Pre-Operations Report

Operation Name: Translator Hill
County: Linn
Management Basin: Rock Creek

Table 1. Operation Areas, Types and Acres

Area	Harvest Type	Gross Acres	Net Acres
I	PC-L	103	99
II	PC-L	28	26
III	PC-M	92	86
Total		**223**	**211**

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 1600 to 2500 feet with moderate slopes of 25 to 50 percent. The aspects vary by area. Area I faces north, Area II has an east aspect, and Area III generally faces the south.

Pechuck and Akerson soils are found within the operation areas. The Akerson series is comprised of deep, well-drained, fine-textured colluvial soils developing from Miocene age andesite. Characteristically, Akerson soil is granular to gravelly, dark brown clay with A to C horizons totaling about 50 inches. Rock volume ranges from 10 to 50 percent, depending on depth. This soil occurs on gentle to moderate slopes at elevations from 1000 to 2600 feet where annual precipitation ranges from 70 to 85 inches.

Pechuck soil is a deep, well-drained, moderately fine-textured colluvial soil that developed from Miocene age andesite. In general, Pechuck soil is a gravelly loam to gravelly clay loam with varying amounts of rock from 10 percent in the A horizon to 80 percent in the C Horizon. It lies over Andesite bedrock which is at a depth generally greater than 50 inches. It occurs on moderate to precipitous slopes at elevations between 1500 to 3200 feet where annual precipitation ranges from 70 to 95 inches.

II. CURRENT STAND CONDITION:

Area I is a 38 year old plantation currently classified as Closed Single Canopy. The overstory consists mainly of Douglas-fir, with an occasional cherry, red alder or bigleaf maple scattered throughout the stand. There is very little vegetation growing in the understory of this stand. In decay classes 3 through 5 there is less than 1 snag per acre 24 inches and larger. In decay classes 3 through 5 there are 18 pieces totaling

2,000 cubic feet larger than 24 inches and 1,300 cubic feet per acre of down wood 24 inches and smaller. (*SLI, 2003*)

Area II is a naturally regenerated 79 year old stand currently classified as Layered (LYR). The majority of the overstory trees are Douglas-fir with a few western hemlock and western red cedar. There are western hemlock and bigleaf maple in the mid-story of this stand. Western hemlock seedlings, vine maple, sword fern, and Oregon grape make-up the understory. In decay classes 3 through 5 there are 2 snags per acre 24 inches and larger. There are 280 cubic feet per acre of sound down wood all less than 24 inches. In decay classes 3 through 5 there are 29 pieces totaling 4,220 cubic feet larger than 24 inches and 2,000 cubic feet per acre of down wood 24 inches and smaller. (*SLI, 2002*)

Area III is a 70 year old naturally regenerated stand currently classified as Understory (UDS). The overstory is made up of Douglas-fir with minor amounts of western hemlock, big leaf maple and red alder scattered throughout the stand. The understory consists of vine maple, western hemlock, and bigleaf maple, vine maple, sword fern, and Oregon grape. In decay classes 3 through 5 there is 1 snag per acre in the 15-23 inch category and 3 snags per acre that are 24 inches and larger. There are 500 cubic feet per acre of sound down wood greater than 24 inches and 500 cubic feet less than 24 inches. In decay classes 3 through 5 there are 18 pieces totaling 2,500 cubic feet larger than 24 inches and 1,400 cubic feet per acre of down wood 24 inches and smaller. (*SLI, 2002*)

Table 2. Stand Inventory Information

Area	Prescription	Stand ID[1]	Species	Age	DBH	BA	TPA	SDI	Acres[2]
I	PC-L	12645	DFWH	38	14	220	223	59	103
		Target [3]			**14**	**205**	**150**	**38**	
II	PC-L	12715	DFWH	79	20	272	124	63	28
		Target [3]			**20**	**232**	**85**	**49**	
III	PC-M	12716	DFCX	70	20	240	112	56	92
		Target [3]			**22**	**144**	**48**	**33**	

[1]The source of stand inventory information is SLI from 2002 & 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 DFC of Area I is a mature fully stocked CSC stand of Douglas-fir and western hemlock with a scattered hardwood component of cherry, red alder and bigleaf maple. Openings in the stand are expected to occur due to the harvesting activities and the naturally occurring root disease. The understory brush and shrub layer will contain such species as vine maple, sword fern, and Oregon grape. Snags and downed wood, of various sizes and decay classes, will increase over time due to natural conditions or through recruitment during harvesting activities.

The DFC of Area II is OFS. The vision for this current LYR stand is to contain multiple layers starting with an overstory dominated by very large scattered Douglas-fir. The missing component for OFS is the size of the larger diameter classes. The thinning will not remove these trees but will give them a little more room to attain the larger diameters needed for OFS. Younger cohorts of codominant Douglas-fir, western hemlock, and western red cedar will be just below the overstory with bigleaf maple, western hemlock, and western red cedar in the next layer. The lower level layers will be made of brush (including vine maple, sword fern, and Oregon grape), smaller shade tolerant conifer (including western hemlock and western red cedar), and hardwood. The forest floor will be littered with down wood in various decay classes and snags of various sizes and condition will be scattered throughout the stand.

The DFC of Area III is a mature fully stocked CSC stand of Douglas-fir and western hemlock with a scattered hardwood component of bigleaf maple and red alder. Openings in the stand are expected to occur due to the harvesting activities and the naturally occurring root disease. The understory brush and shrub layer will contain such species as vine maple, sword fern, and Oregon grape. 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	12645	CSC	UDS	CSC	103
II	12715	LYR	LYR	OFS	28
III	12716	UDS	UDS	CSC	92

[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 objectives for the proposed operation in Area II are to enhance the current level of layering. This will be achieved by removing a portion of the midstory trees. The resulting increase in light levels below the over-story will stimulate the growth and vigor of brush, forbs and hardwood tree species. The disturbance caused by the logging operation will facilitate the introduction of an additional cohort of naturally seeded understory conifer. This operation will move the stand toward an old forest condition by promoting overstory tree growth and by creating inputs to the down wood component.

The primary objective for the proposed operation in Areas I & III is to enhance stand volume production and value. This involves improvement of the form and vigor of the residual trees and capturing stand mortality. In the short term, the harvest operations will develop Area I into Understory (UDS), while Areas II and III will keep their current structure classifications of Layered (LYR) and UDS respectively.

The proposed management prescription for **Area II** is:

- Thin all trees greater than 8 inches DBH to: basal area of 232; TPA 84; ave DBH 20 inches; and SDI 48%.
- Remove all Douglas-fir trees equal to or less than 19 inches DBH to create openings and gaps within the stand
- Reserve all hardwoods, western hemlock, western red cedar, Old Growth Douglas-fir and other minor conifer species.
- Retain all existing down wood and snags.

In the years to come, this stand will receive a series of operations designed to continue enhancement of layering through recruitment of down wood and snags, creation of horizontal diversity through alternative thinning prescriptions, addition of understory cohorts, retention of hardwoods, and promotion of continued growth of the overstory through periodic thinning.

The proposed management prescription for **Area I** is:

- Thin all trees greater than 8 inches DBH to: basal area of 200; TPA 150; ave DBH 14 inches; and an SDI of no less than 35%.
- Retain all existing down wood and snags.
- Snags and down wood will not be added at this entry because of the small tree size.

The proposed management prescription for **Area III** is:

- Thin all trees greater than 8 inches DBH to: basal area of 144; TPA 48; ave DBH 23 inches; and SDI 32%.
- Retain all existing down wood and snags.

In the years to come, the stands in Areas I & III will receive a series of thinnings designed to maximize volume and value, and promote stand health and vigor. It is expected that the stand structure will shift between CSC and UDS as the cutting cycles are implemented over time. Structural development to something more complex is not anticipated. This balance between CSC and UDS will persist until the stands are harvested.

V. ESTIMATED TIMBER AND REVENUE OUTPUTS:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	0%		X
Planned Quarter: 3			

	Conifer	Hardwood	Total
Net Volume (MBF)	1,780		1,780
Stumpage Value ($/MBF)	$350		
Estimated Gross Value	$623,000		$623,000
		Project Costs:	$13,900
		Estimated Net Value:	$609,100

VI. HARVESTING AND ACCESS CONSIDERATIONS:

The sale will use 2.5 miles of the South Rock Creek road and 1.4 miles of the Translator Hill road to access the sale area. Both mainline roads have had surfacing upgrades within the last year and are in good condition. No improvements will be needed for access to the sale area. Within the sale area 2 new roads will be constructed and one road will be reopened. The reconstruction of 2,400 feet of road will involve removing trees growing along the edges, minor realignments, and grading. One new road will be a 200 foot extension of the reopened road. This road extension will reach a suitable cable landing needed for logging to the north. The other new road will access a bench/slope break to facilitate cable logging. The SRC 500 may need some minor sprucing up, road grading, and possible spot rock. All new and reconstructed roads will be surfaced with pit run rock to allow all season use for cable logging. The reopened road will be a 14 foot subgrade and out sloped drainage - matching the existing road surface. The other new spur will be a 16 foot subgrade with out sloped drainage.

The logging is a combination of cable and ground yarding. Ground yarding, to be used where the slopes are generally less than 35%, will be somewhat scatted on the unit. The remaining areas are to be cable yarded with a small yarder. The cable corridors will be generally less than 1000 feet in length and will have good deflection.

Project work

Reconstruct 2400 ft of 14 ft out slope road	$ 4000
New construction 1800 16 ft out slope w/pit run surface	$10800
New construction 200 ft of 16 ft out slope w/pit run	$ 1200
Minor road improvements/maintenance on SRC 500 rd.	$ 1500
Total	$13,900

Table 5. Transportation Management Summary (Miles)

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0	0	.83	0

Improve	0	0	0	0
Maintain	3.9	0	.83	0
Close/Block	0	0	0	0
Vacate	0	0	0	0

VII. AQUATIC RESOURCES AND WATER QUALITY:

There are no type F (fish) streams in any of the operation areas. In Area I there are two and in Area III there are three small perennial type N (non-fish) streams. A buffer of at least 25 feet horizontal distance will be posted on either side of these streams. No trees will be felled within the buffer except to facilitate cable yarding. In the remaining portion of the Riparian Management Areas (RMAs) sufficient trees will be retained to comply with current standards. There are no streams in Area II.

The two streams in Area I flow into Snake Creek while the three Area III streams flow into Rock Creek. The riparian vegetation along these streams includes Douglas-fir, western hemlock, bigleaf maple and red alder in the overstory. Devils club, salmon berry, Oregon grape, vine maple and sword fern can be found in the understory.

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.

The operation area was checked against District knowledge for any listed plant location. The operation area was also checked against the Oregon Natural Heritage Program's database of known listed plant locations. No listed plant records were identified within the operation area.

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 northern portion of Area I and there are no high landslide hazard locations in Areas II and III. The sale drains into tributaries of Snake Creek and Rock Creek. The risk of landslides delivering directly from the sale to tributaries of Snake Creek is low to moderate and to tributaries of Rock Creek is low. Lower portions of the sale appear to be located on a large, deep-seated landslide landform.

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

X. RECREATION RESOURCES:

There are no developed recreation facilities inside the timber sale boundary. Known recreation activities are dispersed and include hunting, site seeing, mushroom gathering and primitive camping. It will be important for both the operators and visiting public to use caution on roadways. To deter illegal motorized off-road use, illegal fires and garbage dumping in this area, skid roads/spurs will be closed.

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:

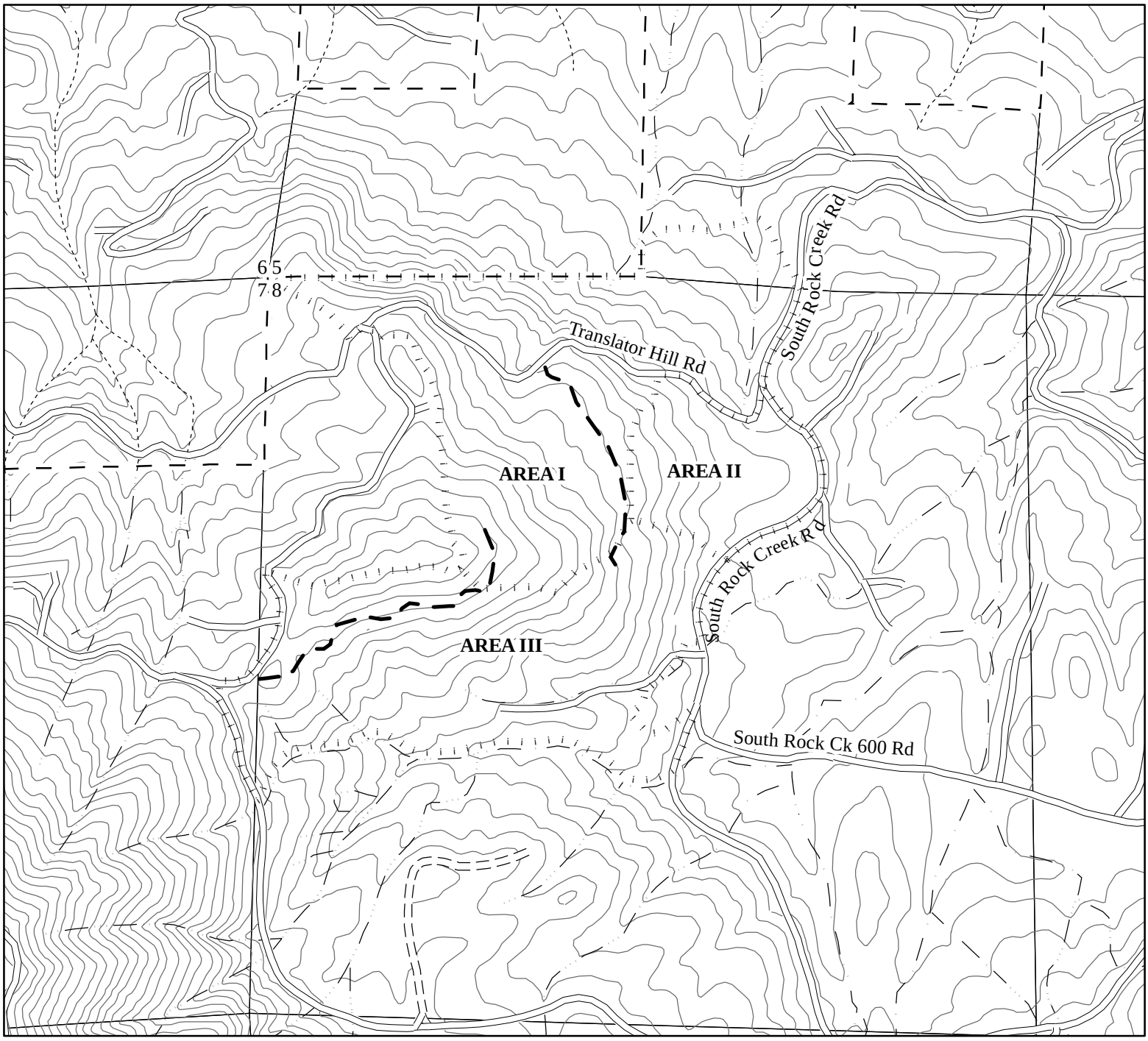
Approximately 9 acres within Area I are visible from Highway 22. The visual classification is moderate sensitivity. *(NWO Forest Management Plan, Jan. 2001, pg. 4-107*). The light thinning prescription for this area should result in minimal visual impacts.

XIII. OTHER RESOURCE CONSIDERATIONS:

The Camp 26 Progeny Site is adjacent to the southeast boundary of Area II and will be protected during harvest activities.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

The Land Management Classification System has indicated focused and special stewardship for aquatic and riparian resources, focused stewardship for visual resources, and special stewardship for research / monitoring habitat for this operation. See Section VII, Aquatic Resources and Water Quality for explanation about riparian resources. See Section XII, Scenic Resources for detailed information about the visual impacts. See Section XIII, Other Resource Considerations for information about the research / monitoring area (Camp 26 Progeny Site).



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

TRANSLATOR HILL

FY 09 AOP
NORTH CASCADE DISTRICT
ATTACHMENT A : TOPOGRAPHY

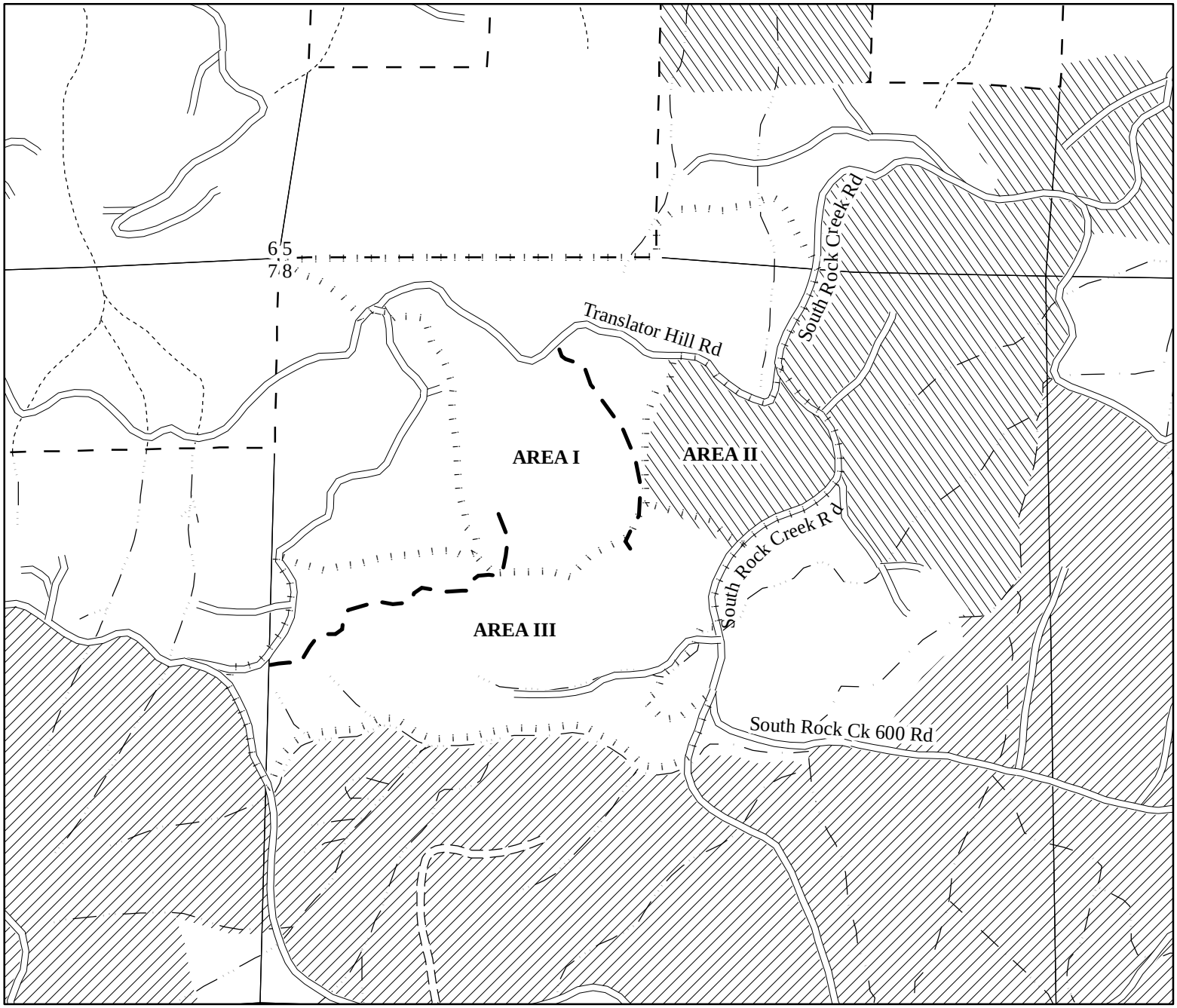
PORTIONS OF SECTIONS 5, 7 & 8
T10S, R3E, W.M.
LINN COUNTY, OR

3

APPROXIMATE NET ACRES
AREA I : 99 (PC)
AREA II : 26 (PC)
AREA III : 86 (PC)

Scale
1:12,000
1 inch = 1000 feet

Feet
0 250 500 1,000 1,500 2,000



TRANSLATOR HILL

FY 09 AOP
NORTH CASCADE DISTRICT
ATTACHMENT B : DESIRED FUTURE CONDITION

PORTIONS OF SECTIONS 5, 7 & 8
T10S, R3E, W.M.
LINN COUNTY, OR

3

Legend

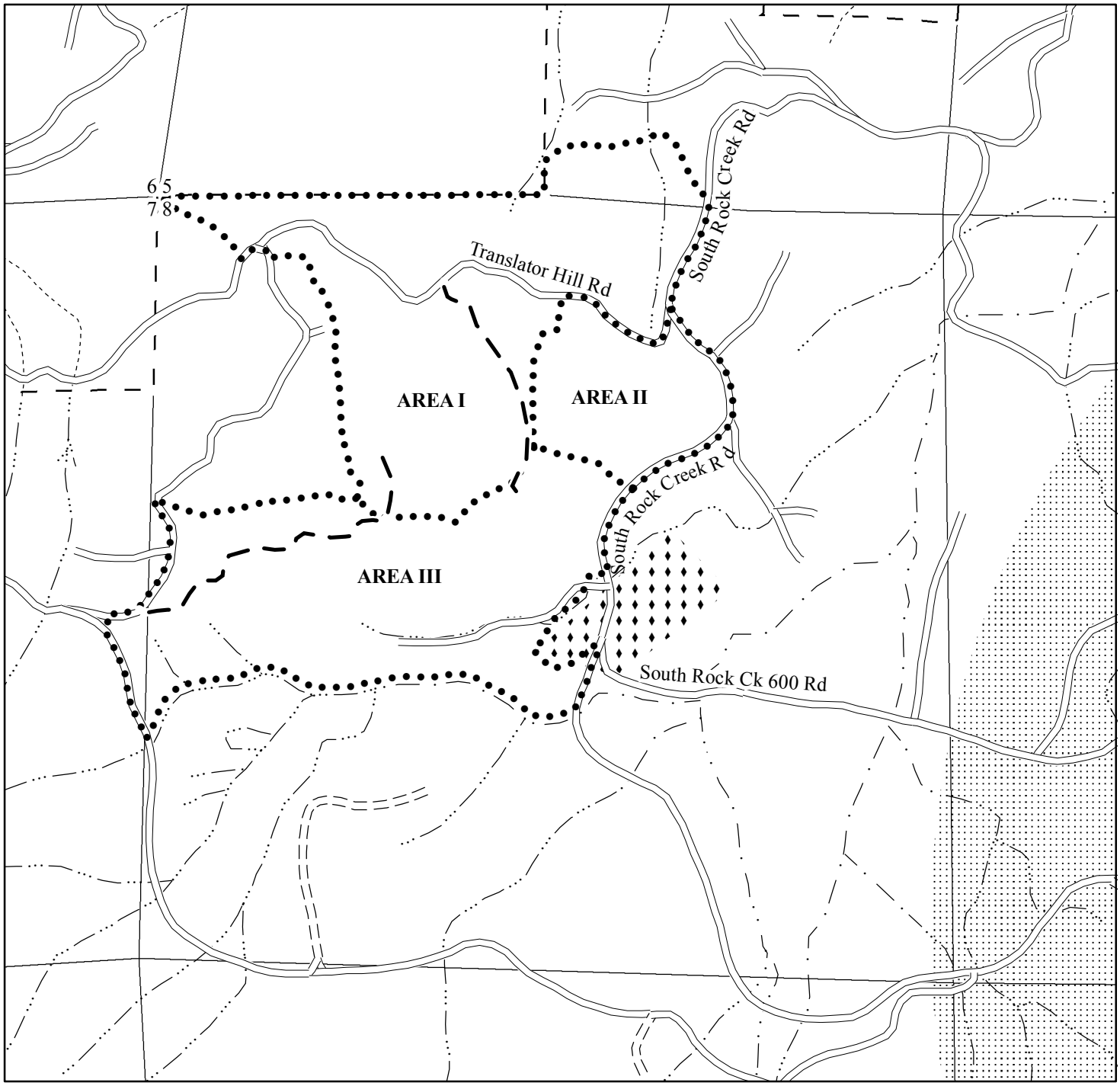
- Sale Boundaries
- Surfaced Road
- Unsurfaced Road
- New Road Construction
- Type F Stream
- Type N Stream
- Unknown Stream
- LYR
- OFS
- State Forest Property Boundary
- Common School Land

APPROXIMATE NET ACRES

AREA I : 99 (PC)
AREA II : 26 (PC)
AREA III : 86 (PC)

Scale
1:12,000
1 inch = 1000 feet

0 250 500 1,000 1,500 2,000 Feet



TRANSLATOR HILL

FY 09 AOP
NORTH CASCADE DISTRICT
ATTACHMENT C : KEY RESOURCES

PORTIONS OF SECTIONS 5, 7 & 8
T10S, R3E, W.M.
LINN COUNTY, OR

Legend

- Sale Boundaries
- Surfaced Road
- Unsurfaced Road
- New Road Construction
- Type F Stream
- Type N Stream
- Unknown Stream
- Progeny Site
- 1.2 Mile NSO Circle
- State Forest Property Boundary

Scale
1:12,000
1 inch = 1000 feet

0 250 500 1,000 1,500 2,000 Feet

N

APPROXIMATE NET ACRES
AREA I : 99 (PC)
AREA II : 26 (PC)
AREA III : 86 (PC)