

# Pre-Operations Report

**Operation Name:** Beavers Rock  
**County:** Polk  
**Management Basin:** Green Mountain

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

Area	Type of Operation	Net Acres
I	Modified Clearcut	45
II	Partial Cut	73
III	Partial Cut	26
IV	Partial Cut	37
V	Partial Cut	59
Total MC		45
Total PC		195

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

The operation consists of one modified clearcut unit and four partial cut units. The units lie in the western hemlock vegetation zone. Average rainfall on Areas I – III is 100 – 150 inches per year and on Areas IV and V it is 78 to 100 inches per year. The soils consist of Killam in Area I, Valino in Areas II-IV, and a combination of Valino and Killam in Area V. The soil information is derived from a soil survey completed in 1980.

The landforms are moderate to steep side-slopes on both sides of Steere Divide between the headwaters of Big Rock Creek and Fall Creek to the northwest and Cedar Creek, Dutch Creek and Blodgett Creek tributaries of Steere Creek to the southeast. Area I has significant steep slopes throughout while Areas II & III have a few scattered bands of steep slope and Areas IV & V have virtually no steep slopes. The underlying rocks are sedimentary & igneous origin. Nearly all of the operation areas are in sedimentary origin rock Tyee Formation with just the southeast portion of Area V mapped as igneous origin Mafic intrusions.

The aspect for the operation areas is as follows: Area I is mostly southeast; Areas II and III are southwest and Areas IV and V are northwest.

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

Area I contains 41 year old Douglas-fir trees that are severely infected with Swiss needle cast (SNC) and consequently, the growth of the stand has been significantly slowed. In addition, there are concentrated areas of *Phellinus weirii*,

a root rot disease, which has killed Douglas-fir trees. For these reasons, the recommended prescription for this area is a modified clearcut harvest, instead of partial cutting. Clearcut harvesting of this area is in compliance with the department's strategic plan for dealing with stands that are severely infected with SNC. A few western hemlock are present in the stand and will be retained during harvest.

Areas II-V support Douglas-fir plantations that range in age from 25-28 years. Some red alder and western hemlock are present in these plantations. The trees in these units were pre-commercially thinned 11-12 years ago. There are few snags and little down wood in the operation areas.

Brush species consisting 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 as determined by SLI.

**Table 2. Stand Inventory Information**

Area	Prescription	Stand ID <sup>1</sup>	Species	Age	DBH	BA	TPA	RD	Acres <sup>2</sup>
I	CC	18674	Douglas-fir	41	13	173	167	44	45
II	PC	18712	Douglas-fir	25	12	175	222	51	73
		Target <sup>3</sup>			15	120	98	31	
III	PC	18670	Douglas-fir	26	12	170	216	49	26
		Target <sup>3</sup>			15	120	98	31	
IV	PC	18012	Douglas-fir	27	11	160	242	48	37
		Target <sup>3</sup>			14	120	112	32	
V	PC	18667	Douglas-fir	28	12	175	222	51	59
		Target <sup>3</sup>			15	120	98	31	

1 The source of stand inventory information is SLI data from 2002-2005

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, Areas II and III are designated as Desired Future Condition (DFC) complex and are targeted to become Layered (LYR) stands. Area I is also designated as DFC LYR, but because of the current condition of the stand, it is believed that this complex condition will not be reached without first clearcutting and starting over at the REG stage. By planting

a diverse mix of species and through silvicultural treatments, the stand will gradually be put on a pathway towards the LYR condition. Areas IV and V are designated as General and are targeted to become Understory (UDS) stands.

**Area I Vision:** The LYR condition will be attained by the time the stand is approximately age 75. At that time, the stand will consist of an overstory of western hemlock and western redcedar with a few scattered alder and bigleaf maple. Douglas-fir will also be present in areas not affected by root disease. A second layer consisting of numerous small patches of hemlock and western redcedar will be present. An understory of natural hemlock, cedar, Douglas-fir and brush species (vinemapple, salal and salmonberry) will be present in gaps and low density areas. Legacy trees (about 4 per acre) left from the regeneration harvest will be located in small clumps and scattered across the area. Snags and downed wood will be present throughout the stand.

**Areas II and III Vision:** The LYR condition will be attained when the stands are approximately age 65. At that time, the stands will consist of an overstory of Douglas-fir with a few scattered alder and bigleaf maple. Portions of the stands will have a second layer consisting of hemlock, western redcedar and a few Douglas-fir and alder. An understory of natural Douglas-fir, alder, maple and brush species will be present in small gaps. Hemlock and cedar will be starting to seed-in naturally. Snags and downed wood will be present throughout the stand.

**Areas IV and V Vision:** These stands are currently in the UDS stand type and will remain 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, vinemapple) and forbs in the understory. A few alder and bigleaf maple 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	18674	UDS	REG	LYR	45
II	18712	UDS	UDS	LYR	73
III	18670	UDS	UDS	LYR	26
IV	18012	UDS	UDS	UDS	37
V	18667	UDS	UDS	UDS	59

<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:**

**Area I Anticipated Pathway:** This harvest will be a modified clearcut prescription leaving behind about 8-10 trees per acre that will be greater than 12 inches DBH. These leave trees will be Douglas-fir and western hemlock. Existing snags that do not pose a safety hazard and all existing down wood will be retained.

After harvest, a site prep herbicide treatment will be applied. Prior to planting, it is likely mountain beaver will need to be trapped from the area.

Following completion of site prep activities, the area will be replanted with approximately 20% Douglas-fir, 40% western hemlock and 40% western redcedar at a rate of 436 trees per acre. Cedar will be planted in identified root rot pockets. 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 CSC.

When the planted trees reach age 15, pre-commercial thinning (PCT) will likely 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, but allowing up to 10% of the mix to be comprised of hardwood.

At around age 35 the unit will be commercially thinned to about an RD 25. This will open the stand enough to allow growth of existing natural conifer and hardwood in the understory and will also allow additional natural seed-in of these species. It is possible that some cedar and/or hemlock may be underplanted at this time as well

Within 5 years after commercial thinning, the presence of forbs and brush and natural or planted seedlings, will have turned the stand into a UDS condition. Small openings in the overstory, resulting from root rot, wind and logging will have likely occurred and will contain brush, hardwood and conifer.

At about age 50 years, the unit will again be thinned to about an RD 20. This thinning will capture harvest volume, maintain stand vigor and allow the understory trees to develop into a second layer. At this harvest entry, the amount and condition of down wood and snags will be evaluated and more will be created if needed.

At about age 65, the unit will be thinned for a third time to about an RD 20, leaving about 30 tpa in the overstory. These remaining trees will be left as legacy trees. Over time, some will become snags and down wood. By age 75, the stand will have moved into the LYR condition. The understory will gradually

become the overstory component. Continued seed-in of conifer and hardwood will keep the stand in the LYR condition. Density regulation in the form of commercial thinning of the overstory and PCT of the understory will likely occur.

**Area II Anticipated Pathway:** During this commercial entry, Area II will be thinned to an RD of about 31, leaving approximately 98 TPA. The average DBH of residual trees is expected to be 15 inches.

- Most snags and downed wood will be left.
- All trees other than Douglas-fir will be reserved from cutting.
- Approximately 20% of the acreage will be put into either patchcuts or low relative density (LRD) areas. Patchcuts will range from 1/2 to 2 acres in size. In patchcuts that are greater than one acre in size, a few trees will be marked for retention. LRD areas will be thinned to about an RD of 20 and will be about 3 acres each in size.
- Both patchcuts and LRD areas will be treated with site preparation herbicides in order to deter brush competition.
- Patchcuts and LRD areas will be planted/underplanted with western hemlock and western redcedar in approximately equal amounts and at a rate of approximately 360 tpa. A few Douglas-fir will be planted in the larger patchcuts.
- Animal damage mitigation will consist of tubing all cedar to protect against deer and elk browse. Mountain beaver control work may be necessary in portions of the area.

It is likely that at least one herbicide application will be needed in the patchcuts within the first 3 years after planting in order to release planted seedlings from competing vegetation.

Five to ten years after thinning, additional forbs, brush and seedlings will be established in the understory, keeping the stand into a UDS condition. Small openings in the overstory, resulting from wind-throw and logging practices will have encouraged natural hemlock, Douglas-fir and hardwood to seed-in in spots in the understory as well. Trees planted in the patchcuts and the LRD areas will be free-to-grow and will be on their way to forming a second layer.

In 10 to 15 years after the initial thinning, the RD is expected to be 50-55 and the stand will be thinned again to an RD of about 30.

- At this time, the amount of natural snags and downed wood will be evaluated. If it is determined that additional amounts are needed, then snags and downed wood will be created.
- LRD areas will again be thinned to an RD 20.
- New patchcuts and/or LRD areas will be created on about 20% of the unit acreage. These areas will be planted/underplanted to cedar and hemlock.
- Following this harvest entry, trees planted/underplanted after the original thinning will be pre-commercially thinned (PCT) if needed.

In another 10 to 15 years, the stand RD will have again reached about 50 and a third commercial thinning will likely occur. This thinning will take the overstory trees down to approximately 35 TPA (20 TPA in LRD areas). It is possible that patchcut trees (those planted after the first harvest) could be commercially thinned at this time as well. The need for additional snags and downed wood will be evaluated and more will be created if needed.

About 10 years after the third commercial thinning (about age 65), the stand will have reached the LYR condition. The stand will be evaluated at this point to determine if more overstory trees will be harvested or if the amount left will serve as legacy trees.

Over time, some legacy trees will become snags or downed wood. The understory trees will gradually become the overstory component. Continued seed-in of conifer and hardwood will keep the stands in the LYR condition. Density regulation (PCT of understory and commercial thinning of the overstory) will likely occur.

**Area III Anticipated Pathway:** During this commercial entry, Area III will be thinned to an RD of about 31, leaving approximately 98 TPA. The average DBH of residual trees will be about 15 inches.

- Most snags and downed wood will be left.
- All trees other than Douglas-fir will be reserved from cutting.
- Approximately 15% of the acreage will be patchcut. Patches will range from 1/2 to 1 acre in size. In patchcuts that are at least one acre in size, a few trees will be marked for retention.
- Patchcuts will be treated with site preparation herbicides in order to deter brush competition.
- Patchcuts will be planted with western hemlock and western redcedar in approximately equal amounts and at a rate of approximately 360 tpa. A few Douglas-fir may be planted in the larger patchcuts.
- Animal damage mitigation will consist of tubing all cedar to protect against deer and elk browse. Mountain beaver control work is not expected to be necessary.

It is likely that at least one herbicide application will be needed within the first 3 years after planting in order to release planted seedlings from competing vegetation.

Five to ten years after thinning, additional forbs and brush will be established in the understory, keeping the stands into a UDS condition. Small openings in the overstory, resulting from wind-throw and logging will have encouraged natural Douglas-fir and hardwood to seed-in in spots in the understory as well. Trees planted in the patchcuts will be free-to-grow and will be on their way to forming a second layer.

In 10 to 15 years after the initial thinning, the RD is expected to be 50-55 and the stands will be thinned again to an RD of about 30. The stands will be opened up enough to maintain stand vigor and to allow the natural regeneration to persist in the understory. Without this thinning, these stands would likely revert to CSC.

- At this time, the amount of natural snags and downed wood will be evaluated. If it is determined that additional amounts are needed, then snags and downed wood will be created.
- New patchcuts will be created on about 15% of the unit acreage. Patches will be replanted to cedar and hemlock.
- Following this thinning, trees planted in the original patchcuts will be pre-commercially thinned (PCT) if needed.

In another 10 to 15 years, the stand RD will have again reached about 50 and a third commercial thinning will likely occur. This thinning will take the overstory trees down to approximately 35 TPA. It is possible that patchcut trees (those planted after the first harvest) could be commercially thinned at this time as well. The need for additional snags and downed wood will be evaluated and more will be created if needed.

About 10 years after the third commercial thinning (about age 65), the stand will have reached the LYR condition. The stand will be evaluated at this point to determine if more overstory trees will be harvested or if the amount left will serve as legacy trees.

Over time, some legacy trees will become snags or downed wood. The understory trees will gradually become the overstory component. Continued seed-in of conifer and hardwood will keep the stands in the LYR condition. Density regulation (PCT of understory and commercial thinning of the overstory) will likely occur.

**Areas IV and V Anticipated Pathway:** These two areas will be thinned to an RD of 31-32 and 120 ft<sup>2</sup> basal area. This will leave 98-112 TPA with an average diameter of 14-15 inches. Snags and downed wood will be left wherever possible. All trees other than Douglas-fir will be reserved from cutting. Five to ten years following harvest, additional brush and forbs will have become re-established in the understory, keeping the areas into the UDS condition. A second thinning will be conducted in 10 to 15 years, when stand RDs have reached about 50. The aim of this thinning is to 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 75-85 years old.

**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:		1	

	Conifer	Hardwood	Total
Net Volume (MBF)	1,500	0	1500
Stumpage Value (\$/MBF)	\$180		
Estimated Gross Value	\$270,000		\$270,000
		Project Costs:	\$117,000
		Estimated Net Value:	\$153,000

**VI. TRANSPORTATION PLANNING AND HARVESTING:**

Access to Area I will require a temporary easement over an Industrial forestland owner utilizing an existing dirt spur with some new construction to extend this spur into the harvest unit. From there the haul route will be west along the Hatchery Fall Creek road, down Beaver Creek road and out Steere Creek county road. This entire unit should be cable logged from one landing. The majority of the haul route is over State Lands, but a portion along the Hatchery Fall Creek road does cross the same Industrial forestland owner mentioned above. The bottom portion of Beaver Creek Road also crosses a private forestland owner. The State currently has a permanent easement across both sections of private forestland. Since this unit is planned as a summer operation, the roads are in a condition that will withstand dry weather hauling.

Areas II & III are planned for wet weather haul using the route described above. The entire length of Steere Finger road and the existing rocked spur into Area III will require a 4" maintenance lift of crushed rock in order to re-establish the original design standard. Cable yarding will be necessary in these units.

Areas IV & V are about equally divided between ground skidding and cable logging. The areas are 90% accessed by rocked roads allowing winter haul from 90% of the cable areas. An existing road along the southern edge of Area V, which accesses the remaining portion of the cable areas, will be re-opened. This road will remain unsurfaced. The haul route is the same route as mentioned above. Area IV will be harvested from existing surfaced roads. Area V will be harvested from existing surfaced roads and from an existing unsurfaced road to be reopened.

There are four stream crossing culverts scheduled for replacement. One culvert is on the Fish Stix Road. This culvert is on a fish stream and will be replaced with a fish passable structure. The other three deteriorated culverts are on non-fish streams. One culvert is on the Hatchery Extension Road, one is on the Hatchery Fall Creek Road below the intersection of the Hatchery Extension Road, and the other culvert is on the road accessing Area III.

Existing roads provide timber harvest access to 95% of the operation acreage. Because the existing road system adequately accesses the sale area, no other transportation system was considered.

Harvesting timber in the operation areas would require a combination of 70% cable yarding and 30% ground skidding.

About 0.8 mile of road improvement will be necessary.

All unsurfaced roads 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				0.2
Improve				0.8
Maintain		4.6	2.7	
Close/Block				
Vacate				

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

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

Streams are located in and adjacent to all five operation areas.

A fish distribution survey needs to be conducted in Area I, the modified clearcut unit. If the survey determines that type F streams exist, the unit boundary will be posted about 100' horizontal distance from the stream. Sufficient trees will be retained in the outer Riparian Management Area Zone to comply with current standards. For type N streams, the unit boundary will be posted at least 50-75' horizontal distance from the stream. Sufficient trees will be retained in the inner and outer Riparian Management Area Zone to comply with current standards

Fish distribution surveys need to be conducted in Areas II and III. For type F or N streams, a 25' horizontal distance buffer will be established on either side of these 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 standards

Fish distribution surveys have been conducted in Areas IV and V. Type N streams are present both areas. A 25' horizontal distance buffer will be established on either side of these 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 standards.

Vegetation along Type F and N streams consists of Douglas-fir, western hemlock, and red alder trees and brush species such as salmonberry, elderberry, sword fern, and vine maple.

There are no domestic water sources in close proximity to 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.

The Land Management Classification System for Aquatic and Riparian category determined 56 acres in Focused Stewardship. Focused Stewardship acres are distributed along type N stream RMA's and the outer zone of type F streams. There are an additional 17 acres of Special Stewardship that are distributed along the Type F stream RMA's.

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

The operation areas do not contain suitable habitat for northern spotted owls. There is suitable habitat for marbled murrelets adjacent to the operation areas. Surveys for murrelets were conducted in 2006 with no detections. Surveys will continue in 2007.

The operation area contains 103 acres of Focused Stewardship, Wildlife Habitat in Areas II and III. Areas II and III are adjacent to a Marbled Murrelet Management Area and seasonal operating restrictions will be required.

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:**

Area I has significant steep slopes throughout while Areas II & III have a few scattered bands of steep slopes. There are only very small areas of steep slopes in Areas IV & V. The initial hazard and risk assessment from the geotechnical specialist is low for Areas IV and V, moderate for Areas II & III and high for Area I. The geotechnical specialist will be consulted during sale layout to determine if a field visit is needed.

**X. RECREATION RESOURCES:**

Recreation activity in the vicinity of the operation areas is mostly 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:**

None of the operation areas are visible from paved roads.

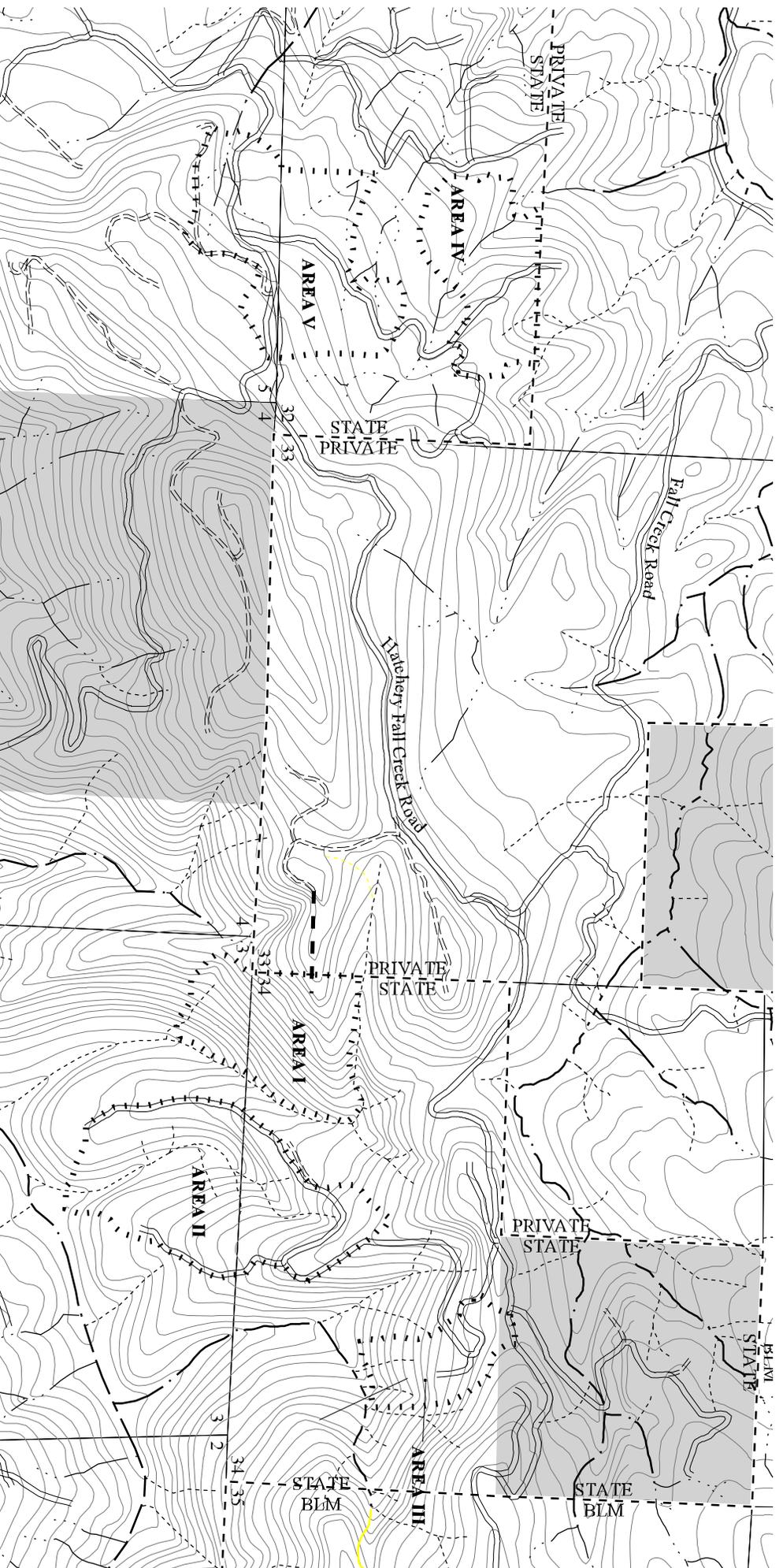
**XIII. OTHER RESOURCE CONSIDERATIONS:**

No other resource considerations have been identified.

**XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:**

The operation area contains 56 acres Focused Stewardship, Aquatic and Riparian Habitat along the Type N stream riparian areas. There are an additional 17 acres of Special Stewardship along the Type F stream riparian areas. See Section VII, Aquatic Resources and Water Quality, for the management guidelines to be utilized.

There are 103 acres of Focused Stewardship, Wildlife Habitat in Areas II and III. See Section VIII, T & E Species Considerations, for the management guidelines to be utilized.



## BEAVERS ROCK

FY 08 AOP

WEST OREGON DISTRICT

ATTACHMENT A : TOPOGRAPHY

PORCTIONS OF SECTIONS 32 & 34, T9S, R8W

AND SECTIONS 3 & 5, T10S, R8W, W.M.

POIK COUNTY, OREGON

This product is for informational use and may not have been prepared for or be suitable for legal, engineering or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

Scale

1 : 18,000

1 inch = 1,500 feet



APPROXIMATE NET ACRES

AREA I	45	ACRES	(MC)
AREA II	73	ACRES	(PC)
AREA III	26	ACRES	(PC)
AREA IV	37	ACRES	(PC)
AREA V	59	ACRES	(PC)

TOTAL 240 ACRES

### LEGEND

--- Timber Sale Boundary

Roads

▭ County Road

▬ Surfaced Road

▬ Unsurfaced Road

▬ New Construction

Streams

— Fish

— Nonfish

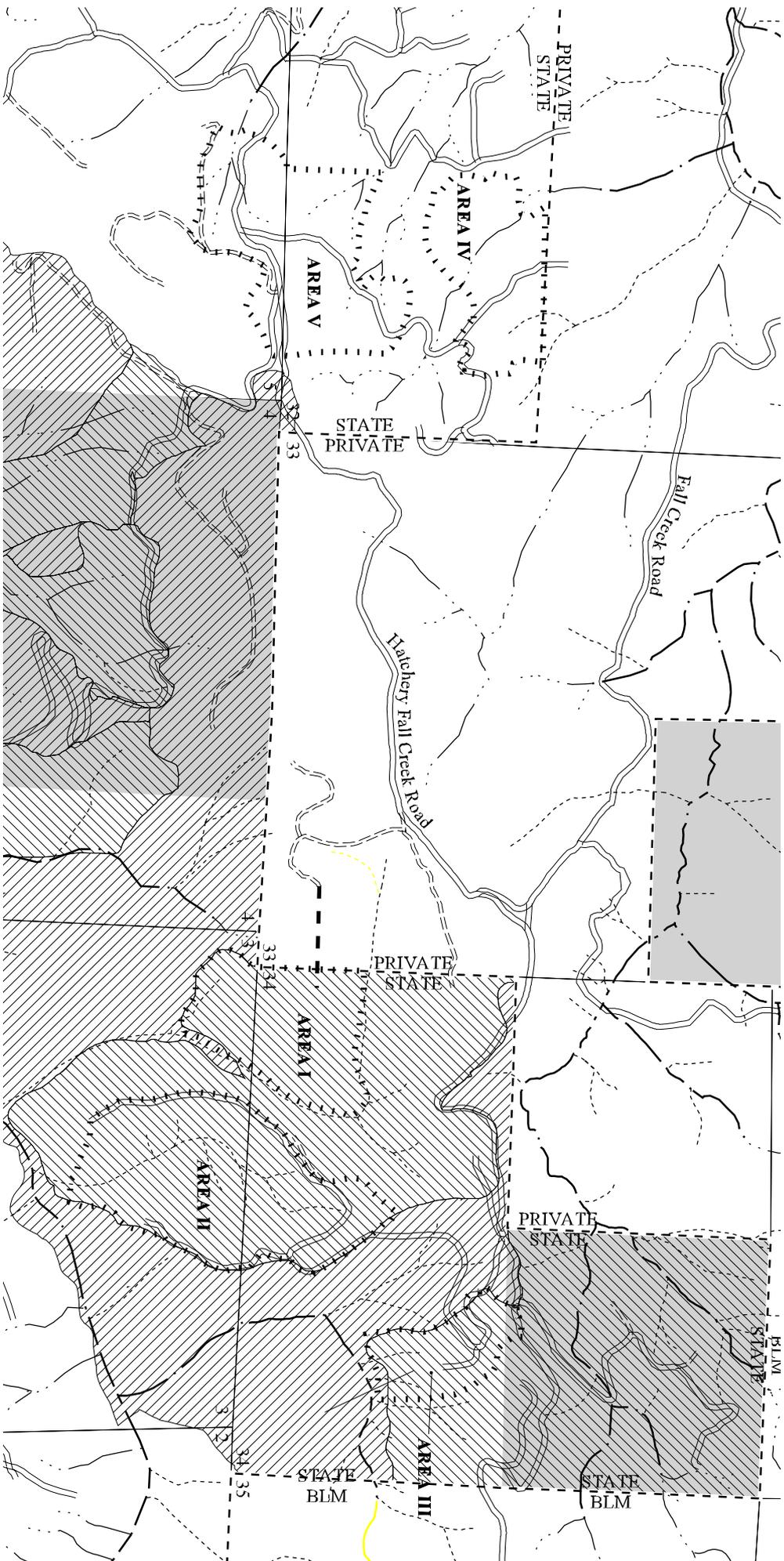
— Unknown

--- State Forest Property Boundary

--- State Forest Property Boundary

--- Forty Foot Contour Lines

▭ Common School Land



# BEAVERS ROCK

FY 08 AOP

WEST OREGON DISTRICT

ATTACHMENT B: DESIRED FUTURE CONDITION

PORTIONS OF SECTIONS 32 & 34, T9S, R8W  
AND SECTIONS 3 & 5, T10S, R8W, W.M.  
POLK COUNTY, OREGON

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Scale

1 : 18,000

1 inch = 1,500 feet

1500

0

1500 Feet



APPROXIMATE NET ACRES

AREA I	45	ACRES	(MC)
AREA II	73	ACRES	(PC)
AREA III	26	ACRES	(PC)
AREA IV	37	ACRES	(PC)
AREA V	59	ACRES	(PC)
<b>TOTAL</b>	<b>240</b>	<b>ACRES</b>	

## LEGEND

--- Timber Sale Boundary

Roads

▭ County Road

▭ Surfaced Road

▭ Unsurfaced Road

▭ New Construction

Streams

— Fish

— Nonfish

— Unknown

- - - State Forest Property Boundary

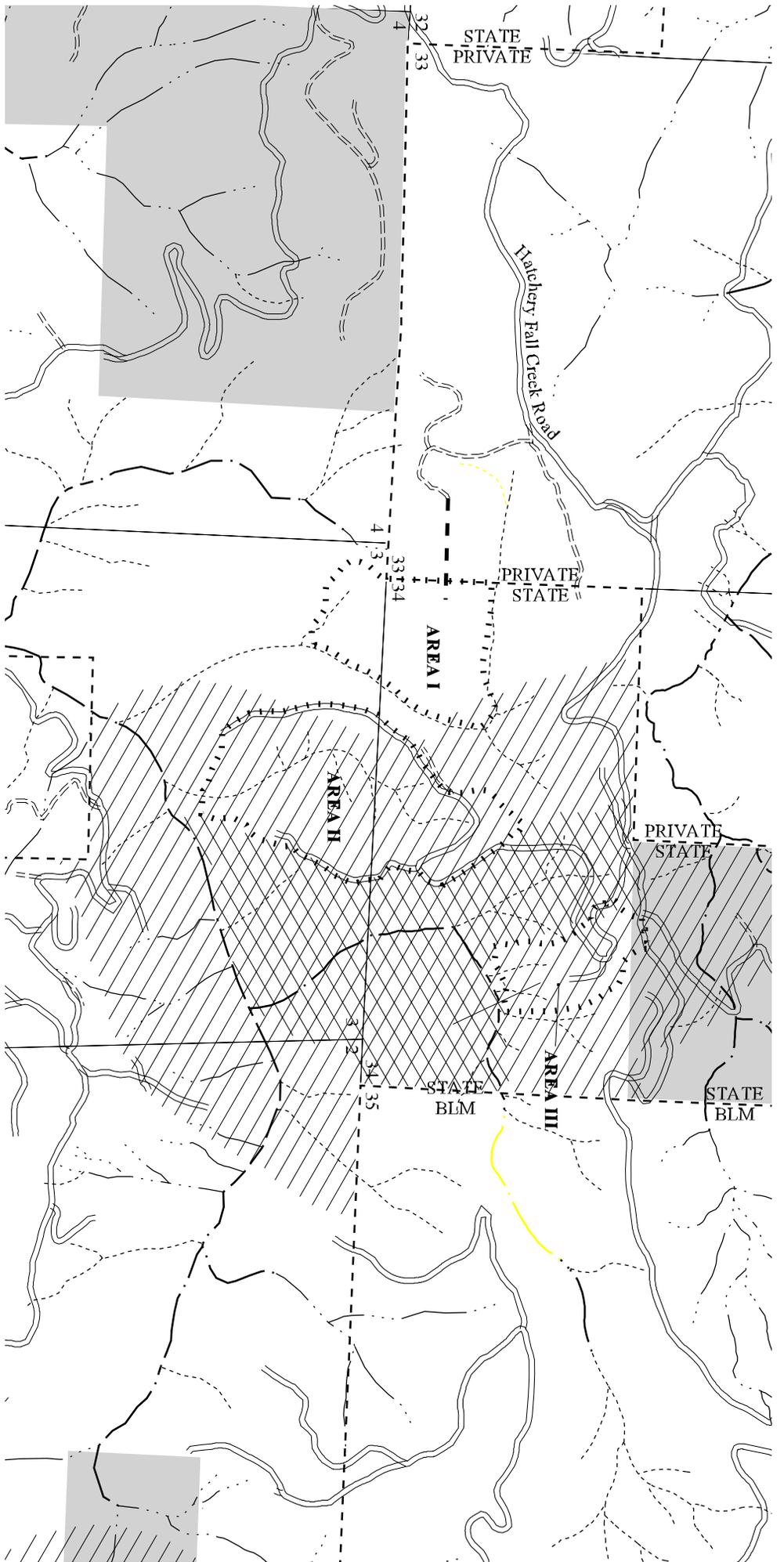
- - - State Forest Property Boundary

▨ Desired Future Condition

▨ OFS

▨ LYR

▨ Common School Land



**BEAVERS ROCK**

FY 08 AOP

WEST OREGON DISTRICT

ATTACHMENT C : KEY RESOURCES

PORCTIONS OF SECTIONS 32 & 34, T9S, R8W AND SECTIONS 3 & 5, T10S, R8W, W.M.

POLK COUNTY, OREGON

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Scale

1 : 18,000

1 inch = 1,500 feet



APPROXIMATE NET ACRES

AREA	ACRES	(MC)
AREA I	45	(MC)
AREA II	73	(PC)
AREA III	26	(PC)
AREA IV	37	(PC)
AREA V	59	(PC)
<b>TOTAL</b>	<b>240</b>	<b>ACRES</b>

**LEGEND**

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