

Pre-Operations Report

Operation Name: Lookout Mtn
County: Marion
Management Basin: Butte Creek

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres
I	PC-L	186	181

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

The operation is located within a temperate climate area. Typically the fall and winter seasons are wet. This area receives approximately 70 to 90 inches of rainfall per year. The operation is located within the *Tsuga heterophylla* Zone (Natural Vegetation of Oregon and Washington, Franklin & Dyrness, 1973). The elevations range from 3700 to 4300 feet with variable slopes of 20 to 70 percent. Aspects are also variable with an unnamed stream flowing east to west dissecting the operation area.

Henline and Goodlow soils are found within the operation area. The Henline series is comprised of moderately deep, well-drained medium-textured skeletal soils developing from Miocene age andesite. These soils are granular gravelly to extremely gravelly loams in the A and B horizons. Depth to andesite bedrock varies from 20 to 40 inches. Rock content ranges from 50 to 90 percent in the solum. Henline soils occur on steep to precipitous mountain slopes at elevations above 3200 feet where mean annual precipitation ranges from 80 to 110 inches.

The Goodlow series consists of deep, well-drained, medium-textured colluvial soils developing from Miocene age andesite. These soils are very dark to dark brown sandy to gravelly loams in the A and B horizons. The weakly structured C horizons or bedrock occur at 40 inches. Rock volume ranges from 10 to 40 percent in the solum. These soils occur on gentle to steep mountain slopes at elevations over 3200 feet in areas where the mean annual precipitation varies from 80 to 110 inches.

II. CURRENT STAND CONDITION:

The majority of the harvest area is currently in an Understory (UDS) stand type with a small amount in Closed Single Canopy (CSC). The sale area is a mixture of stand types that were logged in the 1940's. The stands regenerated naturally and, as a result, are patchy and dense. Pacific silver fir, noble fir, western hemlock, and Douglas-fir are the major conifer species. Western red cedar is a

minor species. The Douglas-fir have been heavily damaged by snow loading and future growth potential is lower than the other conifer species. The western hemlock, Pacific silver fir, and noble fir have sustained some snow damage but have recovered and should respond favorably to thinning.

The understory vegetation consists of a variety of brush and conifer seedlings with beargrass abundant in places. Current inventory indicates huckleberry and rhododendron are the most abundant brush species with tag and Sitka alder, devils club and several other brush species present. The harvest area has approximately 0.1 snags per acre in decay classes 3 through 5 greater than 24 inches. There are 40 cubic feet per acre of sound down wood all less than 24 inches. In decay classes 3 through 5 there are 13 pieces totaling 1,750 cubic feet larger than 24 inches and 560 cubic feet per acre of down wood 24 inches and smaller. (SLI, 2002,2003)

Table 2. Stand Inventory Information

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	SDI	Acres ²
I	PC-L	12340	DF,SF,WH	50	12	168	204	50	63
		12331	SF,DF	50	13	214	237	59	71
		12330	SF,WH,NF	57	13	192	193	52	29
		12328	DF,WH,RC	48	14	200	179	53	6
		12329	SF,WH,NF	48	13	166	184	46	17
		Target ³			14	145	125	30	186

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

2 The acres are based on GIS and include roads, streams buffers, reserve areas, etc.

3 The Target identifies expected stand characteristics (DBH, BA, TPA and SDI) after harvesting has been completed.

III. DESIRED FUTURE CONDITION / VISION:

The Desired Future Conditions (DFCs) for the harvest area are Layered (LYR) and Older Forest Structure (OFS). The DFC of the harvest area is a multi-layered, multi-species stand with a large tree overstory consisting mainly Pacific silver fir, noble fir, and western hemlock with a smaller component of large Douglas-fir, and a few western red cedar, a second story of smaller conifer trees, a third story of saplings and brush, and a ground layer of herbs with a substantial number of large, down logs. Snags of various sizes and species will be scattered throughout the area. Snags and downed wood of various sizes and decay classes will increase over time due to natural conditions or through recruitment during harvesting activities.

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest ¹	Desired Future	Acres
I	12340	UDS	UDS	OFS	63
	12331	UDS	UDS	LYR	71
	12330	UDS	UDS	LYR	29
	12328	CSC	UDS	OFS	6
	12329	UDS	UDS	LYR	17

¹ The stand is expected to develop into this condition in the five to ten years after this operation is completed.

IV. PROPOSED MANAGEMENT PRESCRIPTION:

The objective for this operation is to move this stand along a pathway to complexity. Initially, this means maintaining and enhancing the structural elements that are key to layered stands. In the short term, the harvest operations will not significantly change the stand type but will reduce the stand density sufficiently to improve the vigor of the understory and enhance the growth characteristics of the residual trees so the needed component of large conifer will eventually develop.

The proposed management prescription for the sale area is:

- Thin all trees greater than 8 inches DBH to: basal area of 145; 125 TPA; ave DBH 14 inches; and SDI 30%.
- Preference will be to leave the true firs first, hemlock second and Douglas-fir last.
- Reserve all Old-growth trees from cutting.
- Reserve all hardwoods
- Retain all snags and down wood
- Snag and down wood recruitment is not planned for this entry due to small tree size.

In the years to come, this stand will receive a series of thinnings on a 15 to 20 year cutting cycle that are similar to the one currently proposed. It is expected that each thinning will continue to enhance layering through recruitment of down wood and snags, maintaining a hardwood component, addition of understory cohorts, and promotion of overstory growth. It is also expected that this stand will be harvested when it is 110 to 150 years old.

V. ESTIMATED TIMBER AND REVENUE OUTPUTS:

Table 4. Timber and Revenue

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

	Conifer	Hardwood	Total
Net Volume (MBF)	430		
Stumpage Value (\$/MBF)	\$200		
Estimated Gross Value	\$86,000		\$86,000
		Project Costs:	11,750
		Estimated Net Value:	\$74,250

VI. HARVESTING AND ACCESS CONSIDERATIONS:

The sale area will be accessed via .6 miles of the Butte Cr. Mainline and 8.8 miles of the Butte Cr. 500 Road. These are mainline roads with a durable surface that can support moderate winter use. The roads have a pit run base and various segments have 0" to 6" of crushed rock for a running surface. The last 2.6 miles of road has very little if any crushed rock over the pit run base. The sale can get snowed in from about November through March and will not be open for travel during that time. Surface upgrades have not been economical in this area for two reasons. This is the back end of State ownership and the timber sales/types in this area have been of low value. For this sale, spot rocking will be done on the back end of the BC 500 as needed to smooth out the ride using crushed rock from the D-diaper rock pit/stockpile located in Sec 2 of T8S R3E.

This high elevation sale is planned to be a summer only operable timber sale. One existing pit run rock road (about 2750 ft in length) in the northern half of the unit will be reopened. From this reopened road an unsurfaced 900 foot spur road will be built to access tractor ground and reduce ground yarding distances. Two other spur roads (1400 ft and 700 ft) will be constructed on the south half of the sale to access cable landing locations. All new roads will be constructed with a 16 ft subgrade and outsloped for drainage. These roads will also be left unsurfaced to minimize costs for this low value sale. No roads will be constructed through or near a high landslide hazard location or across Type F streams. Roads in the sale without rock surfacing will be blocked and or vacated after the sale is done.

The majority of the sale area is suitable for ground harvesting systems that minimize the cost of logging. Ground harvesting will be on the slopes less than 40% and will reuse old existing cat roads. Steep terrain on about 50 acres of the sale will require a cable logging system. A small tower less than 50 feet tower height will be adequate for the yarding.

Project work

New road construction

2750 ft of old road to re-open	\$2,750
3000 ft of new road, natural surface	<u>\$9,000</u>
Total cost	\$11,750

Table 5. Transportation Planning Summary (Miles).

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0	0	0	1.1
Improve	0	0	0	0
Maintain	9.4	0	0	1.1
Close/Block	0	0	0	1.1

VII. AQUATIC RESOURCES AND WATER QUALITY:

There is one small stream of unknown fish type in the operation area. This stream flows eventually into Butte Creek, a large Fish (Type F) stream. If the unknown stream is determined have a fish presence (Type F), a buffer of at least 50 foot horizontal distance will be posted on either side of the stream. Sufficient trees will be retained in the outer RMA zone to comply with current standards. If the stream is determined not to have fish presence (Type N), a buffer of at least 25 feet horizontal distance will be posted on either side.

VIII. WILDLIFE AND T&E SPECIES CONSIDERATIONS:

While the sale is not located within any Northern Spotted Owl circles, the sale area was determined to be suitable habitat for this species. Surveys were completed to protocol in the 2007 survey year with no responses. An additional year of surveys will be completed in 2008.

Cold water corydalis (*Corydalis aquae-gelidae*) was found in an area north of the sale area, see Attachment C: Key Resources. This plant is a candidate for threatened and endangered status, but is not currently proposed under the state of Oregon’s Endangered Species Act. It will be protected during harvest activities.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

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

There are bands of high landslide hazard locations along the lower slopes in the sale. The sale drains into the South Fork of Butte Creek, Fiber Lake, Butte Lakes, and Abiqua Creek. The lakes appear to be glacial tarns, and all of the drainages show signs of Pleistocene glaciation. The risk of landslides delivering directly from the sale to Fiber Lake and the South Fork of Butte Creek is low and to Butte Lakes and Abiqua Creek is low to moderate.

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

X. RECREATION RESOURCES:

The High Lakes Recreation Area borders the northeast sale boundary. It is a popular spot for camping, hiking, day-use, fishing and site seeing. The scenic special stewardship boundaries of Rhody and Butte Lakes meet the sale boundary. The timber sale's location should not impact the scenic areas of these lakes. While there are no developed recreation trails inside the sale boundaries public use in its vicinity is high. In the sale boundary the most common uses are dispersed activities such as hunting, site seeing and primitive camping. Where the haul route and recreation access roads merge informational and caution signs will be posted. It will be important for both the operators and visiting public to use caution on roadways. Illegal motorized off-road use and garbage dumping in this area is high. Once the timber sale is complete access roads into the unit will be blocked to deter garbage dumping and reduce soil erosion from off-road impacts.

XI. CULTURAL RESOURCES:

The District cultural resource inventory and pre-operation reconnaissance revealed no visible cultural resource features or artifacts. If discovery is made, the cultural resource will be protected and field staff will consult with the Cultural Resource Specialist in Salem.

XII. SCENIC RESOURCES:

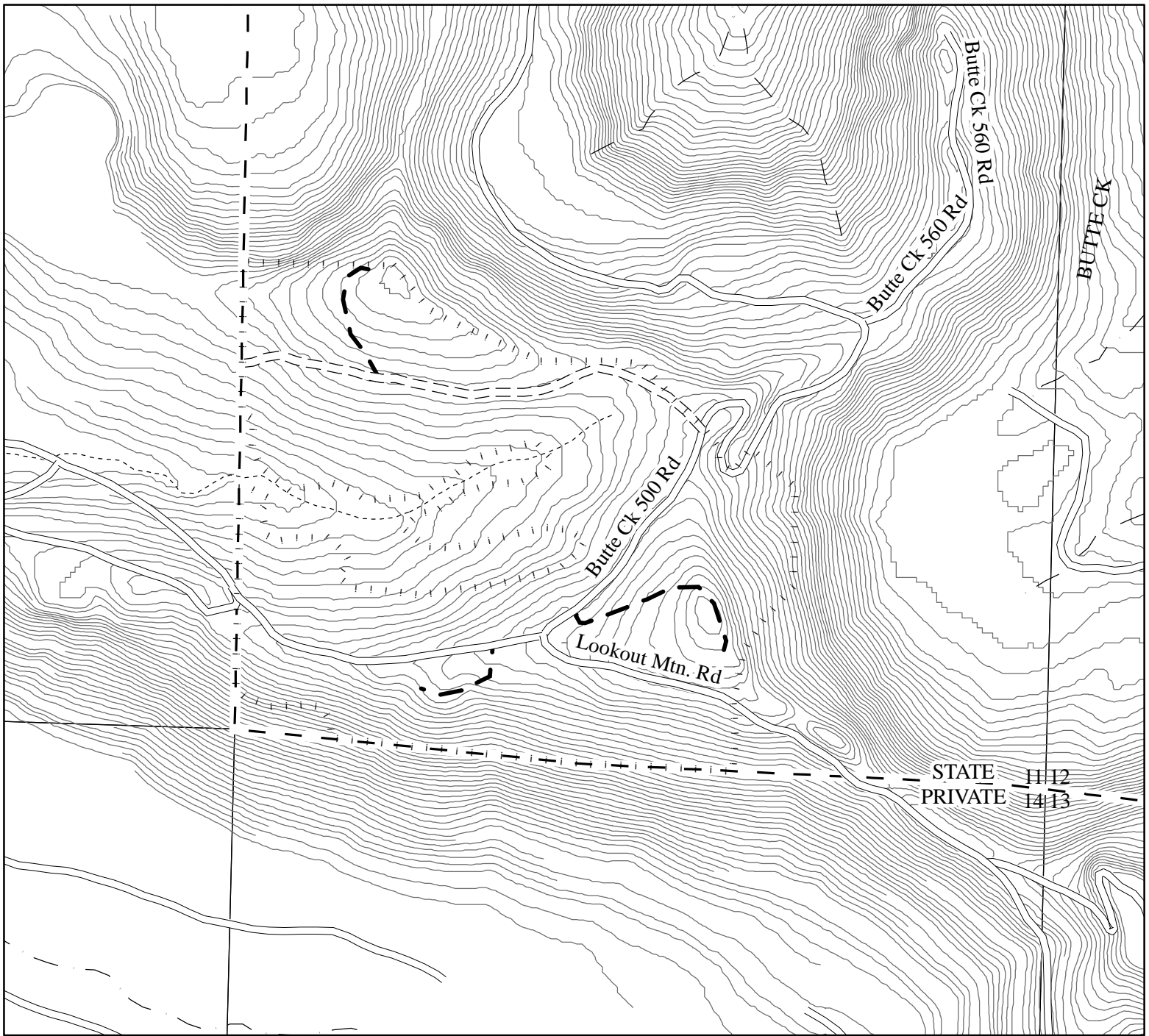
The light thinning prescription for this area should result in minimal visual impacts to the High Lakes Recreation Area. See Section X, Recreation Resources for explanation about the recreational resources.

XIII. OTHER RESOURCE CONSIDERATIONS:

There are no other resource considerations.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

The Land Management Classification System has indicated special stewardship for aquatic and riparian resources. See Section VII, Aquatic Resources and Water Quality for explanation about riparian resources.



Legend

- Sale Boundaries
- ==== Surfaced Road
- ==-- Unsurfaced Road
- New Road Construction
- Type F Stream
- Type N Stream
- Unknown Stream
- - - State Forest Property Boundary
- 40 Foot Contours
- Common School Land

LOOKOUT MOUNTAIN

FY 09 AOP
 NORTH CASCADE DISTRICT
 ATTACHMENT A : TOPOGRAPHY

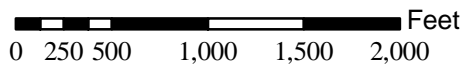
PORTIONS OF SECTION 11
 T8S, R3E, W.M.
 MARION COUNTY, OR

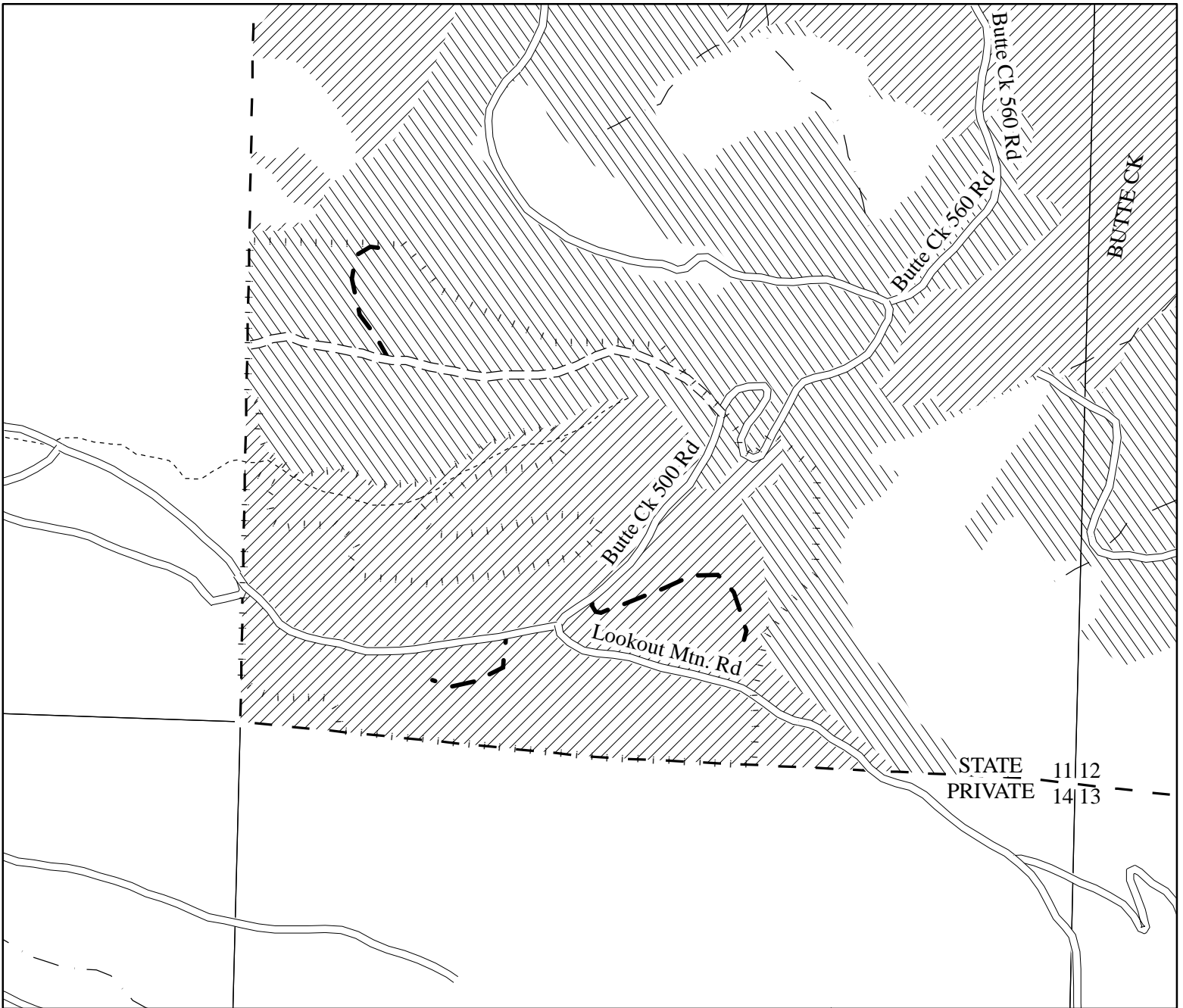
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APPROXIMATE NET ACRES: 181 (PC)

Scale
 1:12,000
 1 inch = 1000 feet

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LOOKOUT MOUNTAIN

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 ATTACHMENT B : DESIRED FUTURE CONDITION

PORTIONS OF SECTION 11
 T8S, R3E, W.M.
 MARION COUNTY, OR

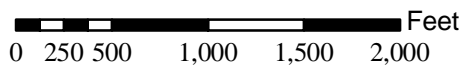
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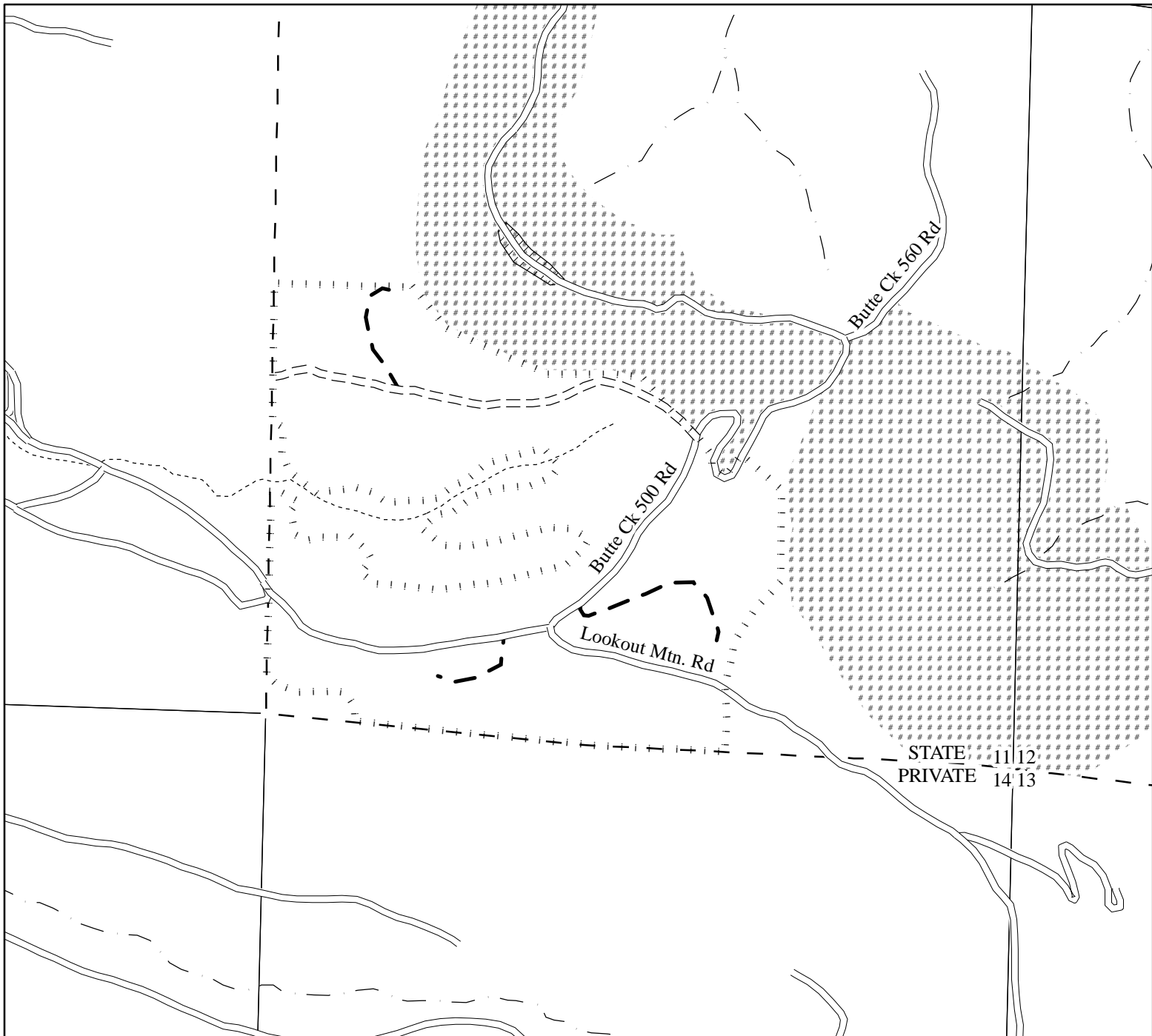
- Sale Boundaries
- ==== Surfaced Road
- ==-- Unsurfaced Road
- New Road Construction
- Type F Stream
- Type N Stream
- Unknown Stream
- //// LYR
- \\\\\\ OFS
- - - State Forest Property Boundary
- Common School Land

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Legend

- Sale Boundaries
- ==== Surfaced Road
- ==-- Unsurfaced Road
- New Road Construction
- Type F Stream
- Type N Stream
- Unknown Stream
- ▨ Protected Plant
- ××× Progeny Site
- ##### Recreation Area
- State Forest Property Boundary
- Common School Land

LOOKOUT MOUNTAIN

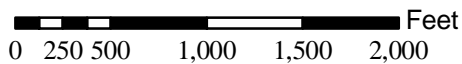
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 ATTACHMENT C : KEY RESOURCES

PORTIONS OF SECTION 11
 T8S, R3E, W.M.
 MARION COUNTY, OR

3

APPROXIMATE NET ACRES: 181 (PC)

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 1:12,000
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