Watertank Gulch
2007 Sale (Alternate)

Operation Name: Watertank Gulch
County: Josephine
Management Basin: Rogue

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres
1	Partial Cut	37	33
2	Partial Cut	35	31
Total		72	64

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

Watertank Gulch is an isolated 80 acre rectangular tract of Board of Forestry land. This area is within the Mixed Evergreen vegetation zone on the east-side of the Siskiyou Mountains. Douglas-fir predominates, with minor inclusions of pine and evergreen hardwoods such as Pacific Madrone, Tanoak, and Canyon Live Oak.

The sale reaches from the upper slopes to mid-slope benches. Slopes range from 30% on the benches and rolling upper slopes to 70% in some of steeper areas. Aspects are southeasterly (Area 1) and southwesterly (Area 2). Elevations range from 2,280 – 3,000 feet.

The underlying rock units are of sedimentary and volcanic origin; Jurassic period. Soils in the sale area consist of the Speaker-Josephine (72F) gravelly loam. This soil unit is moderately deep to deep, well drained, and may be susceptible to water erosion.

II. CURRENT STAND CONDITION:

Overstory: Douglas-fir predominates in the overstory, with minor amounts of incense cedar, grand fir, and hardwood species, primarily Madrone, with some canyon live oak.

Understory: The understory covers 10% of the ground with a variety of shrubs, manzanita, oceanspray, Oregon grape, sword fern, poison oak, and bear grass.

Snags: The inventory picked up 6 conifer snags per acre (15” DBH) in Area I and 1 madrone snag. This meets the threshold for the amount of snags required for OFS structure. Area 2 has 2.41 madrone snags (13” and class 2) per acre and 1 (28” class 3) DF per acre.

Down woody debris: The amount of large down woody debris in Area 1 is 785 cu. ft per acre in classes 1-5. The amount of large down woody debris in Area 2 is 1658 cu. ft per acre in classes 1-5. This is above the OFS threshold.

Current Stand Structure: The sale area is 100% CSC.

Insects and disease: There are no indications of any insect or disease problems in the sale area.

Table 2. Stand Inventory Information

Area	Prescription	Stand ID [1]	Species	Age 06	DBH	BA	TPA	SDI	Acres [2]
1	PC	5064	DF	94	12	151	189	43	37
		Target [3]	DF		13	120	130	32	
2	PC	5066	DF, IC	70	11	162	241	48	35
		Target[3]	DF,IC		12	120	170	35	

1 The source of stand inventory information is SLI from the year 2002. Trees over 5.6 inches.
2 The acres are based on GIS and exclude (or 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:

Area I and II are similar, but Area 1 is more merchantable with larger trees. These are not homogenous stands, where a one-size-fits-all prescription will work. The most prevalent patch type would be a thick stand of DF with a few large residuals, some 12-14" trees and a thick bunch of suppressed 6-10" trees with low crown ratios. Perhaps the second most prevalent patch would be 100 SF of DF overstory with a Madrone mid-layer. The stand treatments will be to create better spacing for the Douglas-fir allowing better diameter growth through reduced competition. Madrone will be left for a hardwood layer. The idea is to send the stand along a trajectory toward OFS. Opening the stand will move it to UDS, and increased diameter growth over the next 20-30 years should help create OFS structure characteristics. See the desired future condition as shown in Table 3 below.

Table 3. Stand Structure Information:

Area	Stand ID	Current	Post Harvest [2]	Desired Future	Acres
1	5064	CSC	UDS	OFS	37
2	5066	CSC	UDS	OFS	35

1 The forest management plans for these districts do not contain structure strategies.
2 The stand is expected to develop into this condition in the five to ten years after this operation is completed.

Vision:

The Watertank sale area is a heterogeneous southerly facing mixed stand of timber. One section of the land ownership not included in the sale is rock outcroppings with Manzanita and Madrone indicating a dry low site. Much of the stand is overdense Conifer with suppressed small DF that have low crown ratios. This portion of the stand should be thinned, without a lower diameter limit, as the small trees in the stand will not release into a future layer. The stand treatments will be to create better spacing for the Douglas-fir allowing better diameter growth through reduced competition. The stand should be thinned to a spacing that does not allow the crowns to touch. After treatment the stand will be open for ten years or more allowing shrubs and herbs to grow. Layering will not come from understory DF, but from Madrone and cedar. Madrone will be left in the stand to give the layering effect. There will be a somewhat reduced susceptibility to crown fire, however as shrubs grow so will the ground fuels. The DFC of this stand is OFS. Currently it needs more diameter growth to reach the thresholds which is what the thinning will help attain.

IV. PROPOSED MANAGEMENT PRESCRIPTION:

The purpose of the following stand management treatments is to reduce moisture stress and competition lowering the risk presented by disease and wildfire, and to raise revenue for the Counties by removing a small amount of timber. Thinning will help reduce interspecies competition and stress on the trees helping to prevent beetle outbreaks and disease. Creating better spacing between crowns and removing suppressed trees will help prevent fire from reaching the canopies and killing the dominant overstory trees.

Desired Silvicultural Results: See Partial Cut Target Stand in Table 2. The commercial prescription will primarily be thinning from below to a desired spacing to remove the suppressed, intermediate and some of the codominant trees from these stands. An upper diameter limit will be established to preserve the largest and healthiest trees in the stands. Density management will increase growth and development of the overstory and understory. Thinning these stands will increase the health and vigor of the residual conifer and hardwood trees as well as reduce the likelihood of insects, disease, wildfire, or other stand replacing events. Approximately 10% of the sale area will remain in unthinned patches at least 1 acre in size. These unthinned patches will be randomly placed throughout the sale area. The largest and healthiest trees will be left throughout the sale, as well any trees that have the Old Growth characteristics of rough bark, large limbs and deformed tops. Madrone trees will be retained for layering. Opportunities to create small ¼ to one acre openings will be explored during sale layout. These patch cuts provide an opportunity to leave extra down wood. Openings greater that ½ acre will be interplanted while those less than ½ acre will be left to naturally develop. This combination of partial cutting and group selection emulates the natural processes behind the development of LYR and OFS stands.

Snags: Snag creation will be required in Area II. Area I will be assessed after logging to see whether it is necessary to create more hard conifer snags. An estimated 1 to 1.5 snags per acre will occur as a result of logging and natural mortality. It is likely that an

additional 1 snag per 2 acres will be created by tree topping or girdling in Area I. All pre-existing snags that are not safety or fire hazards will be retained. Any snags that are felled will be retained for down woody debris.

Down woody debris: Approximately 100 cu. ft./acre of class 1 debris will be added through normal logging operations including trees that are damaged and eventually blow down and cull log segments required to be left on the ground. Additionally any time a stand is opened up from management activities the possibility of isolated blow down or top breakage exists. No yarding of down woody debris will be permitted.

Insects and disease: The sale will focus on removing the trees that have the smaller, less developed crowns, poor vigor and thus are more susceptible to an insects and disease.

Fuels Modification: Residual slash, tree tops and limbs, will be burned if unacceptable accumulations remain after harvest.

Regeneration: Regeneration from seed will occur naturally as a result of the thinning, especially in group selection areas. Replanting may occur in small openings created from logging.

V. ESTIMATED TIMBER AND REVENUE OUTPUTS:

The volume is based on SLI numbers and an estimated 4MBF per acre over 60 acres net. The project costs are for road improvement and road brushing.

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	0%		X
Planned Quarter:		1, 2, 3, or 4	

	Conifer	Hardwood	Total
Net Volume (MBF)	(60*4M=240M)	0	240
Stumpage Value ($/MBF)	$250		
Estimated Gross Value	$60,000	$0	$60,000
		Project Costs:	$10,000
		Estimated Net Value:	$50,000

VI. HARVESTING AND ACCESS CONSIDERATIONS:

Access: Access is through a County Road to 33-6-19 to 33-6-19.1. The road runs through private ownership, to BLM to State. This road is 2.1 miles to the start of ODF land, and 1 mile long on ODF land. There is also an alternate route from the north that would require less improvement, but is longer and has a steep adverse grade at the very end near the sale. The 33-6-19 road would require brushing, grading and access agreements.

Harvesting: The sale area is about 75% cable logging. The sale has slopes up to 70% with benches and rolling ridges at about 30%. The sale is logically and most likely to be logged in the summer.

Table 5. Transportation Management Summary (Miles)

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct				
Improve		3		
Maintain				
Close/Block		1		
Vacate				

* 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.

VII. AQUATIC RESOURCES AND WATER QUALITY:

A perennial stream dissects area 2 of the sale. It is not known whether this is a fish bearing stream at this time. The sale will be buffered as if it is fish-bearing according to the southwest riparian strategies as outlined in the Management Plan (SWO FMP). There are a few seasonal draws in the sale area. For the most part they only flow during heavy rains in the winter. To the extent that harvesting will be occurring in the "inner" and "outer" RMA zones, live tree and snag retention will exceed the requirement standards in the SWO FMP. Area II has no streams.

VIII. WILDLIFE AND T&E SPECIES CONSIDERATIONS:

Northern Spotted Owl: The SOA Wildlife Biologist has determined that the sale area may be suitable for Northern Spotted Owls due to the age and size of the trees. Surveys for NSO's have taken place in 2004-2005 (As the Perkins Gulch sale, T33S R6W Section 18) and will continue in 2006. As a result of these surveys, 3 northern spotted owl sites have been identified within 1.3 miles of this sale.

A biological assessment will be prepared by the ODF SOA Biologist to assure that the appropriate measures are taken to provide sufficient habitat on the landscape as required in the Department adopted Incidental Take Guidelines as well as any seasonal restrictions necessary to prevent disturbance during the nesting season.

Marbled Murrelet: This sale is outside the known inland range of the marbled murrelet and will not require surveys.

Threatened and Endangered Fish: There are no known listed fish present in streams near the sale area. The stream will be posted according to the Southwest Oregon Forest

Management Plan riparian management area rules. For additional protection measures to prevent sediment from entering perennial streams see Section VI – Harvesting and Access Considerations, Section VII – Aquatic Resources and Water Quality, and Section IX – Slope Stability and Geotechnical Issues.

Threatened and Endangered Plants: The sale area was checked against District knowledge for any listed plant location as well as the Oregon Natural Heritage Program (ONHP) database of known listed plant locations. No records were found.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

Slopes max out at about 70%. A hazard assessment of slope stability will be conducted by a Geotechnical Specialist.

X. RECREATION RESOURCES:

There are no developed trails or facilities in close proximity to the sale.

XI. CULTURAL RESOURCES:

A pre-sale reconnaissance revealed no significant cultural resources in the sale area.

XII. SCENIC RESOURCES:

The Visual Classification is rated as Level III – Low Sensitivity.

XIII. OTHER RESOURCE CONSIDERATIONS:

There are no other resource considerations within or adjacent to the sale area.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

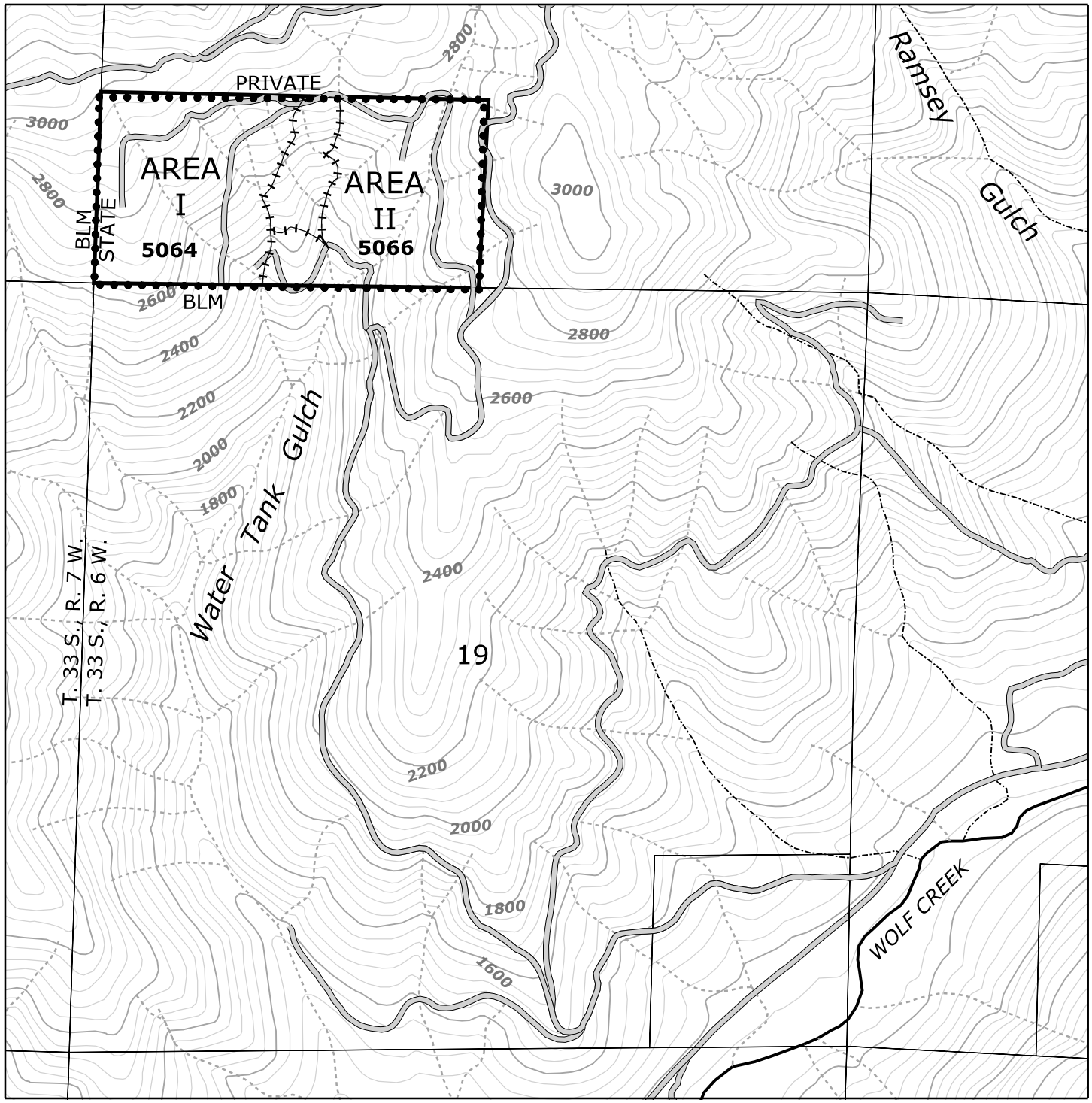
Table 6. Land Management Classification Summary

Area	LMCS Subclass	Focused Stewardship	Special Stewardship
1	Aquatic & Riparian	28	
2	Aquatic & Riparian	5	4

This table summarizes the acres of Focused and Special Stewardship within the operations. The acres each operational area in this table do not necessarily add up to its gross or net acres, because of overlapping classifications under the Land Management Classification System. For example, a particular acre can be classified as Focused Stewardship for Aquatic and Riparian, Recreation, and Scenic resources.

ATTACH Biologic Assessments (where necessary)

ATTACH MAP



Watertank Gulch

- Alternate Sale -

S.W.O. District - 2007
Annual Operations Plan

T. 33 S., R. 6 W., Sec. 18; W.M.
Josephine County, Oregon

Sale Boundary
State Ownership
Ownership Boundary
Existing Road
Planned Road

Streams
Fish
No Fish
Unknown

500 0 500 1000 1500 2000 Feet

Contour Interval : 40 feet

ACRES (est. gross)		
AREA I	:	37 acres
AREA II	:	35 acres
TOTAL	:	72 acres