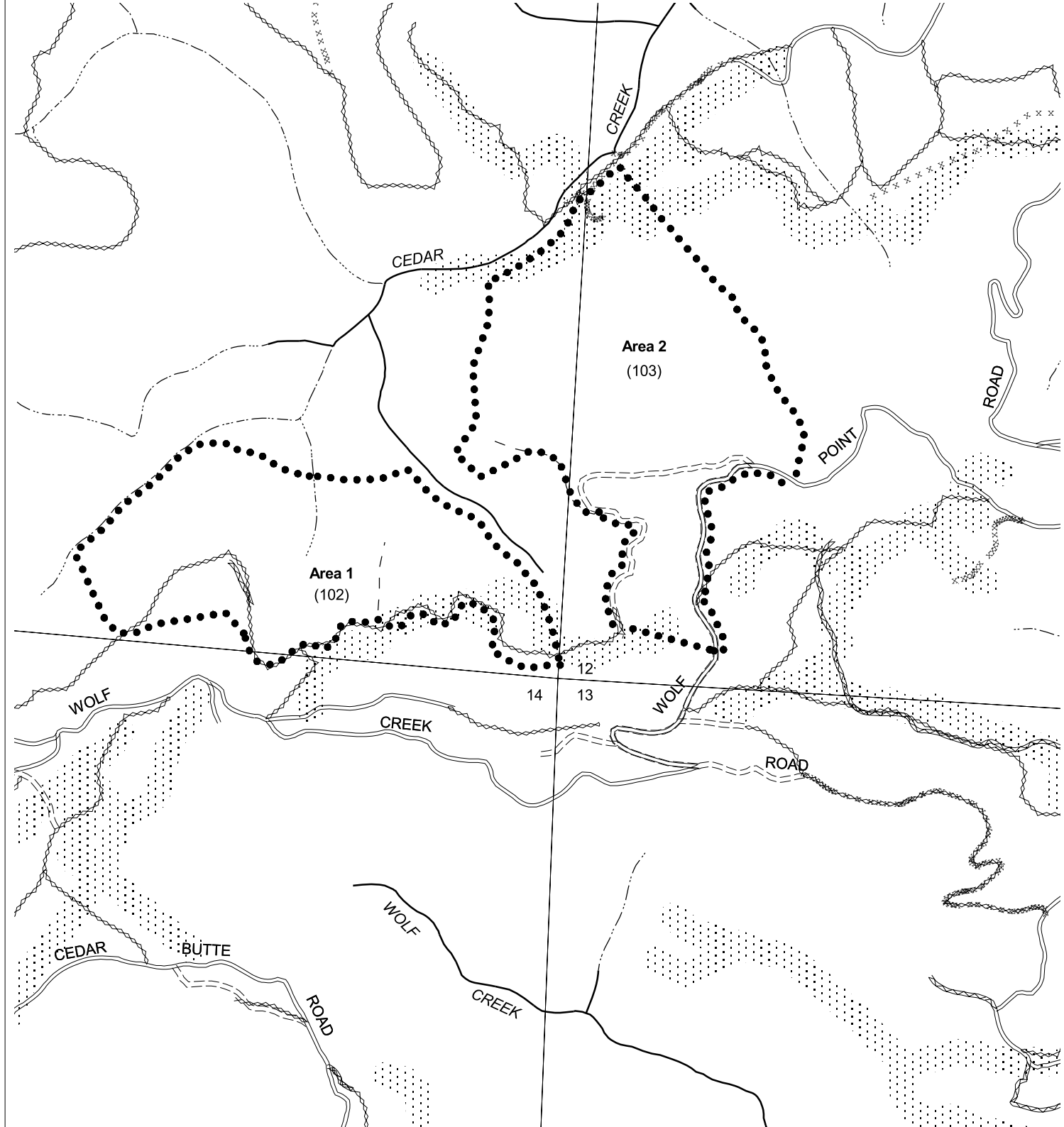
Between Wolves
-- Key Resources --
2008 SALE PLAN
TILLAMOOK DISTRICT
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Area	Type of Operation
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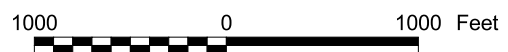
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- | | | | |
|--|-------------------------------------|--|---------------------------|
| | Campground | | Area boundary |
| | Day Use Site | | Sale boundary |
| | OHV Staging Area | | Ownership boundary |
| | Trail Head | | Perennial Type-F stream * |
| | Boat Launch | | Perennial Type-N stream * |
| | Interpretive or Administrative Site | | Unsurfaced road |
| | Stewardship | | Surfaced road |
| | Focused | | State/Federal highway |
| | Special | | Legacy road |
| | | | Road construction |
| | | | County road |
| | | | OHV trail |
| | | | Non-motorized trail |

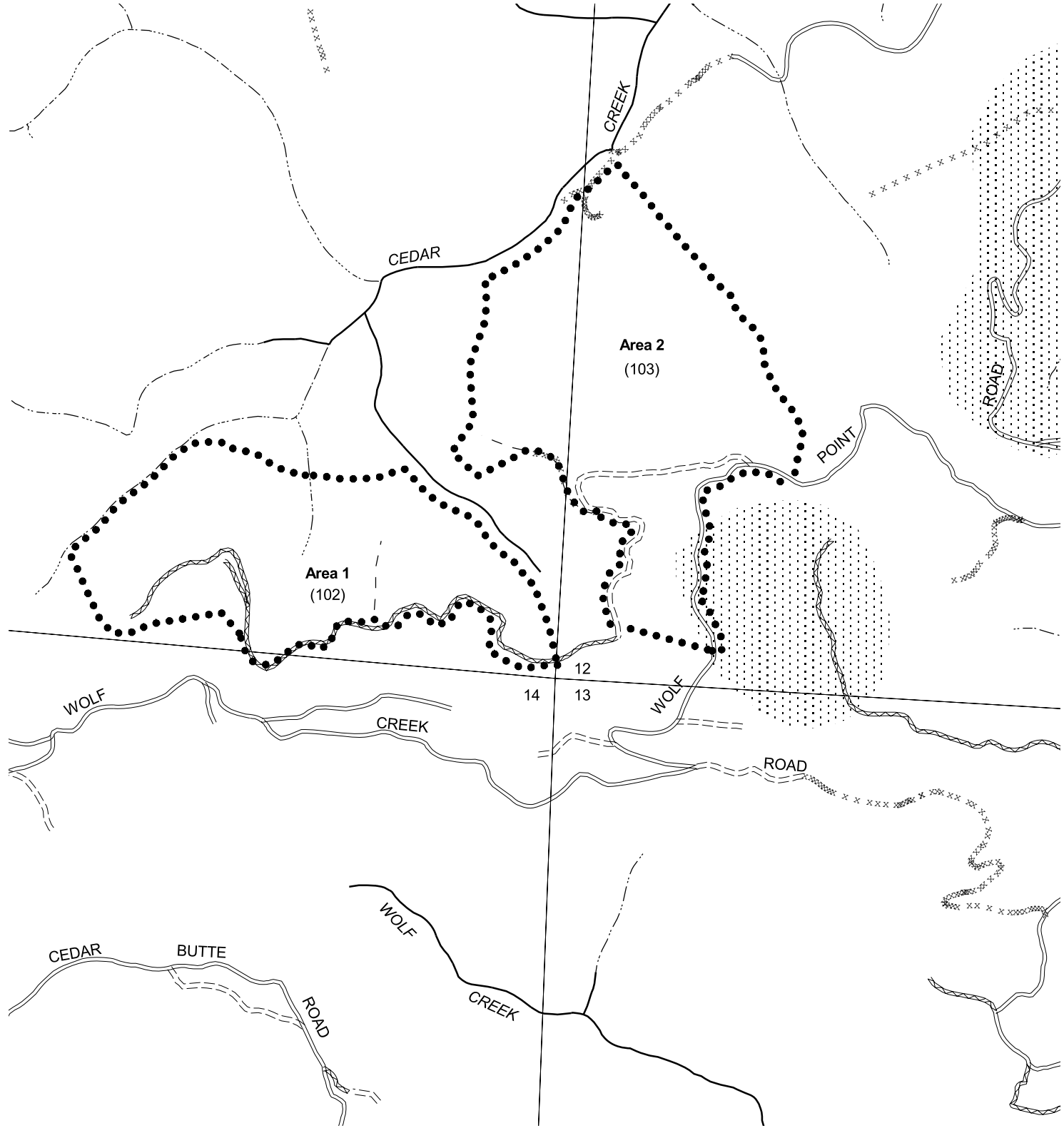
Between Wolves
--Key Resources/Recreation --
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- | | | | |
|--|---------------------|--|---------------------------|
| | Stewardship Focused | | Area boundary |
| | Special | | Sale boundary |
| | | | Ownership boundary |
| | | | Perennial Type-F stream * |
| | | | Perennial Type-N stream * |
| | | | Unsurfaced road |
| | | | Surfaced road |
| | | | State/Federal highway |
| | | | Legacy road |
| | | | Road construction |
| | | | County road |
| | | | Blocked/closed road |

Between Wolves
-- Key Resources/Visual --
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	Type of Operation
Area 1	Modified clearcut
Area 2	Modified clearcut

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