

# Pre-Operations Report

**Operation Name:** Green Tangle  
**County:** Polk, Lincoln  
**Management Basin:** Green Mountain

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

Area	Type of Operation	Net Acres
I	Moderate Partial Cut	39
II	Moderate Partial Cut	22
III	Moderate Partial Cut	51
IV	Moderate Partial Cut	13
V	Moderate Partial Cut	50
VI	Moderate Partial Cut	25
VII	Moderate Partial Cut	21
VIII	Moderate Partial Cut	38
Total		259

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

The operation consists of eight partial cut units. The units lie in the western hemlock vegetation zone. Average rainfall varies widely between the units. Areas I, II, portions of V, VI, VII and portions of VIII get 78 to 100 inches yearly. Areas III, IV and portions of V get 100 to 150 inches per year. Portions of Areas VI, VII, and VIII have an annual rainfall of 68 to 78 inches.

The soils consist of Killam for Area I and Bateman for the rest of the operation areas. The soil information is derived from a soil survey completed in 1980.

The aspect for the operation areas is as follows: Areas I, III, and V are mostly south; Area II and VII are primarily east; Area IV is southwest; Area VI is north and Area VIII is east/west.

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

Areas I-VIII support Douglas-fir plantations that range in age from 26-35 years old. A few western hemlock trees are present in Areas I – V. All of the operation areas were pre-commercially thinned 11-13 years ago. There are some red alder and big leaf maple present in all the stands. There are few snags and little down wood in the operation areas.

Brush species consist of salmonberry, vine maple, sword fern, salal, and elderberry are present in the understory but in small quantities.

All of the operation areas are classified as Understory (UDS) stand type. The stand type was determined by Stand Level Inventory (SLI) or district observation.

**Table 2. Stand Inventory Information**

Area	Prescription	Stand ID <sup>1</sup>	Species	Age	DBH	BA	TPA	RD	Acres <sup>2</sup>
I	Partial Cut	18002	DF	29	12	170	216	49	34
		18947	DF	29	12	170	216	49	5
		Target <sup>3</sup>			15	120	98	31	
II	Partial Cut	18005	DF	30	12	175	222	51	22
		Target <sup>3</sup>			15	120	98	31	
		18661	DF	26	12	180	229	52	51
III	Partial Cut	18661	DF	26	12	180	229	52	51
		Target <sup>3</sup>			15	120	98	31	
		18448	DF	35	13	180	195	50	13
IV	Partial Cut	18448	DF	35	13	180	195	50	13
		Target <sup>3</sup>			16	120	86	30	
		18025	DF	29	11	160	242	48	50
V	Partial Cut	18025	DF	29	11	160	242	48	50
		Target <sup>3</sup>			14	120	112	32	
		18214	DF	28	12	175	222	51	25
VI	Partial Cut	18214	DF	28	12	175	222	51	25
		Target <sup>3</sup>			15	120	98	31	
		18688	DF	28	12	170	216	49	21
VII	Partial Cut	18688	DF	28	12	170	216	49	21
		Target <sup>3</sup>			15	120	98	31	
		18065	DF	27	11	160	242	48	38
VIII	Partial Cut	18065	DF	27	11	160	242	48	38
		Target <sup>3</sup>			14	120	112	32	

1 The source of stand inventory information is district plot data from 2005, 2006.

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

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

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

According to the district's landscape design, all eight operation areas are designated as Desired Future Condition (DFC) General and are targeted to become UDS stands.

**Areas I – VIII Vision:** These stands will remain in the UDS stand structure following initial thinning and will stay in that condition until final regeneration harvest at around 70 years. At the time of final harvest, these areas will consist of well-stocked Douglas-fir in the overstory and brush (sword fern, hazel,

vinemaple) and forbs in the understory. A few hemlock and hardwoods will be scattered throughout the stands, both in the overstory and understory. Snags and down wood will be present throughout the stands.

**Table 3. Stand Structure Information**

Area	Stand ID	Current	Post Harvest <sup>1</sup>	Desired Future	Acres
I	18002	UDS	UDS	UDS	34
	18947	UDS	UDS	UDS	5
II	18005	UDS	UDS	UDS	22
III	18661	UDS	UDS	UDS	51
IV	18448	UDS	UDS	UDS	13
V	18025	UDS	UDS	UDS	50
VI	18214	UDS	UDS	UDS	25
VII	18688	UDS	UDS	UDS	21
VIII	18605	UDS	UDS	UDS	38

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

**IV. PROPOSED MANAGEMENT PRESCRIPTION:**

**Areas I – VIII Anticipated Pathway:** Each of the eight operation areas will be thinned to an RD of 30-32 and 120 ft<sup>2</sup> basal area. This will leave 86-112 TPA with an average diameter of 14-16 inches. This thinning will capture harvest volume and maintain stand vigor. Snags and downed wood will be left wherever possible and all trees other than Douglas-fir will be reserved from cutting.

A second thinning will be conducted in 10 to 15 years, when stand RDs have reached about 50. The aim of this thinning will be to again capture volume and maintain stand vigor. 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 a few years and conduct a regeneration harvest. If a third thinning is chosen, then final harvest will likely occur when the stands are around 70 years old.

## V. ESTIMATED TIMBER AND REVENUE INFORMATION:

**Table 4. Timber and Revenue**

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
85%	15%	<input type="checkbox"/>	X
Planned Quarter:	3		

	Conifer	Hardwood	Total
Net Volume (MBF)	1,400	0	1,400
Stumpage Value (\$/MBF)	\$180		
Estimated Gross Value	\$252,000		\$252,000
		Project Costs:	\$69,000
		Estimated Net Value:	\$183,000

## VI. TRANSPORTATION PLANNING AND HARVESTING:

Access to Areas I & II is from Big Rock Creek County Road, and associated spurs. Big Rock Creek County Road is user maintained and will require spot rock and grading. Access to Area I will use an existing roads which are surfaced and in adequate condition for wet weather haul. A portion of these roads will require a temporary use agreement with an industrial forest landowner. The other spurs are on State Lands. A portion of Area II may require logs to be yarded through Plum Creek Timber Co. land.

Areas III, IV, V, VI, VII, & VIII are accessed from Green Mountain Road. This collector road is in adequate condition to support wet weather haul. Access over the bottom of Green Mountain Road is through Industrial forest lands and a small woodland owner. Permanent easements are secured.

Access to Area III is via a surfaced spur off Broken Horn road. Most of this spur, and a portion of the Broken Horn Road, is over BLM property. A permanent easement is in place. These roads are surfaced but only suitable for minimal wet weather hauling, requiring only normal road maintenance.

Access to Area IV will require reopening a portion of an existing unsurfaced spur road. This segment will be rocked for wet weather hauling.

Access to Area V is from Bradish Boulevard. The portion of this road within Area V will have a maintenance lift of rock applied, bringing it back to it's original design standard for wet weather haul.

Access to the southern portion of Area VI is via an aggregate spur off Green Mtn. Road. Dry weather access to the center of Area VI will be provided by reopening an existing unsurfaced spur that extends northwest from the existing rocked road.

Dry weather access to Area VII will be achieved by constructing an unsurfaced ridge top spur off Green Mountain Road.

Access to Area VIII is via an existing unsurfaced ridge top spur off Harmsen Road.

Approximately 0.4 miles of improvement will be needed. This will consist of re-opening 2 existing roads. One of the roads will be re-opened for a short distance and surfaced.

Existing roads provide timber harvest access to 90% of the operation acreage. Because existing roads already access the majority of the sale area, no other transportation alternatives were considered.

Wet weather access is planned for Areas I, II, IV, & V.

Harvesting timber in the operation areas will require a combination of 85% cable yarding and 15% ground skidding.

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

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

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct				0.3
Improve			0.1	0.3
Maintain	4.1	11.9	0.6	0.8
Close/Block				1.4
Vacate				

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

Water flowing from streams in Areas I - VI are part of the Siletz River System. Streams flowing from Areas VII and VIII are part of the Yaquina River system.

Type F streams are present adjacent to, or within the following units: Big Rock Creek flows along the southeast side of Area I and the east side of Area II; Area III has Hays Creek to the southwest and Steere Creek to the south; Fisher Creek is southeast of Area V; Area VI has a small, unnamed type F stream exiting from

the west portion of the area; a small type F stream is present on the south side of Area VII, and a small type F stream flows through Area VIII.

Type N streams are present in some of units.

There are numerous streams in the operation areas with an unknown status for fish. Fish distribution surveys will be conducted to determine if fish are present.

For type F streams adjacent to an area, the timber sale boundary will be posted at least 25' horizontal distance from the streams. For type F streams that are within an area, a 25' horizontal distance buffer will be posted along either side of the stream. For type N streams, a nonposted 25' horizontal distance buffer will be established. For both type F or N streams, no harvesting will be allowed within the buffer except to facilitate cable yarding. The partial cut thinning prescription will retain sufficient trees in the RMA to comply with current FMP standards.

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

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

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.

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

Suitable marbled murrelet habitat exists adjacent to some of the operation areas according to the area wildlife biologist. Surveys were conducted in 2007 with no detections. Surveys will be continued in 2008. The operation areas do not contain suitable habitat for northern spotted owls as determined by the area wildlife biologist.

Areas I, II and IV are adjacent to Marbled Murrelet Management Areas (MMMA) and seasonal operating restrictions will be required. The MMMA adjacent to Area IV will have an on-the-ground evaluation to define the perimeter in relation to the boundary of Area IV.

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 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 operation areas.

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

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

There is a band of high landslide hazard locations along the lower slopes in Area I. There are no high landslide hazard locations in Area II. Both areas drain to Big Rock Creek. The risk of landslides delivering directly to Big Rock Creek from Area I is moderate and from Area II is low.

There is a band of high landslide hazard locations along the mid-slopes in Area III. There is an isolated high landslide hazard location in Area IV. Area III partially drains to Hayes Creek and both areas drain to Steer Creek. The risk of landslides delivering directly to Hayes Creek and Steer Creek from Area III is moderate and from Area IV is low. Area III may be located on a large, deep-seated landslide landform.

There is a band of high landslide hazard locations along the mid-slopes in Area V. Area V drains to Fisher Creek. The risk of landslides delivering directly to Fisher Creek from Area V is moderate.

There are no high landslide hazard locations in Area VI. Area VI drains to Rock Creek. The risk of landslides delivering directly to Rock Creek from Area VI is low.

There are isolated high landslide hazard locations in Areas VII and VIII. Area VII drains directly to the Little Yaquina River and Area VIII drains to an unnamed tributary of the Little Yaquina River. The risk of landslides delivering directly to the Little Yaquina River and its tributary from both areas is low to moderate.

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

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

Recreation in the vicinity of the operation areas is mostly hunting and fishing.

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

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

**XII. SCENIC RESOURCES:**

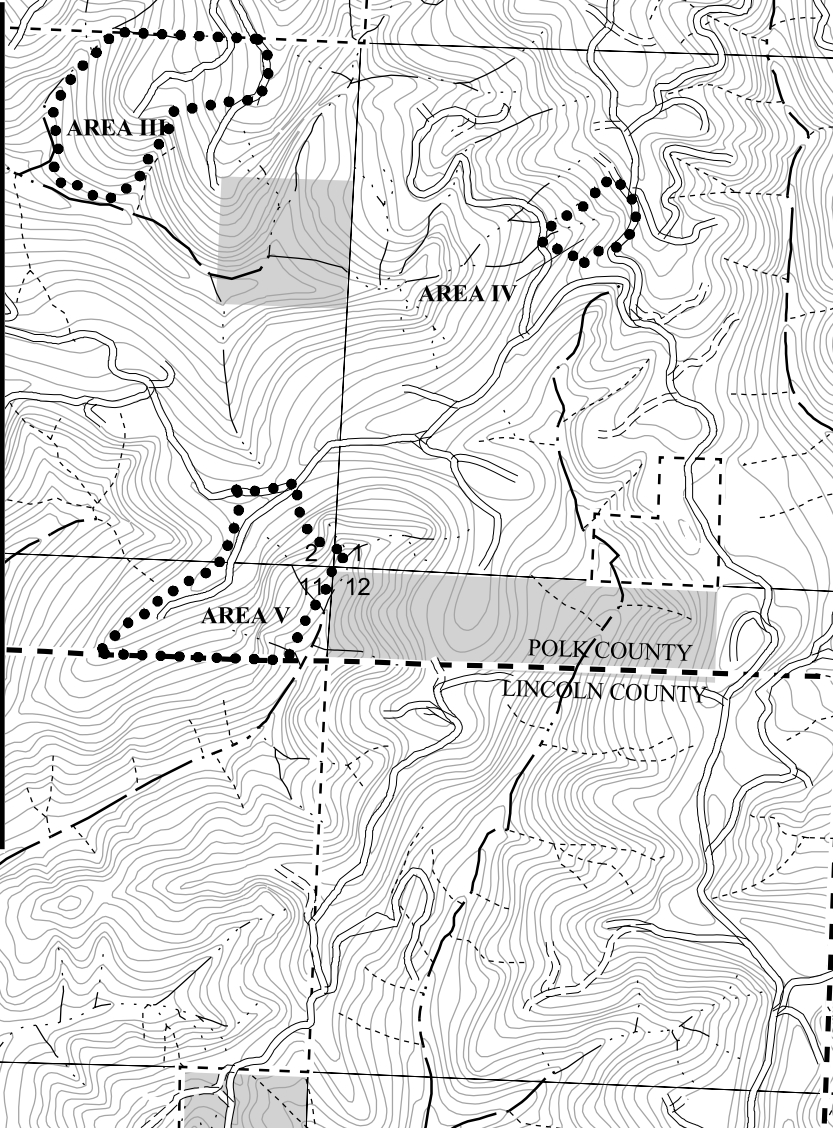
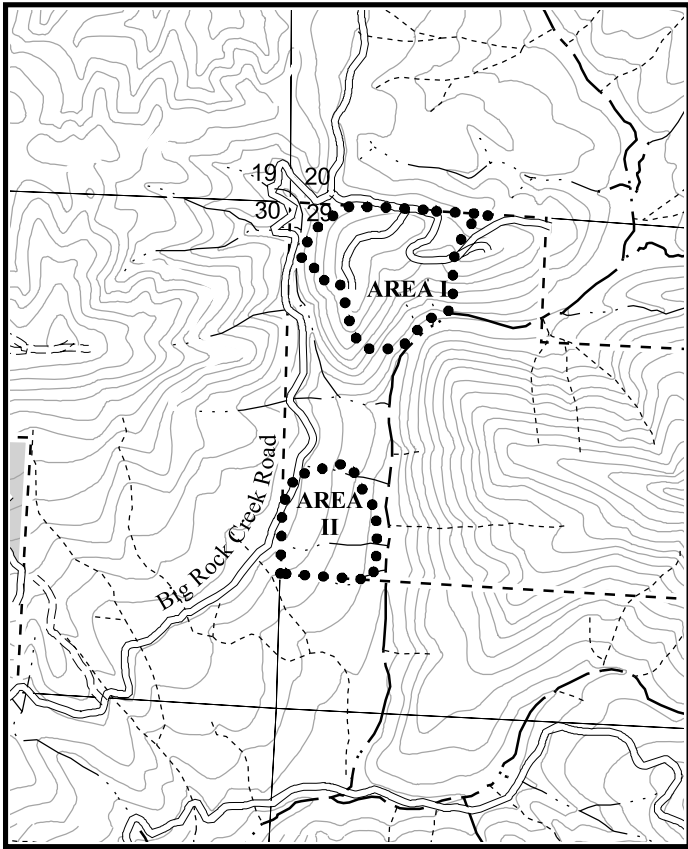
Portions of Area VIII may be visible from the Logsdan Road, a rural two lane paved road. This is a level 3, low intensity visual classification.

**XIII. OTHER RESOURCE CONSIDERATIONS:**

No other resource considerations have been identified.

**XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:**

Areas I, II, and IV contain 70 acres of Focused Stewardship and 4 acres of Special Stewardship, Wildlife. See Section VIII for the management guidelines to be used. There are 68 acres of Focused Stewardship and 8 acres of Special Stewardship, Aquatic and Riparian Habitat. See Section VII, Aquatic Resources and Water Quality, for the management guidelines to be utilized.



**Green Tangle**  
 FY 09 AOP  
 WEST OREGON DISTRICT  
 ATTACHMENT A : TOPOGRAPHY

PORTIONS OF SECTION 29, T9S, R8W,  
 AND SECTIONS 1, 2, 11, 13, & 24, T10S, R8W, W.M.  
 LINCOLN AND POLK COUNTIES, OREGON

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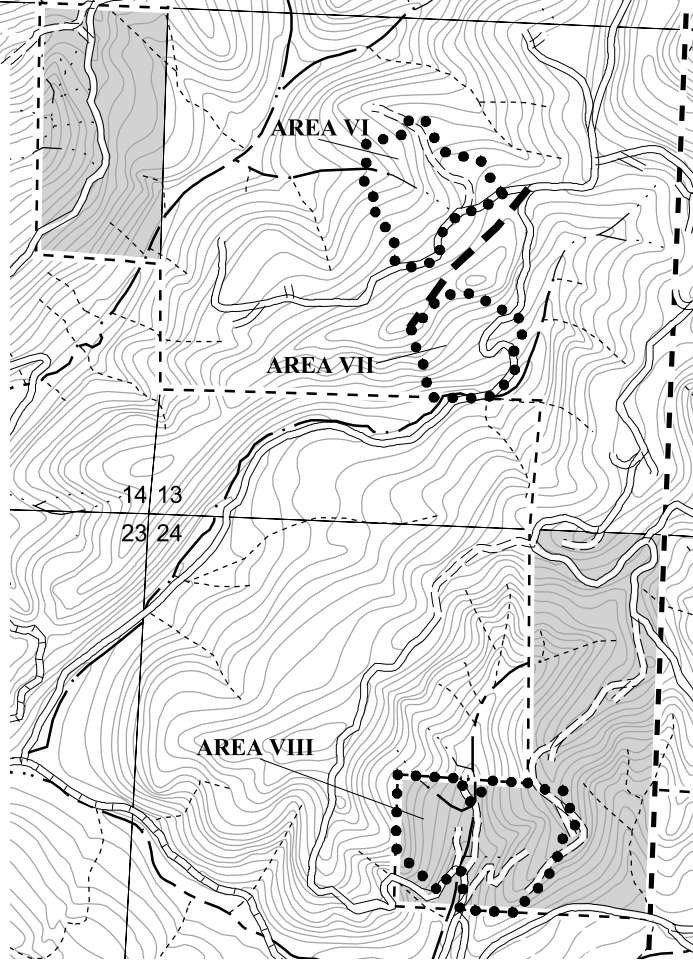
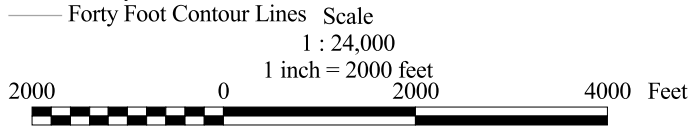
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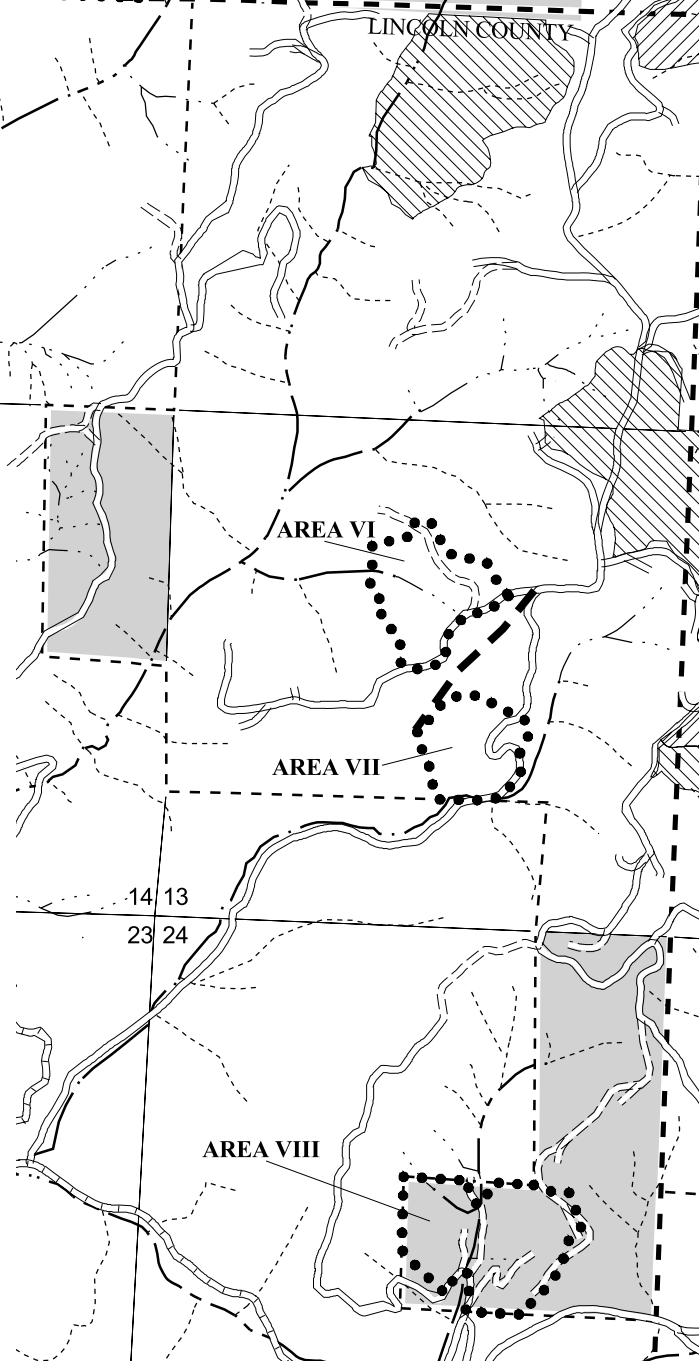
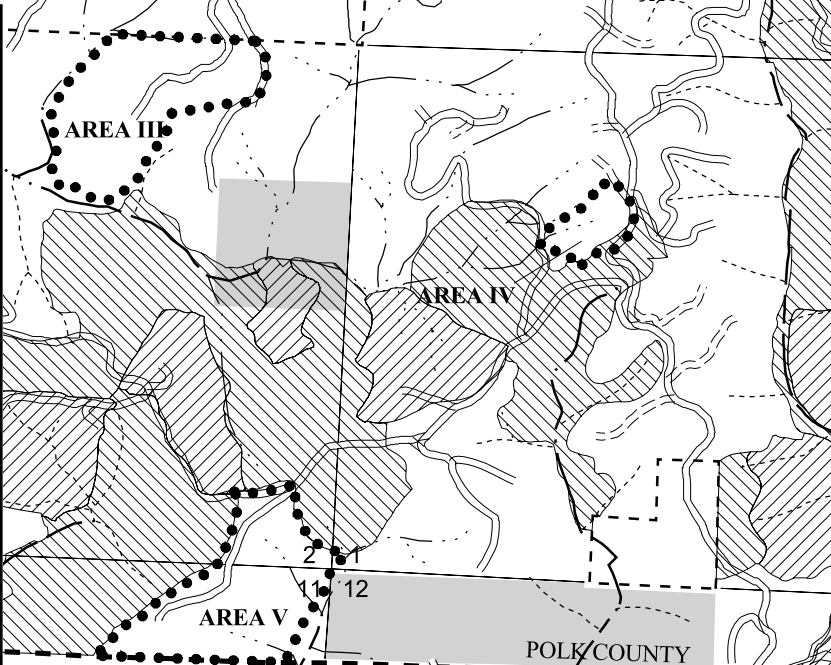
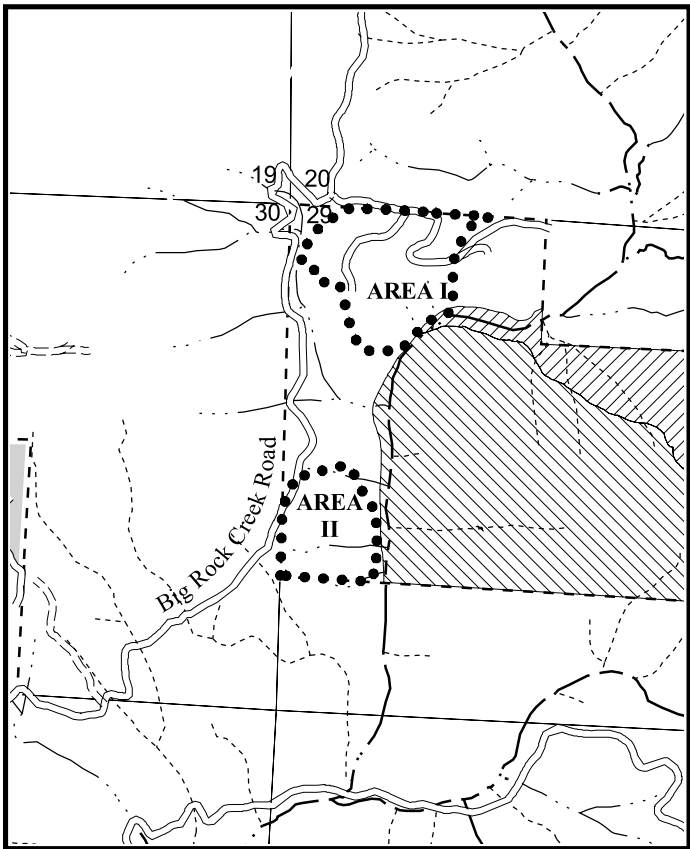
- Sale Area
- Roads
  - Surfaced Road
  - === Unsurfaced Road
  - - - New Construction
- Streams
  - — Fish
  - · · Nonfish
  - · · · Unknown
- - - State Forest Property Boundary
- Common School Land
- - - County Line
- Forty Foot Contour Lines



**APPROXIMATE NET ACRES**

AREA I	39	ACRES (PC)
AREA II	22	ACRES (PC)
AREA III	51	ACRES (PC)
AREA IV	13	ACRES (PC)
AREA V	50	ACRES (PC)
AREA VI	25	ACRES (PC)
AREA VII	21	ACRES (PC)
AREA VIII	38	ACRES (PC)
<b>TOTAL</b>	<b>259</b>	<b>ACRES (PC)</b>





**Green Tangle  
FY 09 AOP  
WEST OREGON DISTRICT  
ATTACHMENT B : DESIRED FUTURE CONDITION**

PORTIONS OF SECTION 29, T9S, R8W,  
AND SECTIONS 1, 2, 11, 13, & 24, T10S, R8W, W.M.  
LINCOLN AND POLK COUNTIES, OREGON

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**Legend**

- Sale Area
- Roads**
- ==== Surfaced Road
- Unsurfaced Road
- - - New Construction
- Streams**
- Fish
- · · Nonfish
- · · · Unknown
- - - State Forest Property Boundary
- Common School Land
- - - County Line
- Desired Future Condition**
- ▨ LYR
- ▩ OFS



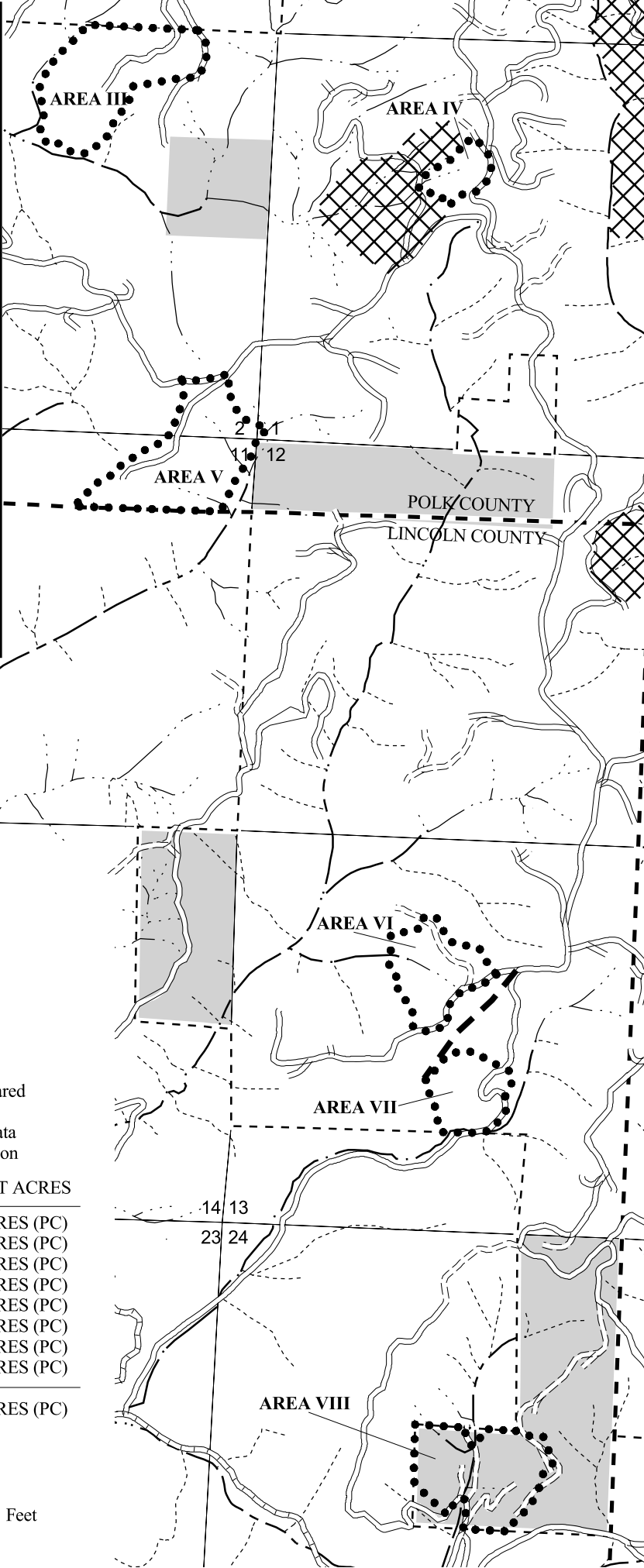
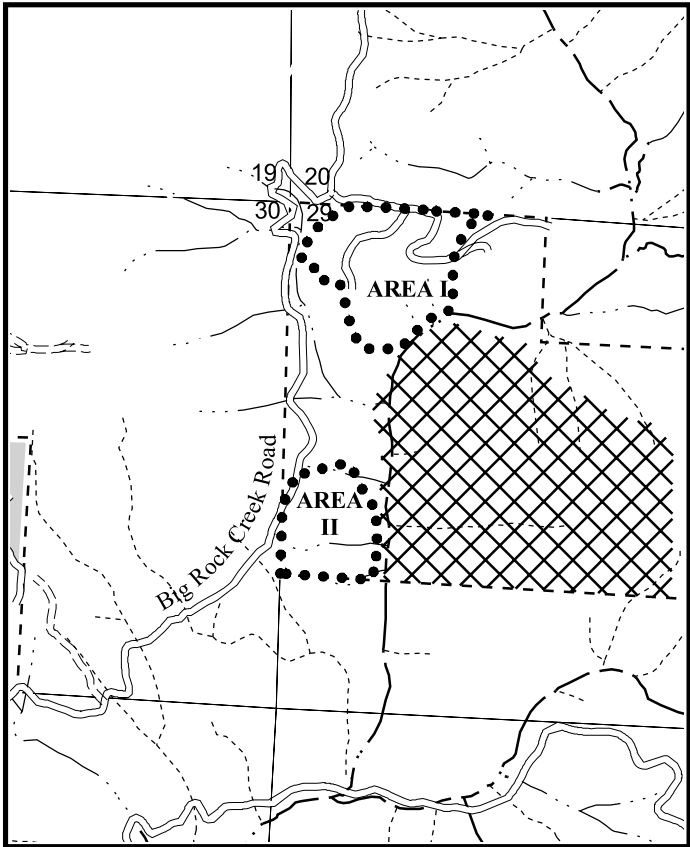
**APPROXIMATE NET ACRES**

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AREA II	22	ACRES (PC)
AREA III	51	ACRES (PC)
AREA IV	13	ACRES (PC)
AREA V	50	ACRES (PC)
AREA VI	25	ACRES (PC)
AREA VII	21	ACRES (PC)
AREA VIII	38	ACRES (PC)

**TOTAL 259 ACRES (PC)**

Scale  
1 : 24,000  
1 inch = 2000 feet





**Green Tangle  
FY 09 AOP  
WEST OREGON DISTRICT  
ATTACHMENT C : KEY RESOURCES**

PORTIONS OF SECTION 29, T9S, R8W,  
AND SECTIONS 1, 2, 11, 13, & 24, T10S, R8W, W.M.  
LINCOLN AND POLK COUNTIES, OREGON

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**Legend**

- Sale Area
- Roads
  - ==== Surfaced Road
  - Unsurfaced Road
  - - - New Construction
- Streams
  - Fish
  - Nonfish
  - - Unknown
- - - State Forest Property Boundary
- Common School Land
- - - County Line
- ✕ Marbled Murrelet Management Area



**APPROXIMATE NET ACRES**

AREA I	39	ACRES (PC)
AREA II	22	ACRES (PC)
AREA III	51	ACRES (PC)
AREA IV	13	ACRES (PC)
AREA V	50	ACRES (PC)
AREA VI	25	ACRES (PC)
AREA VII	21	ACRES (PC)
AREA VIII	38	ACRES (PC)

**TOTAL 259 ACRES (PC)**

Scale  
1 : 24,000  
1 inch = 2000 feet

