

# Pre-Operations Report

**Operation Name:** California Elk  
**County:** Clatsop  
**Management Basin:** Klaskanine

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

Area	Type of Operation	Gross Acres	Net Acres
1	PC-H	32	29
2	MC	55	49
3	PC-M	94	85
4	MC	52	47
5	MC	25	23
6	MC	66	60
7	MC	74	67
Total	Modified Clearcut	272	246
Total	Partial Cut	126	114
Total		398	360

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

These sale areas are located within the Klaskanine Basin, about 15 miles southeast of Astoria along Highway 202, and then between two to four miles east into the basin. The Klaskanine Basin drains northwesterly into the multiple forks of the North Fork of the Klaskanine River and then into Youngs Bay and the Columbia River. It is in the "hemlock zone" and is generally composed of Douglas-fir, western hemlock and red alder with a mix of other conifers and an understory of ferns, huckleberry and salmonberry.

The landforms are gentle rolling slopes and steeper headwaters of North Fork Klaskanine River and the Middle Fork of the North Fork. The underlying rocks are sedimentary origin rocks of the informal Northrup Creek and Smuggler Cove Members of the Astoria Formation.

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

Area 1 - This stand is composed of fairly dense, hemlock dominated, mixed conifer stands with significant stringers and small clumps of hardwoods, and is approximately 66 years old. The alder is found along the wet areas and draws.

The understory vegetation is primarily sword fern with some patches of salmonberry.

Areas 2 and 3 - These stands are composed of moderately dense, hemlock dominated, mixed conifer stands with some small stringers and clumps of hardwoods, and are approximately 66 to 69 years old. There is very little understory, which is mostly sword fern and some hemlock reproduction along the existing road at the top of the areas.

Area 4 - This stand is composed of hemlock and other mixed conifer with larger patches of alder, and is approximately 69 years old. The understory is primarily sword fern with patches of salmonberry and Devil's club.

Area 5 - This stand is extremely dense, with recent SLI indicating the SDI exceeding the maximum stand density possible (114% of maximum). This homogenous hemlock stand is approximately 80 years old and is classified as a CSC stand. There is minimal understory in these stands. Currently, there is approximately one snag per acre 24 inches in DBH or greater and about 1,200 cubic feet per acre of down wood in decay classes 1 and 2 on site on site.

Area 6 - This stand is also very dense, with recent SLI indicating the SDI is approximately 81% of maximum. This hemlock dominated, mixed conifer stand is approximately 77 years old and is classified as a CSC stand. There is minimal understory in these stands. Currently, there are no snags 24 inches in DBH or greater and only about 270 cubic feet per acre of down wood in decay classes 1 and 2 on site on site.

Area 7 - This stand is also very dense, with recent SLI indicating the SDI is approximately 79% of maximum. This hemlock dominated, mixed conifer stand is approximately 70 years old and is classified as a UDS stand. There is slightly more understory in this stand compared to Area 6. Currently, there are 1.6 snags per acre 24 inches in DBH or greater and about 570 cubic feet per acre of down wood in decay classes 1 and 2 on site. This stand is on southwest exposure with a high potential of wind throw, with blow down occurring along the eastern boundary adjacent to the property line.

**Table 2. Stand Inventory Information**

Area	Prescription	Stand ID <sup>1</sup>	Species	Age	DBH	BA	TPA	SDI	Acres <sup>2</sup>
1	PC-H	23528	WH, SS, RA	66	16	309	237	79	29
		Target <sup>3</sup>	WH, SS, RA		19	110	75	25 - 30	29
2	MC	23516	WH, DF	69	17	312	188	75	17
2	MC	23528	WH, SS	66	18	232	139	55	32
		Target <sup>3</sup>	DF, WH, WRC				5		49
3	PC-M	23516	WH, DF	69	17	312	188	75	85
		Target <sup>3</sup>	WH, DF		20	140	90	30 - 35	85
4	MC	23567	WH, RA	61	15	233	204	61	47
		Target <sup>3</sup>	DF, WH, WRC				5		47
5	MC	23620	WH	80	15	442	341	114	23
		Target <sup>3</sup>	DF, WH, WRC				5		23
6	MC	23501	WH, SS, DF	77	18	344	194	81	60
		Target <sup>3</sup>	DF, WH, WRC				5		60
7	MC	23558	WH, SS	70	16	309	237	79	67
		Target <sup>3</sup>	DF, WH, WRC				5		67

1 The source of stand inventory information is (SLI from 2002 and 2003). Stand ages shown are as of 2006.

2 The acres are based on (orthophotos, traverse, GIS, GPS, etc) and exclude 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 Condition (DFC) for Area 1 is Older Forest Structure (OFS) and approximately 50 acres of Area 3 is planned for Layered (LYR). Areas 2, 4, 5, 6, and 7 are not planned to have a complex desired future condition on the landscape.

**Table 3. Stand Structure Information**

Area	Stand ID	Current	Post Harvest <sup>1</sup>	Desired Future	Acres
1	23528	UDS	LYR	OFS	29
2	23516	UDS	REG	General	17
2	23528	UDS	REG	General	32
3	23516	UDS	LYR	LYR	50
3	23516	UDS	LYR	General	35
4	23567	UDS	REG	General	47
5	23620	CSC	REG	General	23
6	23501	CSC	REG	General	60
7	23558	UDS	REG	General	67

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:**

Area 1 – is a partial cut, with the objective of developing a condition of “Older Forest Structure.” This partial cut entry will be a heavy thinning prescription, approximately SDI 25 to 30, and will retain the “biggest and best” trees. It is anticipated that thinning to this level will allow the development of another cohort of hemlock and cedar in the understory. Although this stand is fairly dense, the dominant trees within the stand have started to differentiate over the co-dominants and intermediate trees. It is anticipated that this prescription will remove the trees with poor crown ratios while retaining the emerging dominants with better crown ratios. It is anticipated that red alder will naturally seed in portions of exposed to mineral soil. An additional entry will be needed in the future to reach the DFC of OFS.

Area 3 – is a partial cut, with the objective of developing a condition of “layered”. Due to the tall height and poor crown ratios of the hemlock component in the stand and exposure to strong winds, blowdown from windstorms is a concern. There is a significant amount of Douglas-fir, Sitka spruce, and red alder scattered and clumped throughout the sale area, which have performed better during recent wind events in adjacent partial cuts.

This partial cut entry will remove all merchantable hemlock and partial cut all other species to an SDI of 30 to 35. The “biggest and best” trees will be retained, including alder. There will be some gaps created where clumps of hemlock are removed, which may need to be reforested. It is anticipated that hemlock will prodigiously seed in the gaps and that red alder will naturally seed in portions exposed to mineral soil.

Areas 2, 4, 5, 6, and 7 – are planned for regeneration harvest (modified clearcut) and will be replanted with a mixture of conifer species.

*Snags:* In all areas, all existing snags will be retained unless deemed to be safety hazards. In MC areas, several strategies will be employed to obtain the landscape goal of two hard snags per acre, including: tree topping and/or girdling, and retaining additional green trees. In PC areas, it is anticipated that additional snags will develop during yarding activities by leaving, topping, or girdling damaged rub trees, tail trees, lift trees, and/or intermediate support trees.

*Green Trees:* In MC Areas 2, 4, 5, 6, and 7, approximately five to eight green trees per acre will be scattered and/or clumped throughout the areas, and not solely located in riparian areas. In addition, individual and small clumps of non-merchantable conifer and alder may be left in operationally feasible areas to provide short term snag recruitment for cavity nesting birds. In all sale areas minor species such as red cedar may be reserved from cutting, and any existing larger remnant trees will be reserved from cutting.

*Downed Wood:* For all harvesting activities, all existing downed woody debris will be retained. In MC Areas 2, 4, 5, 6, and 7, additional conifer trees and/or conifer logs will be retained to meet the landscape targets for down wood as prescribed in the FMP and Implementation Plan. Obvious defect in conifer logs will be bucked out in the unit to enhance downed wood levels. In partial cut areas, to increase down wood levels, operations will be required to top trees prior to yarding and to yard only merchantable log segments to roadsides.

Site preparation treatments for Areas 2, 4, 5, 6, and 7, and potentially Area 3, will be accomplished through cable yarding operations, ground based harvesting, and mechanical manipulation of slash concentrations. Ground and aerial applied herbicides may be prescribed to sale areas if competing vegetation poses a threat to stand establishment. These sale areas will be replanted with Douglas-fir, western hemlock, and western red cedar. Mountain beaver trapping is anticipated in most portions of the entire sale area. Animal damage through big game browse is expected to be heavy. Timing of planting will be critical to minimize big game browse to hemlock. Tree protection will be prescribed to newly planted conifer species, Douglas-fir will receive paper bud caps, cedar will receive tubes at initial planting.

**V. ESTIMATED TIMBER AND REVENUE OUTPUTS:**

**Table 4. Timber and Revenue**

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

	Conifer	Hardwood	Total
Net Volume (MBF)	11,000	1,300	12,300
Stumpage Value (\$/MBF)	\$250	\$350	
Estimated Gross Value	\$2,750,000	\$455,000	\$3,205,000
		Project Costs:	\$415,000
		Estimated Net Value:	\$2,790,000

**VI. HARVESTING AND ACCESS CONSIDERATIONS:**

There are currently good quality forest roads accessing the general vicinity of the sale areas. Access to Area 1 and a portion of Area 2 requires an easement from an adjacent landowner, Teevin Bros., for the use of an existing unnamed rocked road in Simmons Field and the construction of approximately 400 feet of road on their ownership. The remainder of Area 2 and Area 3 are currently accessed from existing ridgetop roads

Currently, the South Fork Road is inaccessible due to the removal of the fill near the junction with Elk Mountain Road, which accesses Area 4. Reestablishing the crossing previously vacated would require the installation of a bridge. Another alternative is to construct a new ridgetop road from the end of the existing spur in Area 5. This alternative would require additional redesign of existing junctions on the South Fork Road, as they are all directed to haul down hill towards the Elk Mountain Road. These road plans will be further explored and evaluated during the field layout process.

Areas 5 and 7 can be accessed with existing roads and short access spurs. Access to Area 5 is secured through an existing easement with Weyerhaeuser (311.04089 – Noyes Hayes Agreement). Access to Area 7 requires an easement from an adjacent landowner, Agency Creek Tree Farm, for the use of an existing unnamed rocked road off of the Coon Creek Road and the construction of approximately 200 feet of road on their ownership. These easements will allow construction of two ridge top roads, and eliminate the need for any new stream crossings.

Access into Area 6 will require one Type N stream crossing. These plans will be further explored and evaluated during the field layout process.

The road rock needed for road construction and improvement will be crushed at the Elk Mountain Quarry. Roadside brushing is currently planned for all of the haul routes.

The project work for this sale is estimated to cost approximately \$415,000.

Approximately 70% of the sale area will be cable logged, as the slopes are moderate to steep. Ground based harvesting systems will be utilized on the more gentle slopes. Cable yarding can be done with medium size yarders. Tractor logging can be done with shovel loggers, track or wheel skidders.

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

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0.0	0.5	1.5	0.0
Improve	0.0	2.0	1.0	0.0
Maintain	7.0	5.0	3.0	0.0
Close/Block	0.0	0.0	0.0	0.0
Vacate	0.0	0.0	0.0	0.0

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

*Type F Streams:* Middle Fork of the North Fork Klaskanine (medium, Type F stream) flows along the northwestern boundaries of Areas 1 and 2.

An unnamed tributary of the North Fork of the North Fork Klaskanine (medium, Type F stream) flows along the eastern boundary of Area 3.

The South Fork of the North Fork Klaskanine (medium, Type F stream) flows along the northern boundary of Area 4, and an unnamed tributary of the South Fork of the North Fork Klaskanine flows along the southern boundary.

Two unnamed tributaries of the North Fork of the North Fork Klaskanine (medium, Type F stream) flow along the northern and southern boundaries of Area 6.

There are no Type F streams within or adjacent to Areas 5 and 7.

All of the streams flow in a westerly direction into the Klaskanine River drainage towards the Columbia River.

*Type N Streams:* There are small perennial Type N streams in all sale areas. NW Oregon Forest Plan stream riparian strategies will be employed along these streams. The current riparian vegetation is composed of a patchwork of conifer and hardwood overstories. The understory in the conifer dominated reaches is similar to the headlands, with mostly ferns, salal, and some wild rose. The understory within the alder reaches is mostly salmonberry.

All streams will be examined during sale layout to determine stream type and classification. Then, the specific RMA strategies required in the FMP will be implemented. These strategies are found in Appendix J, pages J-1 through J-16.

None of the sale areas are within proximity of streams in which listed fish are present.

*Stream Enhancement Opportunities:* Preliminary sale review by ODFW Fish Habitat Biologist indicates that there are options for stream enhancement projects associated with this sale. Further assessment and collaboration will be done with ODFW biologists and the Sunset Unit Forester.

*Aquatic Resource Protection:* For all areas, full log suspension is required when cable yarding over streams. No ground-based logging equipment operation is allowed within the stream bank zone. Adequate RMA buffers will be left where required on all streams per the FMP standards. To protect water quality during active operations, a variety of methods will be used to prevent sediment from entering live streams. These methods range from use of hay bales in road ditches, to "ditch-outs" away from streams, to complete shutdown of logging and hauling operations during times of heavy rainfall. There are no known high risk sites within the sale area. Any high-risk sites found will require at least one-end log suspension and cable logging. If any in-stream work is required with the sale, then the in-stream work will be conducted during in-stream periods established by ODFW.

**VIII. WILDLIFE AND T&E SPECIES CONSIDERATIONS:**

The sale area was surveyed for Northern Spotted Owls in 2005, 2006, and 2007 with no responses, and is scheduled to be resurveyed in 2008.

The sale area was surveyed for Marbled Murrelets in 2005 and 2006, with no detections.

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

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

Very few High Landslide Hazard Locations appear on the topography as mapped in the operation. The initial assessment from the geotechnical specialist is low. If High Landslide Hazard Locations are located during field work the geotechnical consultant will be consulted.

**X. RECREATION RESOURCES:**

This area receives dispersed recreation, which includes hunting, camping, target shooting, and driving forest roads. This sale is located in the motorized recreation portion of the Clatsop State Forest; however inventories of existing trails have not yet been conducted for this area.

**XI. CULTURAL RESOURCES:**

None.

**XII. SCENIC RESOURCES:**

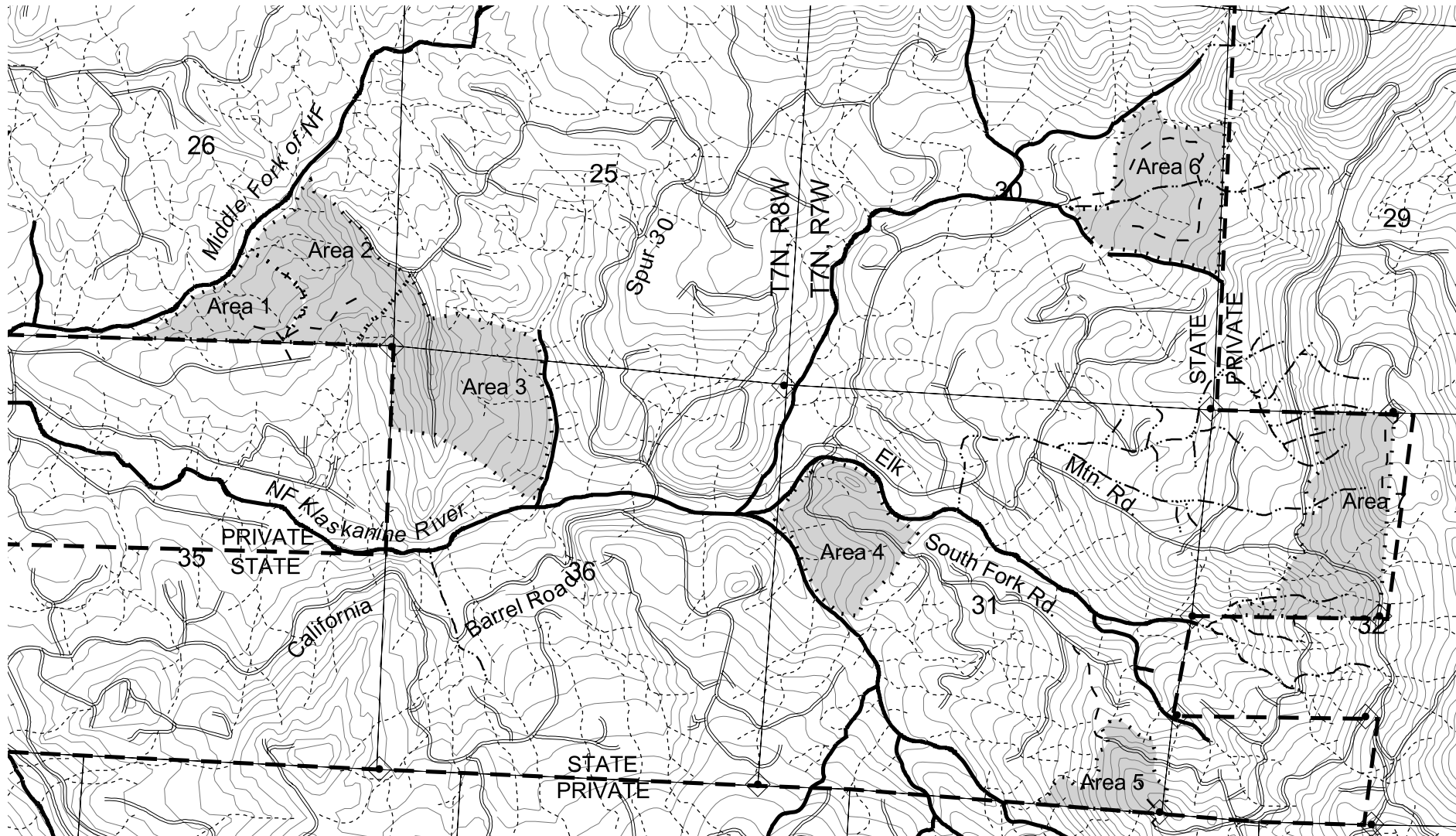
The sale areas are not visible from any county or state highway. All forest roads accessing the sale areas are Level 3 classification.

**XIII. OTHER RESOURCE CONSIDERATIONS:**

None.

**XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:**

The lands in this timber sale are all classified "general" stewardship.



APPROXIMATE NET ACREAGE:

	MC Acres	PC Acres
Area 1(PC-H)		29
Area 2(MC)	49	
Area 3(PC-M)		85
Area 4(MC)	47	
Area 5(MC)	23	
Area 6(MC)	60	
Area 7(MC)	67	
TOTALS =	246	114
Total Sale Acreage =	360	



1:24000

FY2009  
California Elk  
Portions of Sections 25, 26, and 36, T7N, R8W,  
and Sections 30, 31, and 32, T7N, R7W,  
W.M., Clatsop County, Oregon.

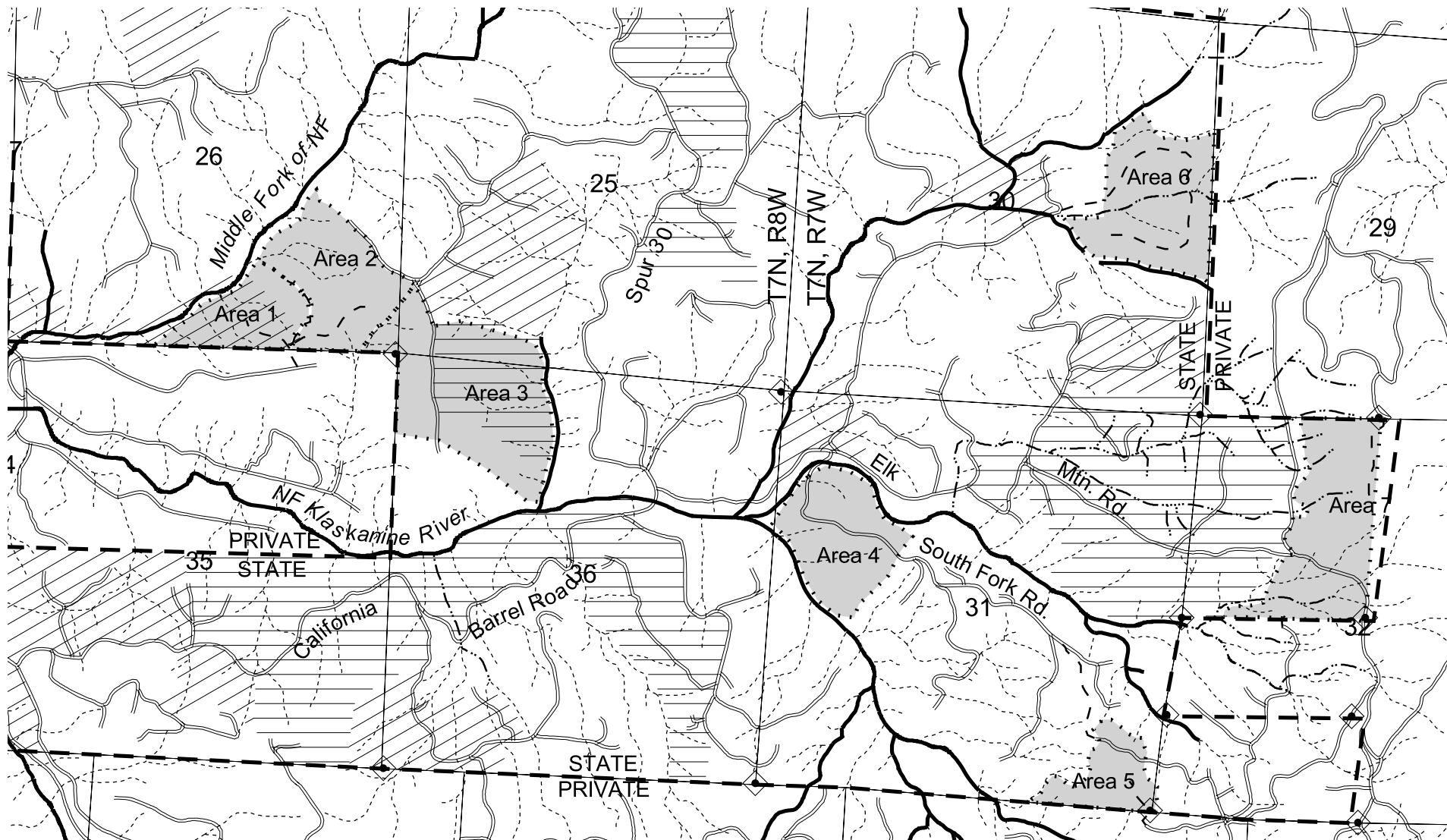
Map A - Topography

1000 0 1000 Feet



LEGEND

- Sale Boundary
- Road Construction
- Roads
- Ownership Boundary
- Streams**
- Type F Stream
- Type N Stream
- Unknown Stream



APPROXIMATE NET ACREAGE:

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FY2009  
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and Sections 30, 31, and 32, T7N, R7W,  
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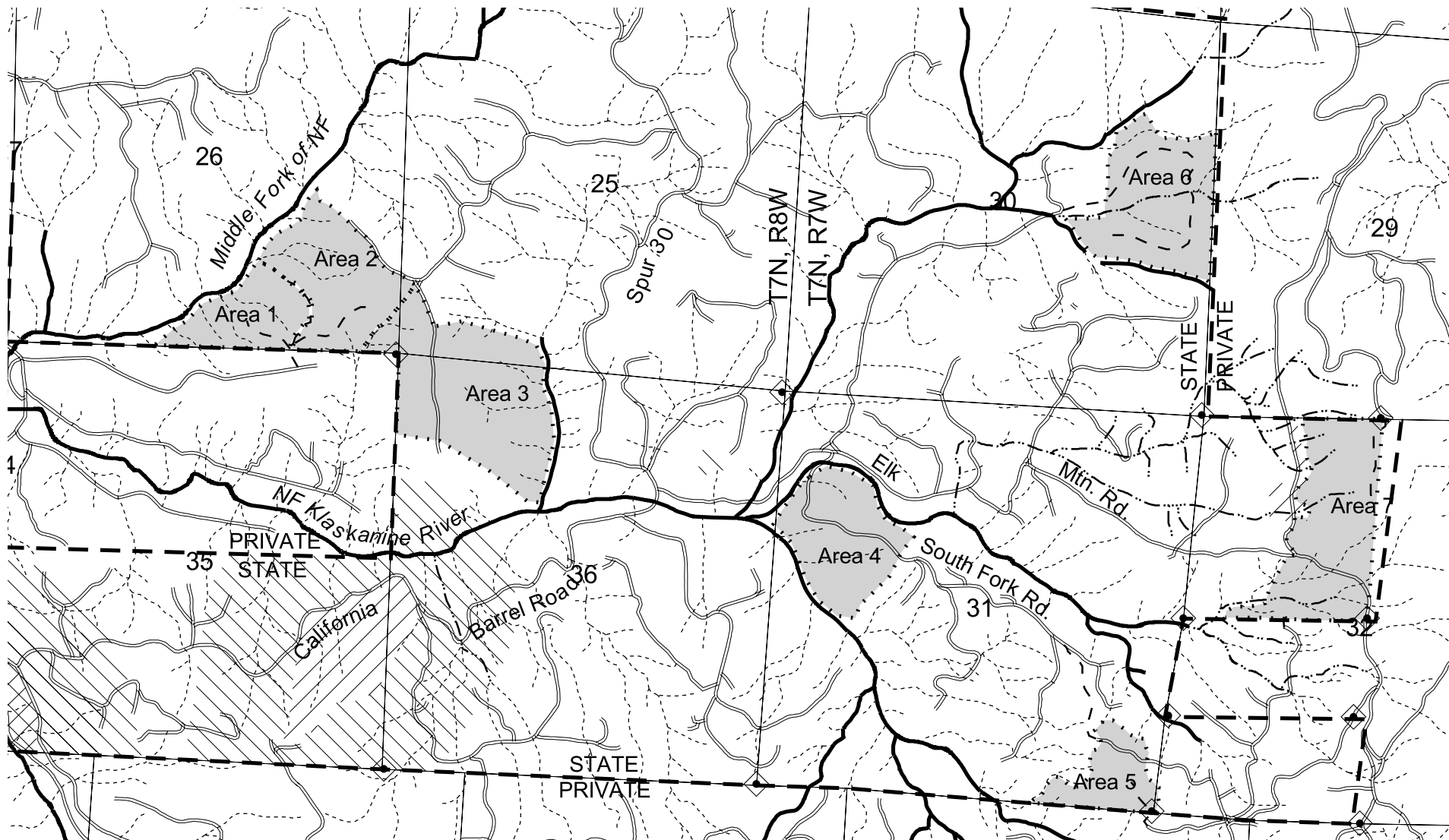
Map B - Desired Future Condition

1000 0 1000 Feet



LEGEND

- Sale Boundary
- Road Construction
- Roads
- Ownership Boundary
- Streams
- Type F Stream
- Type N Stream
- Unknown Stream
- Desired Future Condition
- LYR
- OFS



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California Elk  
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and Sections 30, 31, and 32, T7N, R7W,  
W.M., Clatsop County, Oregon.

Map C - Key Resources

1000 0 1000 Feet



LEGEND

- Sale Boundary
- Road Construction
- Roads
- Ownership Boundary
- Streams
- Type F Stream
- Type N Stream
- Unknown Stream
- FMLC
- Focused
- Special