

# Pre-Operations Report

**Operation Name: Bonsai**  
**County: Benton**  
**Management Basin: Bonner Ridge**

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

Area	Type of Operation	Net Acres
	Modified Clearcut	45
Total		45

## **I. PHYSICAL DESCRIPTION OF OPERATION AREA:**

The operation consists of one modified clearcut unit. The unit lies in the western hemlock vegetation zone. Average rainfall is 68 to 78 inches per year. The soils are a combination of Valino and Bateman. The soil information is derived from a soil survey completed in 1980.

The landforms are gentle to moderate upper-slopes and the steeper side-slopes of the east flank of Burgett Creek. There are only two small bands of steep slopes in the operation area, near the western boundary. The underlying rocks are sedimentary origin of the Tye Formation.

The aspect for the area is generally west.

## **II. CURRENT STAND CONDITION:**

The operation area supports 73-110 year old Douglas-fir trees with a few red alder and big leaf maple trees existing mostly in the draws.

Some snags and down wood are present although in limited numbers.

Brush species include salal, vine maple, hazel, Oregon grape, and swordfern.

The stand type is a combination of Understory (UDS) and Layered (LYR) as determined by SLI and district information.

**Table 2. Stand Inventory Information**

Area	Prescription	Stand ID <sup>1</sup>	Species	Age	DBH	BA	TPA	RD	Acres <sup>2</sup>
	Modified Clearcut	18251	Douglas-fir	110	21	275	114	60	25
		18078	Douglas-fir	77	27	266	75	51	10
		18264	Douglas-fir	73	17	225	143	55	10

1 The source of stand inventory information is from SLI and OSCUR 99 data.

2 The acres are based on (orthophotos and GIS) and exclude roads, streams buffers, reserve areas, etc.

### III. DESIRED STAND CONDITION:

According to the district's landscape design, the operation area is designated as Desired Future Condition (DFC) General and is scheduled to become an UDS stand and not a more complex stand such as LYR or Older Forest Structure (OFS).

**Vision:** When the next final harvest occurs in this operation area, the stand will be 70-80 years old and will be in the UDS condition. At that time, the stand will consist of an overstory of well stocked Douglas-fir with smaller amounts of western hemlock, western redcedar and grand fir, and a few bigleaf maple and red alder. Where there are gaps in the overstory, there will be an understory of mixed conifer, hardwood and brush (vinemapple, salal, sword fern). Legacy trees (about 4 per acre) left from the first regeneration harvest will be located in small clumps and also scattered across the area. These Douglas-fir trees will average about 48 inches DBH. Both large and small snags and large and small down wood will be located throughout the unit.

**Table 3. Stand Structure Information**

Area	Stand ID	Current	Post Harvest <sup>2</sup>	Desired Future	Acres
	18251	UDS	REG	UDS	25
	18078	LYR	REG	UDS	10
	18264	UDS	REG	UDS	10

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:

**Anticipated Pathway:** This harvest will be a modified clearcut prescription leaving behind about 8-10 green trees per acre ranging from 17-28 inches DBH. The majority of these reserve trees will be Douglas-fir with DBH greater than 20" but some alder and bigleaf maple may also be left. Existing snags that do not pose a safety hazard and all down wood will be retained. The area will be monitored for natural snag and down wood recruitment. If sufficient amounts

have not accrued naturally within 5 years after harvest, they will be artificially created from the reserve trees.

After harvest, a site prep herbicide treatment will be applied. The area will be machine piled, and piles will be burned. Prior to planting, mountain beaver may need to be trapped from the area.

Following completion of site prep activities, the area will be replanted with approximately 70% Douglas-fir, 15% western hemlock, 10% western redcedar and 5% grand fir at a rate of 436 trees per acre. This planting mix will help leave the option open for changing the DFC to a more complex condition if so desired. All cedar will be tubed to deter elk and deer browse. Once planting is complete, the operation area will fit the REG classification.

It is likely that at least one herbicide application will be needed within the first 3 years after planting in order to release planted conifer from competing brush. It is also likely that mountain beaver will be trapped again the first year after planting. By age 15 years the stand will have moved from REG to closed single canopy (CSC).

When the planted trees reach age 12-15, it is likely that pre-commercial thinning (PCT) will be used to reduce total trees per acre to around 222. The biggest and best trees will be selected to leave, also keeping roughly the same percent species mix as was planted, and allowing up to 10% of the mix to be comprised of naturally occurring hardwood.

At approximately age 30 the unit will be commercially thinned to an RD of 30-35. This thinning will capture harvest volume, maintain stand vigor, and will also move the stand on the pathway from CSC to UDS by opening the stand enough to allow vegetation to grow in the understory. Approximately 5-10 years following this thinning, the UDS condition will be achieved.

In about 10-15 years, the unit will again be thinned to an RD of 30-35. This thinning will capture harvest volume and maintain stand vigor. The amount and condition of down wood and snags will be evaluated and more will be created at this time if needed.

In another 10-15 years, tree growth rates will be evaluated and a decision will be made to either conduct a third thinning or to wait until final harvest at 70-80 years old.

## V. ESTIMATED TIMBER AND REVENUE INFORMATION:

**Table 4. Timber and Revenue**

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	0%		X
Planned Quarter:	4		

	Conifer	Hardwood	Total
Net Volume (MBF)	2,000	0	2,000
Stumpage Value (\$/MBF)	\$450		
Estimated Gross Value	\$900,000		\$900,000
		Project Costs:	\$97,000
		Estimated Net Value:	\$803,000

## VI. TRANSPORTATION PLANNING AND HARVESTING:

Access to this sale consists of one route off Hoskins County road. A short segment of private ownership exists between the county road and state lands for which the STATE has secured a permanent easement. The remainder of the haul route is through state lands. Five unsurfaced roads will need to be constructed to access the unit. These roads will be constructed on gentle ridge top ground. Access to the southwest portion of the unit will require construction of a short spur. This spur, and the road accessing this spur, will need an easement from an industrial forest landowner.

Five temporary stream crossing culverts will need to be installed. These culverts are on small, intermittent, non-fish streams. They will be removed after harvest operations are complete.

There are a few cross drains and small stream crossing culverts in the Bonner Creek parcel which are approaching the end of their design life. Fish distribution surveys are needed for these stream crossing culverts which are on small tributaries to Bonner Creek. These stream crossing culverts may be replaced based on stream designations.

Since this unit is planned as a summer operation, the roads are in adequate condition to sustain dry weather hauling.

Existing roads only provide timber harvest access to the east and south edges of the unit. New construction will provide access to the remaining portions of the unit. New roads will be located on stable ground and in areas that are not environmentally sensitive.

Harvesting timber in the operation areas would require a combination of 50% cable yarding and 50% ground skidding.

There will be no road improvement, only maintenance and new construction.

The unsurfaced roads within the unit will be waterbarred and blocked to vehicular traffic after harvesting operations are completed and/or at the beginning of the wet season.

**Table 5. Transportation Planning Summary (Miles).**

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct				0.8
Improve				
Maintain		2.1	2.0	
Close/Block				
Vacate				

**VII. AQUATIC RESOURCES AND WATER QUALITY:**

Water flowing from streams in the operation area is part of the Luckiamute River System.

There is a stream to the west of the operation area (Burgett creek) and within the operation area. Fish distribution surveys will be conducted to determine if fish are present in either of these streams. If either of the streams is determined to be a type F, the timber sale boundary or buffer zone will be posted about 100' horizontal distance from this stream and sufficient trees will be retained in the outer Riparian Management Area (RMA) zone to comply with current standards. If fish surveys determine no fish present the timber sale boundary or buffer zone will be posted 50-75 feet from the stream. In the remaining portion of the RMA zones sufficient trees will be retained to comply with current standards.

The possibility of placing large wood in Burgett creek to enhance fish habitat will be examined with the fisheries biologist from the Oregon Department of Fish and Wildlife.

Vegetation along the streams consists of conifer and hardwood trees and brush species such as salmonberry, elderberry, vine maple, and sword fern.

There are no registered domestic water intakes in the vicinity of the operation area.

Activities that will take place in proximity to the streams, listed above, include timber felling and yarding. The following measures will be employed to minimize impacts to the stream: 1) no timber will be felled within the buffer except to facilitate cable yarding, 2) timber above the buffer will be felled away from or parallel to the stream, 3) timber will be yarded away from the stream, where possible, 4) if it is necessary to yard logs across the stream, logs will be fully suspended above the buffer vegetation, and 5) single end suspension of logs will be required elsewhere in the units.

Other requirements designed to minimize impacts to streams include seasonal restrictions for road construction and log hauling.

The Land Management Classification System for Aquatic and Riparian category determined 6 acres in Focused Stewardship and 4 acres of Special Stewardship. Focused Stewardship acres are distributed along Type N stream RMA's and the outer zone of Type F streams. The Special Stewardship acres are distributed along the inner zone of the Type F stream.

#### **VIII. T&E SPECIES CONSIDERATIONS:**

The operation area contains suitable habitat for northern spotted owls and marbled murrelets. Surveys for both species were conducted in 2006 with no detections. Surveys will continue in 2007.

The operation areas were checked against district knowledge for any listed plant locations. The operation areas were also checked against the Oregon Natural Heritage Program (ONHP) database of known listed plant locations. No listed plant records were identified within the operation areas.

#### **IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:**

There are two bands of steep slopes within the operation area near the western boundary. The initial hazard and risk assessment from the geotechnical specialist is moderate. If these steep slopes are confirmed in the operation area as sale layout proceeds, the geotechnical specialist will be consulted to determine if a field visit is needed.

#### **X. RECREATION RESOURCES:**

Recreation in the vicinity of the operation area consists mainly of hunting.

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

The operation area was checked for cultural resources with the district's GIS inventory. No cultural resources are located in the vicinity of the operation area.

**XII. SCENIC RESOURCES:**

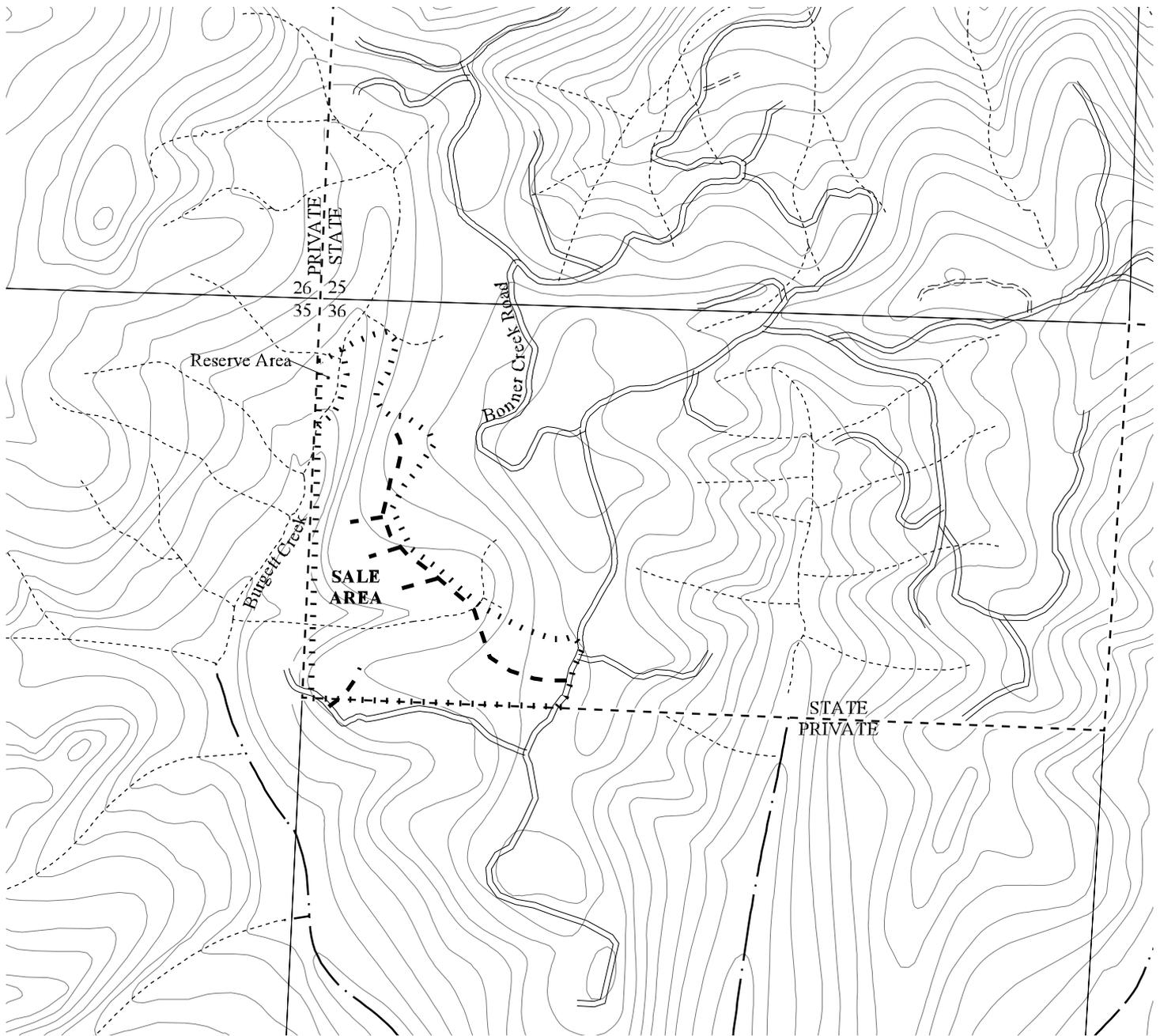
The operation area is not visible from any paved roads.

**XIII. OTHER RESOURCE CONSIDERATIONS:**

No other resource considerations were identified.

**XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:**

The operation area contains six acres of Focused Stewardship and four acres of Special Stewardship along the Type F stream in the NW corner of the area and along the Type N stream in the southern portion of the unit. See Section VII, Aquatic Resources and Water Quality, for the management guidelines to be utilized.



**BONSAI**  
 FY 08 AOP  
 WEST OREGON DISTRICT  
 ATTACHMENT A : TOPOGRAPHY

PORTIONS OF SECTION 36, T10S, R7W, W.M.  
 BENTON COUNTY, OREGON



**LEGEND**

- Timber Sale Boundary
- Roads**
- ▭ County Road
- ▬ Surfaced Road
- ▬▬▬ Unsurfaced Road
- ▬▬▬ New Construction
- Streams**
- Fish
- · · Nonfish
- · · · · Unknown
- - - State Forest Property Boundary
- Forty Foot Contour Lines

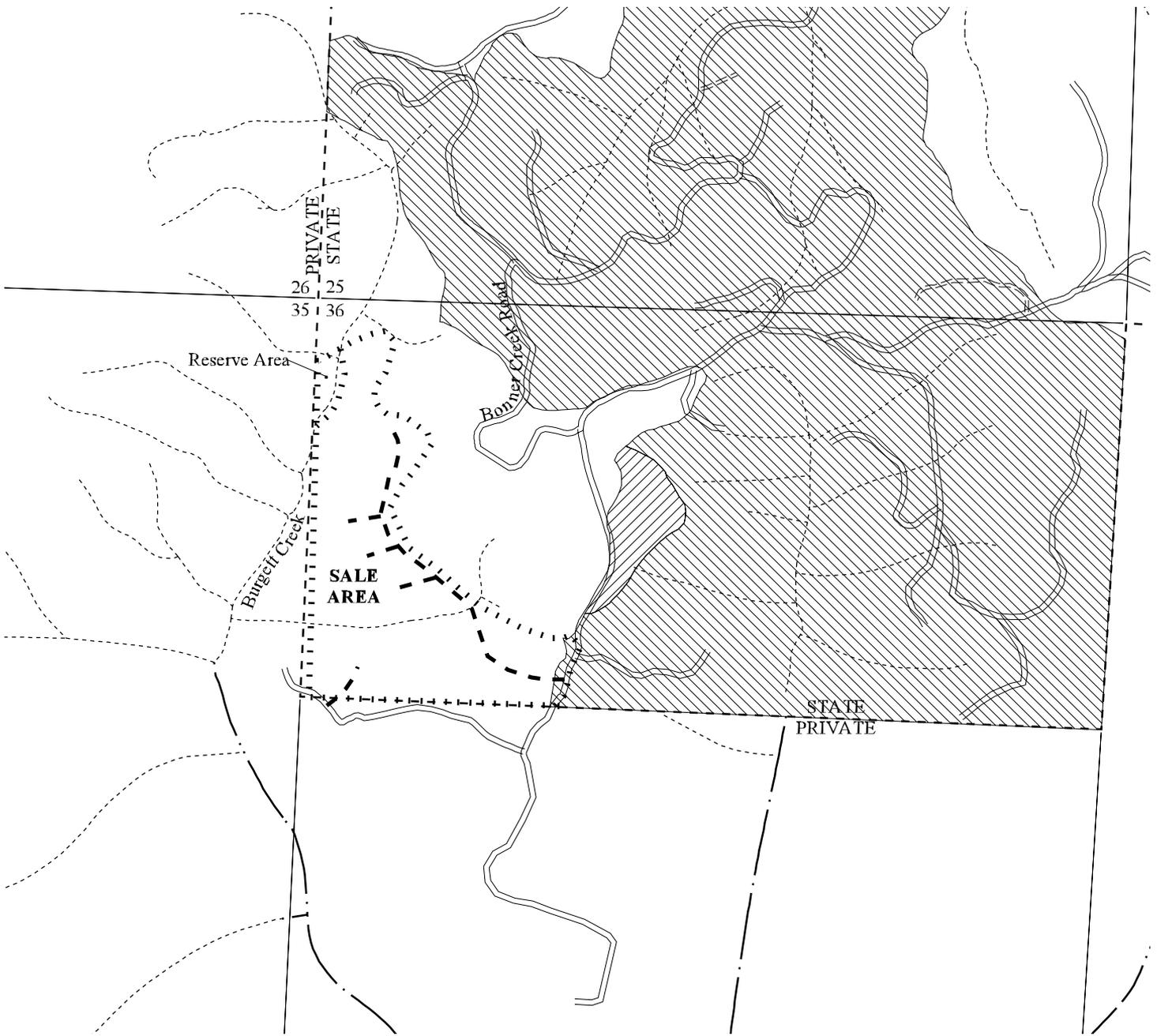
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APPROXIMATE NET ACRES

SALE AREA : 45 ACRES (MC)

Scale  
 1 : 12,000  
 1 inch = 1000 feet





**BONSAI**  
 FY 08 AOP  
 WEST OREGON DISTRICT  
 ATTACHMENT B : DESIRED FUTURE CONDITION

PORTIONS OF SECTION 36, T10S, R7W, W.M.  
 BENTON COUNTY, OREGON

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**LEGEND**

- Timber Sale Boundary
- Roads**
- ==== County Road
- ==== Surfaced Road
- ==== Unsurfaced Road
- New Construction
- Streams**
- Fish
- Nonfish
- Unknown
- State Forest Property Boundary
- Desired Future Condition
- [Hatched] OFS
- [Hatched] LYR
- [Solid] Common School Land

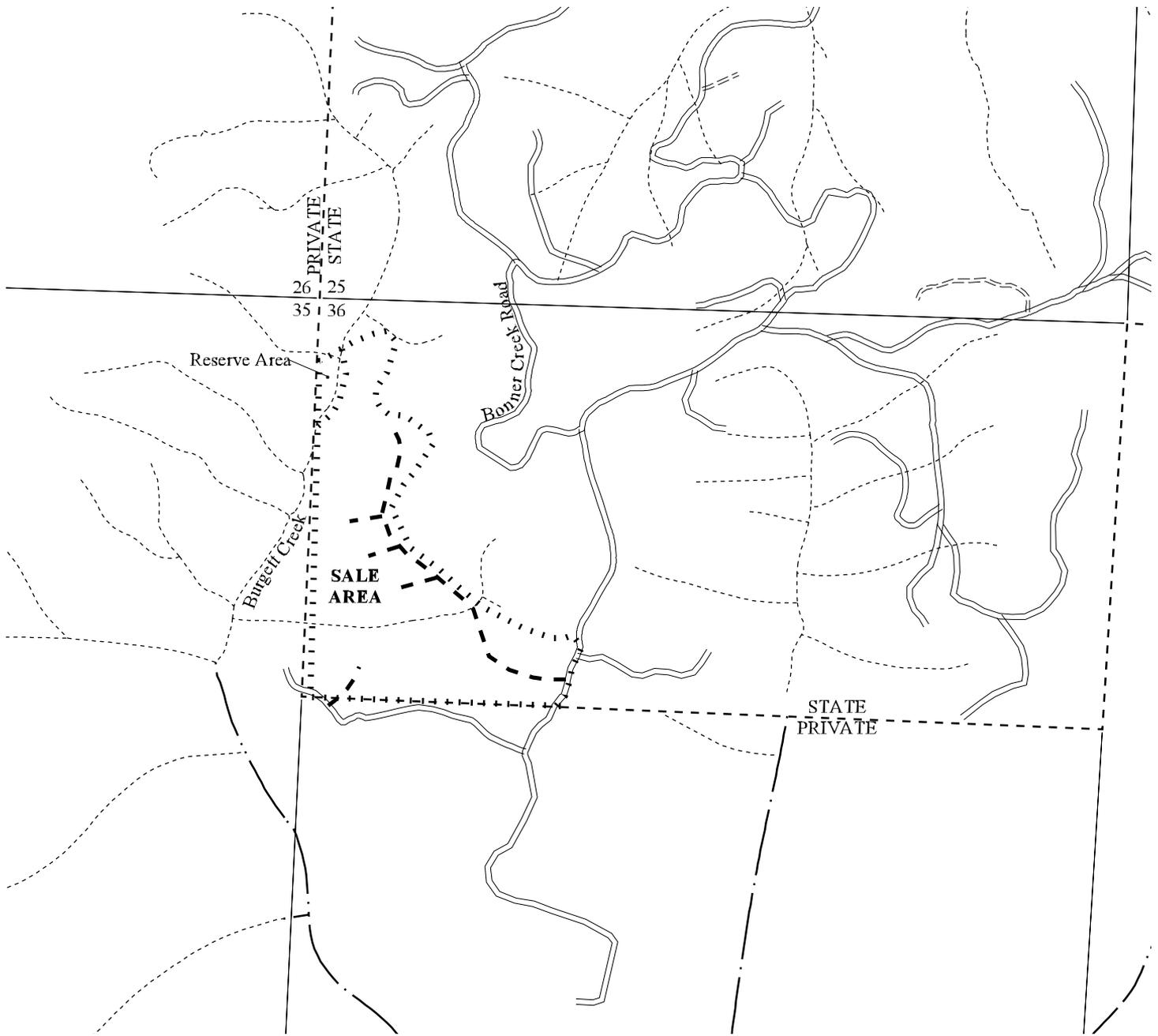


APPROXIMATE NET ACRES

SALE AREA : 45 ACRES (MC)

Scale  
 1 : 12,000  
 1 inch = 1000 feet





**BONSAI**  
 FY 08 AOP  
 WEST OREGON DISTRICT  
 ATTACHMENT C : KEY RESOURCES  
 PORTIONS OF SECTION 36, T10S, R7W, W.M.  
 BENTON COUNTY, OREGON



**LEGEND**

- ⋯⋯⋯ Timber Sale Boundary
- Roads**
- ▭▭▭ County Road
- ▬▬▬ Surfaced Road
- ═══ Unsurfaced Road
- — — New Construction
- Streams**
- — — Fish
- · · · · Nonfish
- Unknown
- - - State Forest Property Boundary

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APPROXIMATE NET ACRES

SALE AREA : 45 ACRES (MC)

Scale  
 1 : 12,000  
 1 inch = 1000 feet

