

Pre-Operations Report

Operation Name: Crabtree #6

County: Linn

Management Basin: Crabtree Basin

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres
I	MC	107	96
II	PC-H	9	9
Total		116	105

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 73 inches of rainfall per year. The operation is located within the *Tsuga heterophylla* Zone (Natural Vegetation of Oregon and Washington, Franklin & Dyrness, 1973).

The landforms are gentle to moderate slopes on a spur-ridge divide between Cruiser Creek a tributary to Bald Peter Creek and Camp Creek with a few steep slopes along Camp Creek in the lower portion of the sale area. The underlying rock is igneous origin rock of the Western Cascades assemblage of continental, largely volcanogenic deposits of basalt and basaltic andesite, including flows and breccia, complexly interstratified with epiclastic and volcanoclastic deposits.

The slope within the operation ranges from 0-60%. The soil is Blachly clay loam which is a deep, well drained soil. The 50 year site index for Douglas-fir is 120 feet. (Soil Survey of Linn County Area, SCS, 1983) The elevation on the operation ranges from 1,980 to 1,440 feet.

II. CURRENT STAND CONDITION:

The operation is in a 65-year-old stand currently classified as Understory. The overstory consists mainly of Douglas-fir with a few scattered western hemlock throughout the stand. The overstory trees are in clumpy, dense patches surrounded by old roads or *Phellinus weirii* pockets. The understory consists of dense salal, some vine maple, sword fern, huckleberry and a few understory

western hemlock trees. There is currently 200 cubic feet of sound down wood and 7,000 cubic feet of down wood in all decay classes within the stand. There are 3 snags per acre greater than 12 inches in diameter in this stand. Most of the snags are the result of suppression mortality or root disease. (SLI 2004) Old skid trails and many *Phellinus weirii* pockets have maintained openings throughout the stand.

Table 2. Stand Inventory Information

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	SDI	Acres ²
I	MC	12400	DF	64	16	163	124	42	107
II	PC-H	12400	DF	64	16	163	124	42	9
		Target			20	109	50	25	

1 The source of stand inventory information is SLI from 2004 .

2 The acres are based on GIS and include roads, streams buffers, reserve areas, etc.

III. DESIRED STAND CONDITION:

This operation is located within the Crabtree Basin. There are no complex stands planned within this basin. (*Cascade District Implementation Plan, 2003*) This basin is dominated by Douglas-fir trees with minor amounts of western hemlock and hardwood trees along the streams. A major portion of this basin is infected with root disease. There is also significant soil compaction along old skid roads that may have occurred during wet weather logging in the late 1930's. All lands in this basin are considered candidates for land exchange due to the lands being entirely surrounded by private land ownership.

The root disease pockets within the stand will be treated during this entry and into the future. Root disease pockets will be replanted with disease resistant trees to grow for a rotation of the stand. Skid roads and landings will be replanted.

The **anticipated pathway** for Area I is as follows:

- Area I will receive a modified clearcut,
- The slash and brush will be treated to prepare the site for reforestation,
- The area will be promptly reforested and reclassified as a Regeneration stand,
- The area will be periodically checked to determine if interplanting or vegetation management need to occur,
- When this stand reaches approximately 10 years of age, it will be evaluated for possible pre-commercial thinning opportunities.
- The stand will be evaluated around age forty for an initial commercial thinning.

Area II is the riparian management area for Camp Creek. The desired future condition for this area is for mature forest condition consisting of a stand dominated by large conifer trees.

The **anticipated pathway** for Area II is as follows:

- Area II will receive a partial harvest.
- No further management activities are anticipated within this riparian management area.

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest ¹	Desired Future	Acres
I	12400	UDS	REG	General	96
II	12400	UDS	UDS	MFC ²	9

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

² MFC stands for mature forest condition consisting of a stand dominated by large conifer trees.

IV. PROPOSED MANAGEMENT PRESCRIPTION:

Area I will receive a modified clearcut. Approximately 5 to 7 green trees per acre will be retained within the unit. Any western red cedar tree will be reserved from harvest unless located within a road right-of-way or a cable corridor. Western hemlock and western red cedar trees will be the preferred leave tree species. The green trees will be left along streams and also as scattered clumps within the unit. To prepare the site for reforestation, logging slash will be piled and burned in ground yarding areas. Tree-length yarding or logs with the tops left on will be required within the cable yarding areas to minimize slash. The area will be replanted with Douglas-fir in areas that are not infected with *Phellinus weirri* and with western red cedar in those areas infected with the root disease.

The objective within the entire operation is to retain all down wood currently within the stand. At least 600 cubic feet per acre of sound down wood will remain in the unit following completion of harvest. Snags will be retained which do not pose a safety hazard, but some snags may need to be felled during the operation. A minimum of 2 snags per acre will be within the stand at the completion of harvest. If snags need to be developed within the unit, these will come out of the harvest volume and not the green trees.

Area II will receive a thinning to a SDI 25%. This thinning is located within the riparian management area of Camp Creek. Area II is across the creek from the Crabtree Rectangle clearcut which was completed in 2003. A minimum of a 300 foot stream buffer will be left along Camp Creek in between the two clearcut units to ensure compliance with the Oregon Forest Practices Act. At least a 150 foot stream buffer (Area II) will be located on the Crabtree #6 side of Camp Creek. The thinning will occur between 25 feet and 150 feet from Camp Creek within the stream buffer.

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:		4	

	Conifer	Hardwood	Total
Net Volume (MBF)	3,360	0	3,360
Stumpage Value (\$/MBF)	\$300	\$150	
Estimated Gross Value	\$1,008,000	0	\$1,008,000
		Project Costs:	\$109,000
		Estimated Net Value:	\$899,000

VI. TRANSPORTATION PLANNING AND HARVESTING:

Log haul will be off the Hammond Mainline and 410 roads. Both roads are currently under a secured easement with Weyerhaeuser Timber Inc.. These easements require a road maintenance and rock wear fee of approximately \$60,000 to \$90,000 to use these roads. These are mainline roads with crushed rock surfacing. Access into the sale unit will be accomplished by construction of .3 miles of new road (16' subgrade with 3' ditch, pit-run). Approximately .77 miles of road improvement to open up old road, 14' out-sloped and pit-run surfacing will be needed. Two log fills will be removed from the East Cr. and replaced with culverts. These culverts will be removed following the completion of harvest. One helicopter landing off of the Hammond 410 rd. will be constructed with the sale. This helicopter landing is not needed to yard the operation, however, it will be used to perform young stand management activities such as aerial chemical spraying or fertilization within the Crabtree Management Basin. Most of the ground is flat enough for ground yarding. Minor cable yarding will be necessary on the SE ¼ and NW 1/4 of the sale.

Table 5. Transportation Planning Summary (Miles).

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0	0	.3	0
Improve	0	0	.47	0
Maintain	0	0	.77	0
Close/Block	0	0	0	0
Vacate	0	0	0	0

* For determination of road class either use results of the Harvest and Habitat roads classifications, or if this information is not available then low use roads are spurs, medium use roads are collectors and high use roads are mainlines. Use these same criteria when comparing the total for all AOP sales to the IP plans.

VII. AQUATIC RESOURCES AND WATER QUALITY:

A portion of Camp Creek, a large fish bearing stream, located along the northern border of this unit contains anadromous fish. There are also 2 small streams whose beneficial use is unknown. A fish presence survey may be performed on these streams during the 2007 survey season. If fish presence surveys are not performed on the streams, the Oregon Forest Practices Revised Guidance on Interim Water Classifications (1995) will be used to make the determination. These streams flow into Crabtree Creek. The overstory along these streams consists of Douglas-fir, western hemlock and red alder. The understory consists of salal, salmonberry, huckleberry and ferns.

Management activities within riparian areas of streams will focus on achieving properly functioning aquatic and riparian habitat conditions over time. Riparian Management Areas (RMAs) will be established immediately adjacent to streams for the purpose of protecting aquatic and riparian resources and maintaining the functions and ecological processes of the streams. The Management Standards for Aquatic and Riparian Areas can be found in the *NWO State Forests Management Plan* (pg. J-1 – J-16).

- The RMA along Camp Creek will consist of a no harvest buffer 25 feet from the stream. Between 25 feet and 150 feet away from the stream, the trees will be thinned to a SDI of 25%.
- The RMA along the two small unknown streams will consist of a no harvest buffer at least 25 feet from the streams. The initial field check of these streams suggests that these streams do not contain fish due to steep slopes where the streams enter Camp Creek. With a non-fish stream status, at least 15 to 25 trees per acre will be retained within the 25 to 100 foot RMA.

The following measures will be used to minimize impacts to streams: 1. No ground based equipment will be allowed within 50 feet of any fish stream and 25 feet of any non-fish bearing streams, 2. There will be seasonal restrictions as to when ground yarding and road construction will be allowed (i.e. during dry seasons), 3. Erosion control measures will be used on areas of soils exposed during road construction or improvement, 4. In the cable portions of the operation, one end suspension of logs during yarding will be required, 5. Road ditches will be disconnected from streams, 6. Road maintenance will be required during log hauling.

VIII. T&E SPECIES CONSIDERATIONS:

This operation was surveyed for Northern Spotted Owls with no response during the 2004, 2005 and 2006 survey seasons. The operation may be surveyed again during the 2007 survey season.

The operation was checked against the Oregon Natural Heritage Program's database of known plant locations. The operation was also checked against district knowledge for any listed plant location. No records of threatened, endangered, rare or candidate plant species were found within the operation.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

The initial hazard and risk assessment from the geotechnical specialist is low except for the steep sloped areas along the northwest boundary of the sale. If these steep sloped areas remain within the sale area as the sale layout proceeds, the geotechnical specialist will be consulted to determine if a field visit is needed.

X. RECREATION RESOURCES:

There are no known recreational resources associated with this unit. This area is located behind a locked gate of a private landowner.

XI. CULTURAL RESOURCES:

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:

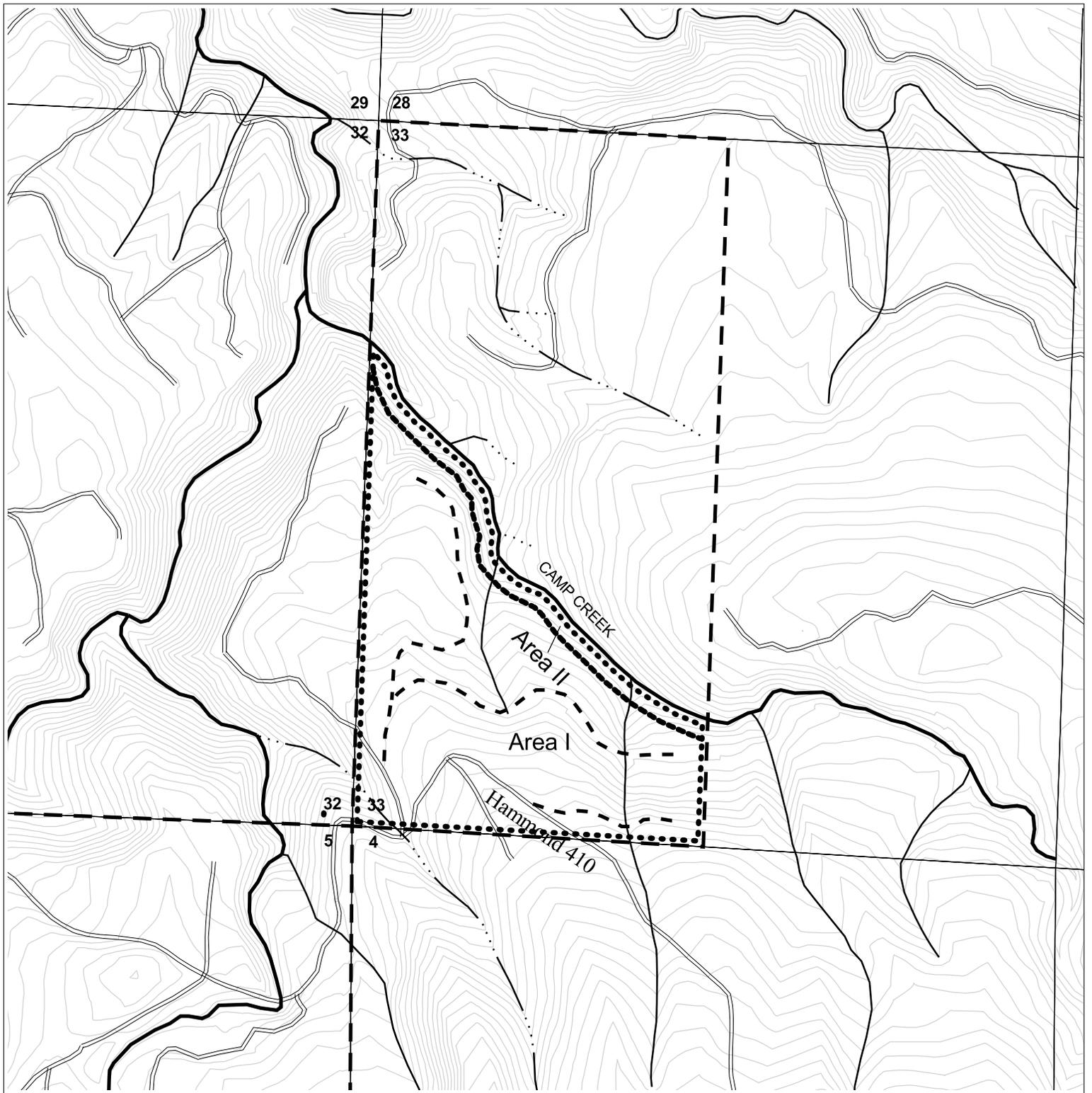
There are no scenic resources associated with this unit.

XIII. OTHER RESOURCE CONSIDERATIONS:

To protect air quality, the pile burning will comply with the Oregon Smoke Management Plan. The Smoke Management Plan is designed to reduce emissions from prescribed burning in western Oregon and to minimize smoke intrusions into designated population areas.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

The operation contains Special Stewardship, Aquatic and Riparian Habitat for a large Type F stream and Focused Stewardship, Aquatic and Riparian Habitat for small type N streams. See Section VII, Aquatic Resources and Water Quality, for the management guidelines to be utilized.



**CRABTREE #6
--TOPOGRAPHY--
FY '08 SALE PLAN
NORTH CASCADE DISTRICT**

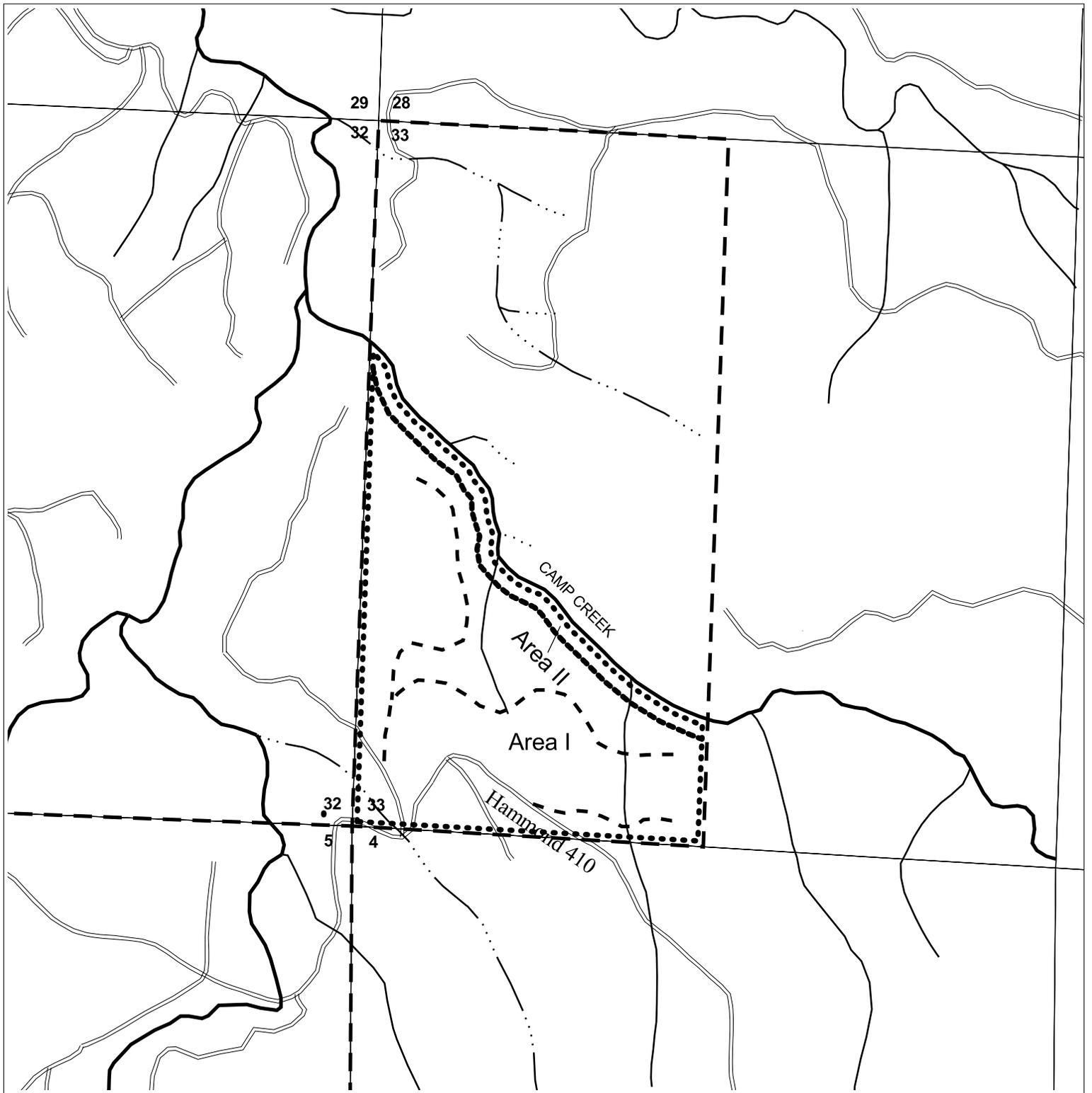
Portions of Section 33
T11S, R2E W. M.
Linn County, OR

Net Acreage:
MC - 96
PC-H - 9

-  New Road Construction
-  State Forest Boundary
-  Crabtree #6
-  Roads
-  Streams
-  FISH
-  NONFISH
-  UNKNOWN
-  20 foot contours



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CRABTREE #6
--DESIRED FUTURE CONDITION--
FY '08 SALE PLAN
NORTH CASCADE DISTRICT

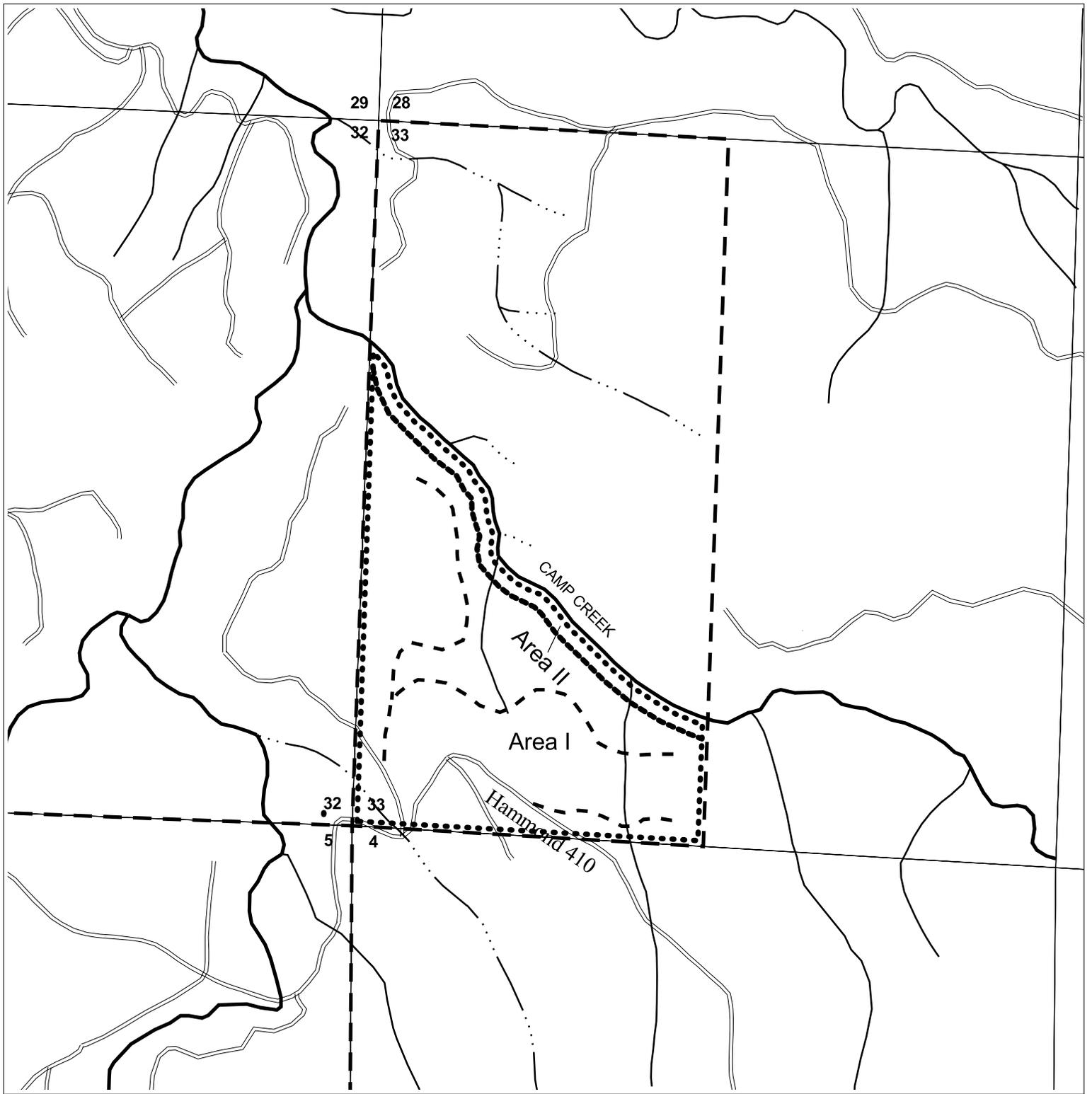
Net Acreage:
 MC - 96
 PC-H - 9

Portions of Section 33
 T11S, R2E W. M.
 Linn County, OR

-  New Road Construction
-  State Forest Boundary
-  Crabtree #6
-  Roads
-  Streams
-  FISH
-  NONFISH
-  UNKNOWN
-  Desired Future Condition
-  LYR
-  OFS



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CRABTREE #6
--KEY RESOURCES--
FY '08 SALE PLAN
NORTH CASCADE DISTRICT

Net Acreage:
 MC - 96
 PC-H - 9

Portions of Section 33
 T11S, R2E W. M.
 Linn County, OR

-  New Road Construction
-  State Forest Boundary
-  Crabtree #6
-  Roads
-  Streams
-  FISH
-  NONFISH
-  UNKNOWN



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