

McPherson Ridge Pre-Operations Report

Operation Name: McPherson Ridge

Legal: Portions of Sections 25, 26, and 35, T3N, R9W, W.M., Tillamook County

Management Basin: Lower Nehalem

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres ¹
1	Modified Clearcut	135	120
2	Partial Cut - Heavy	4	4
3	Modified Clearcut	110	108
4	Partial Cut - Heavy	35	36
Total		284	268

1. The net acres are based on orthophotos and GIS and exclude roads and stream buffers.

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

Slopes in the sale areas range from 5% to 90+%. Elevations range from 160 to 1240 feet. Area 1 predominately has a northern aspect with some northwest, northeast, and western facing slopes. Area 2 has a southwestern aspect. Area 3 has predominately a southern aspect. The major soil type is Cochran with minor areas of Rye. Area 4 is the riparian area of an unnamed stream and the adjacent steep uplands and headwalls.

II. CURRENT STAND CONDITION:

Table 2. Stand Inventory Information³

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	SDI	Net Acres ²
1	MC	300	DF/RA	44	14.4	222	195	53	120
2	PC	301	DF/RA	44	15.5	252	192	54	4
2	PC	Target ³	DF/RA	44	19.5	100	48	23	4
3	MC	302	DF/RA	44	14.2	195	177	47	108
4	PC	303	DF/RA	44	14.7	195	160	51	36
4	PC ⁴	Target ³	DF/RA	44	19	100	51	25	36

1. The source of stand inventory information is from cruise plots taken in 2008.

2. The net acres are based on GIS and GPS and exclude roads and stream buffers. Modified clear cut acres are not contiguous and do not exceed 120 acres.

3. These numbers are based on plot data taken to this point and final numbers may differ significantly. The directive for minor and major modifications will be followed for further review.

4. Thinning only required for parts of area. See prescription section IV.

All four sale areas burned in the Tillamook Fire of 1933 and the Wilson River/ Salmonberry Fire in 1945. Western hemlock, western red cedar, and Sitka spruce found within the stand are either remnant from these fires or from natural regeneration. All but the northern-most portion of the sale (approximately 80%), which is predominantly red alder, was planted with Douglas-fir in 1963-1964. These areas have had no other prior management. No significant insect or disease outbreaks have been discovered at this time.

Area 1: This area is composed primarily of alder (149 ft² of the 191 ft² basal area per acre). The alder regenerated naturally and Douglas-fir was planted on the south central part of the area in 1963-1964. There is a 2-3 acre pocket of spruce, hemlock, and Douglas-fir on the southern part of the area. Hemlock and spruce is scattered throughout the area existing as an intermediate to the dominate alder. The alder is of high quality with some bole diameters in the 20 inch and higher diameter classes. The alder in this stand is also dense (approx. 70% SDI) and is showing signs of stem exclusion resulting in reduced height and diameter growth.

Area 2: This area is dominated by Douglas-fir with pockets of red alder. The area was planted and is dense (Douglas-fir at 54% SDI) co-dominant and intermediate Douglas-fir, which have low live crown ratios. The alder is also slowing in growth due to age.

Area 3: Douglas-fir is the major component of this area (100 ft² of 169 ft² basal area per acre). The majority of Area 3 was planted with Douglas-fir in '63-'64. There are scattered pockets of alder and big leaf maple. Like the other areas in this sale, the stand is dense (approx. 50% SDI for Douglas-fir) live crown ratios on intermediate Douglas-fir is low (15-20%) and the stand is showing signs of stem exclusion.

Area 4: Located between Areas 1 and 3, Area 4 buffers a small type F stream to its headwaters. This area was planted in '63-'64 with Douglas-fir. The area is composed of pockets of alder and Douglas-fir with and occasional spruce or hemlock coming in as an intermediate or an understory component.

See Table 2 for specific stand data.

III. DESIRED STAND CONDITION and VISION:

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest ¹	Desired Future	Net Acres
1	300	UDS	REG	GEN	120
2	301	UDS	UDS	GEN	4
3	302	UDS	REG	GEN	108
4	303	UDS	UDS	GEN	36

1. The stand is expected to develop into this condition in the five to ten years after this operation is completed except in REG stands which occur after harvest.

See Section IV: Proposed Management Prescription for more information on Green Tree, Down Wood, and Snag Strategies during operation. Also refer to Landscape Design in the Summary document for more information on strategies to move the district toward Desired Future Condition (DFC) goals.

Lost Creek and McPherson Creek Landscape View:

In conjunction with prior management sites in the McPherson and Lost Creek basins, there will be a mosaic of stands differing in age, density, and species makeup. There will be openings as large as 120 acres with clumps of legacy conifers and groves of alder along streams.

All McPherson Ridge Sale Areas: The DFC for all areas of McPherson Ridge is General (GEN).

Short Term Vision: The regeneration harvests will replace the current stands of alder and Douglas-fir which have become dense (approx. 180 trees per acre) and show signs of reduced vigor and growth at a stand level. Buffers will be thinned to give residual trees more growing space allowing them to thrive. Openings will be planted with western hemlock and Swiss needle cast resistant Douglas-fir. Red alder will likely regenerate naturally in clearings and remain a significant component in riparian areas. There will be clumps of big leaf maple adding diversity and reserved Douglas-fir with diameters larger than 20” in most cases. These green trees will add structure to the regenerated stand and, through natural processes, serve as a source of larger snags and down woody material. The stands will be on a pathway that maintains productivity via density management while providing some structure with the legacy components.

Long Term Vision: The vision for McPherson Ridge is to have stands of mostly hemlock on northern slopes and mostly Douglas-fir on southern slopes with minor components of red alder, big leaf maple, western redcedar, and Sitka spruce. About 10 years after the harvesting, the clearings will have transformed into thriving young forests. At this time it will be necessary to manage stand density by precommercially thinning to give the most vigorous trees additional growing space to thrive and maintain productivity. Some of the legacy structures will blow over creating down wood, or die creating larger decay class 1 or 2 snags. Approximately 35-40 years after harvest, the stand will be commercially thinned for density. Riparian buffers will likely have some LYR components.

IV. PROPOSED MANAGEMENT PRESCRIPTION:

The prescriptions described below are based on the current stand condition such as overall tree and stand growth, species mix, stand density, and stand health.

Modified Clearcut

Area 1

Prescription: Merchantable red alder and Douglas-fir will be removed. The largest and most vigorous Douglas-fir will be left as green trees. All other species will be reserved.

Green Trees: The largest and most vigorous Douglas-fir will be left on the landscape where available. Green trees may also include Douglas-fir with multiple tops or broken tops to improve wildlife habitat and other tree species. Green trees around stream buffers and near headwalls will be left in clumps. 5 - 7 trees per acre will be left to meet forest management plan requirements.

Snags: Approximately 2 snags per acre greater than 15 inches DBH will be created in this area. Snags currently on site will be left as long as the snags pose no danger to harvest operations.

Down Wood: The existing down wood will be left in the sale areas and additional down wood will be created during this harvest operation in order to meet the FMP target of 600 to 900 cubic feet. Down wood creation will be completed by bucking and leaving obvious defect and butt logs from felled Douglas-fir. If necessary, additional trees may be felled to meet the down wood goal.

Pathway: The area will be reforested predominantly with western hemlock. A minor component of other conifer species, including Douglas-fir, will be scattered across the area and alder will be retained in stream buffers. A precommercial thinning is anticipated at 10-12 years when the crowns begin to close. A commercial thinning will then be planned at age 35 to 40. At this time managers will review density, stand health, and landscape goals to decide future management prescriptions.

Area 3

Prescription: Merchantable red alder and Douglas-fir will be removed. The largest and most vigorous Douglas-fir will be left as green trees. All other species will be reserved.

Green Trees: The largest and most vigorous Douglas-fir will be left on the landscape where available. Green trees may also include Douglas-fir with multiple tops or broken tops to improve wildlife habitat and other tree species. Green trees around stream buffers and near headwalls will be left in clumps. 5 - 7 trees per acre will be left to meet forest management plan requirements.

Snags: Snag creation will be done with this harvest operation. Approximately 2 snags per acre greater than 15 inches DBH will be created within sale area.

Snags currently on site will be left as long as the snags pose no danger to harvest operations.

Down Wood: The existing down wood will be left in the sale areas and additional down wood will be created during this harvest operation in order to meet the FMP target of 600 to 900 cubic feet. Down wood creation will be completed by bucking and leaving obvious defect and butt logs from felled Douglas-fir. If necessary, additional trees may be felled to meet the down wood goal.

Pathway: The area will be reforested predominantly with SNC tolerant Douglas-fir. A minor component of other conifer species will be scattered across the area and alder will be retained in stream buffers. A precommercial thinning is anticipated at 10-12 years when the crowns begin to close. A commercial thinning will then be planned at age 35 to 40. At this time managers will review density, stand health, and landscape goals to decide future management prescriptions.

Partial Cut

Area 2

Prescription: Red alder and Douglas-fir will be thinned from below to 100 – 120ft² basal area per acre (25% SDI). All other conifer and hardwood species will be reserved.

Snags: Snags currently on site will be left as long as the snags pose no danger to harvest operations. If additional snags are needed on the landscape, snag creation will be done during the second thinning entry.

Down Wood: The existing down wood will be left in the sale areas and additional down wood will be created during this harvest operation. Down wood creation will be completed by bucking and leaving obvious defect and butt logs from felled Douglas-fir.

Pathway: Area 2 is located between Area 1 and the McPherson sale of 2005. The residual trees will be the biggest and best and will continue to grow in diameter and height. This harvest will keep this stand on the landscape another 20 years before final harvest.

Area 4

Prescription: Red alder and Douglas-fir will be thinned from below to a basal area of 100-120 ft². All other conifer and hardwood species will be reserved. Thinning will occur along cable corridors that pass through Area 4 when harvesting in the adjacent areas. Thinning is required for a minimum of 50 feet either side of each cable corridor that goes through Area 4.

Snags: Snags will be created naturally as the stand progresses through time. Snags currently on site will be left as long as the snags pose no danger to harvest operations.

Down Wood: The existing down wood will be left in the sale areas and additional down wood will be created during this harvest operation. Down wood creation will be completed by bucking and leaving obvious defect from felled Douglas-fir.

Pathway: Area 4 is located along a Type F tributary of McPherson Creek. This buffer will be managed to improve riparian habitat. The area will be left to mature and provide cover for streams. Land managers can review stand density and species complexion to decide on future management.

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:		2	

	Douglas-fir	Red alder	Total
Net Volume (MBF)	1824	2346	4170
Stumpage Value (\$/MBF)	\$101.41	\$185.81	
Estimated Gross Value	\$184,975	\$435,900	\$620,875
		Project Costs:	\$167,795
		Estimated Net Value:	\$453,080

VI. HARVESTING AND ACCESS CONSIDERATIONS:

The sale areas are accessed via Cook Creek and McPherson Roads. These are currently all weather, crushed rock roads. See maps for specific road locations and conditions.

Approximately 0.41 miles of abandoned road will be improved which includes grading, rocking, widening, culvert replacement, sidecast pullback, and adding new culverts. This work will bring all roads up to standards described in *the Forest Roads Manual*.

Approximately 1.03 miles of road will be constructed to provide access to cable yarding areas. It is anticipated that the new construction roads will be closed at the completion of the sale. See summary document for more information on road closure. No other project work is currently planned with this sale.

There is a 25% favorable spur road that will be built to access the ridge top to cable yard Area 3. Oregon Parks and Recreation Department (OPRD) is the landowner north of Area 1 and tail holds will be required on OPRD land to cable yard this area. OPRD has given verbal approval to allow machinery and tail holds on their property.

The operation will be 100% cable yarding.

Table 5. Transportation Planning Summary (Miles)⁴

Activity	Mainline	Collector	Rocked Spur ¹	Dirt Spur ¹
Construct			0.83	0.20
Improve			0.41	
Maintain ²				
Close/Block ³			0.83	0.20
Vacate ³				

1. *Additional roads may be built by the operator at the time of harvest and will be approved by the State through the Operations Plan. These will be short dead end spurs and closed or blocked after harvest*
2. *All roads accessing the sale area will be maintained during the life of the timber sale contract. Maintenance miles in the table are those roads not being constructed or improved.*
3. *Roads not closed/blocked or vacated at the end of the sale will be reviewed for closure after reforestation is established.*
4. *The numbers in this table reflect planned Project Work associated with the sale.*

VII. AQUATIC RESOURCES AND WATER QUALITY:

An unnamed tributary to the Nehalem River, a medium Type F stream, is adjacent to sale Area 4. There are also small unnamed perennial and seasonal Type N streams that are within and adjacent to the sale areas and haul route. These streams will be reviewed and protected appropriately during sale layout based on flow, topography, and terrain.

Oregon Department of Fish and Wildlife (ODFW) will be requested to complete stream surveys before sale layout begins. Streams of unknown status will be treated as Type F until surveys are completed to verify fish use.

Stream buffers within or adjacent to harvest unit boundaries will be managed according to *Forest Management Plan* Riparian Strategies. The riparian areas will be reviewed during sale layout for current stand conditions and/or operational constraints for implementing FMP strategies.

Small Type N streams can influence stream temperature of downstream fish-bearing streams. Sufficient trees will be retained within 500' of the confluence with type F streams to achieve 80% shade over streams. A 25' no-harvest buffer will be established along the small Type N streams. Additional trees including some wildlife trees will be retained resulting in a large buffer (Area 4).

Riparian management areas result in leave trees adjacent to the stream which protect stream temperature, provide nutrients, protect stream banks, and eventually provide wood to improve fish habitat.

VIII. T&E SPECIES CONSIDERATIONS:

The sale areas have been reviewed with the ODF Northwest Oregon Area Biologist. Surveys for marbled murrelets are not required due to the absence of potentially suitable habitat. Surveys for northern spotted owls are required due to potential habitat within or adjacent to the sale area. Surveys for northern spotted owls have been conducted during the 2008 survey season and will be conducted during the 2009 survey season. All northern spotted owl surveys are conducted in accordance with USFWS endorsed protocol.

Streams in this sale are in the Nehalem basin. As of March 2008, coastal coho salmon are listed as threatened for the Oregon Coast. The riparian and aquatic strategies combined with road and harvest practices described in this Annual Operations Plan and our Northwest Oregon State Forests Management Plan (FMP) are designed to minimize impacts and or restore aquatic habitats that influence aquatic species.

T & E Plant species: The sale areas were checked against the Oregon Natural Heritage Program (ONHP) database of known threatened or endangered listed plant locations as well as local records in the Land Management Classification System (LMCS). No listed plants were identified within or adjacent to the sale areas.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

This assessment is based on USGS 1:24,000 topographic maps and available geologic maps. There are high landslide hazard locations throughout the sale area. The sale area drains to Lost Creek, McPherson Creek, and an unnamed tributary to the Nehalem River. The risk of landslides delivering to these streams from Areas 1, 3, and 4 is high and from Area 2 is low. The geotechnical specialist will conduct a field review of this sale.

X. RECREATION RESOURCES:

The sale area is designated as Motorized in the *Tillamook State Forest Comprehensive Recreation Plan* (1993). This sale has been reviewed by the Recreation Planner.

No OHV trails were identified within or adjacent to the sale areas. OPRD owns land adjacent to the northern portion of the sale area. A plan will be developed to manage issues that may come up during the sale preparation process. Recreational use common to this area includes hiking, hunting, camping, and site seeing.

XI. CULTURAL RESOURCES:

The *Tillamook State Cultural Assessment* does not list any cultural sites within or adjacent to the proposed sale boundary. The district will consult the Public Use Coordinator for appropriate protection and tracking if any sites are noted during sale preparation or administration.

XII. SCENIC RESOURCES:

The sale area has a visual classification of Level 3, low sensitivity. No scenic impact is expected. Future plans for the State Parks land adjacent to the north side of the sale area are unknown at this time. Future planning should be coordinated with Oregon State Parks.

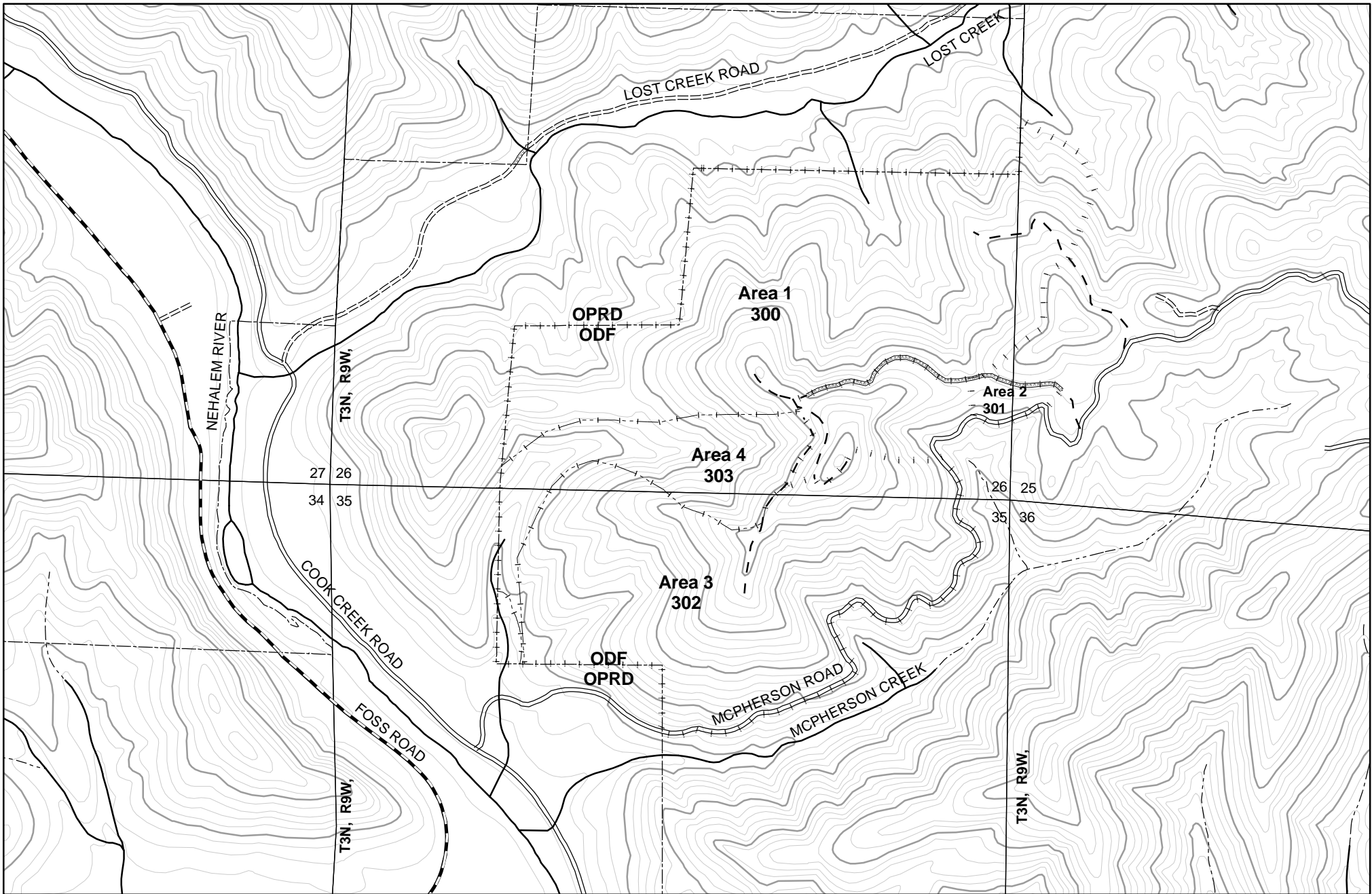
XIII. OTHER RESOURCE CONSIDERATIONS:

The northern and western boundaries of the sale areas are adjacent to property owned by OPRD. This boundary has/has not been established by a survey. The property boundary will need to be identified and marked in the field.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

The sale area contains Focused and Special Aquatic Habitat. See Section VII, Aquatic Resources and Water Quality, for the management guidelines to be utilized.

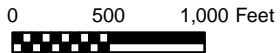
Boundary lines depicted on Attachment C are approximate; exact locations and site specific management activities will be determined during the sale preparation process.



Contour Interval 40'

- Area boundary
- ! ! Sale boundary
- Ownership boundary
- Perennial Type-F stream*
- - - Perennial Type-N stream*
- == Unsurfaced road
- == Surfaced road
- State/Federal highway

- Abandoned road
- □ Blocked road
- - - Road construction
- County road
- ; ; Transmission line



3

McPherson Ridge -- Topography -- 2010 SALE PLAN TILLAMOOK DISTRICT

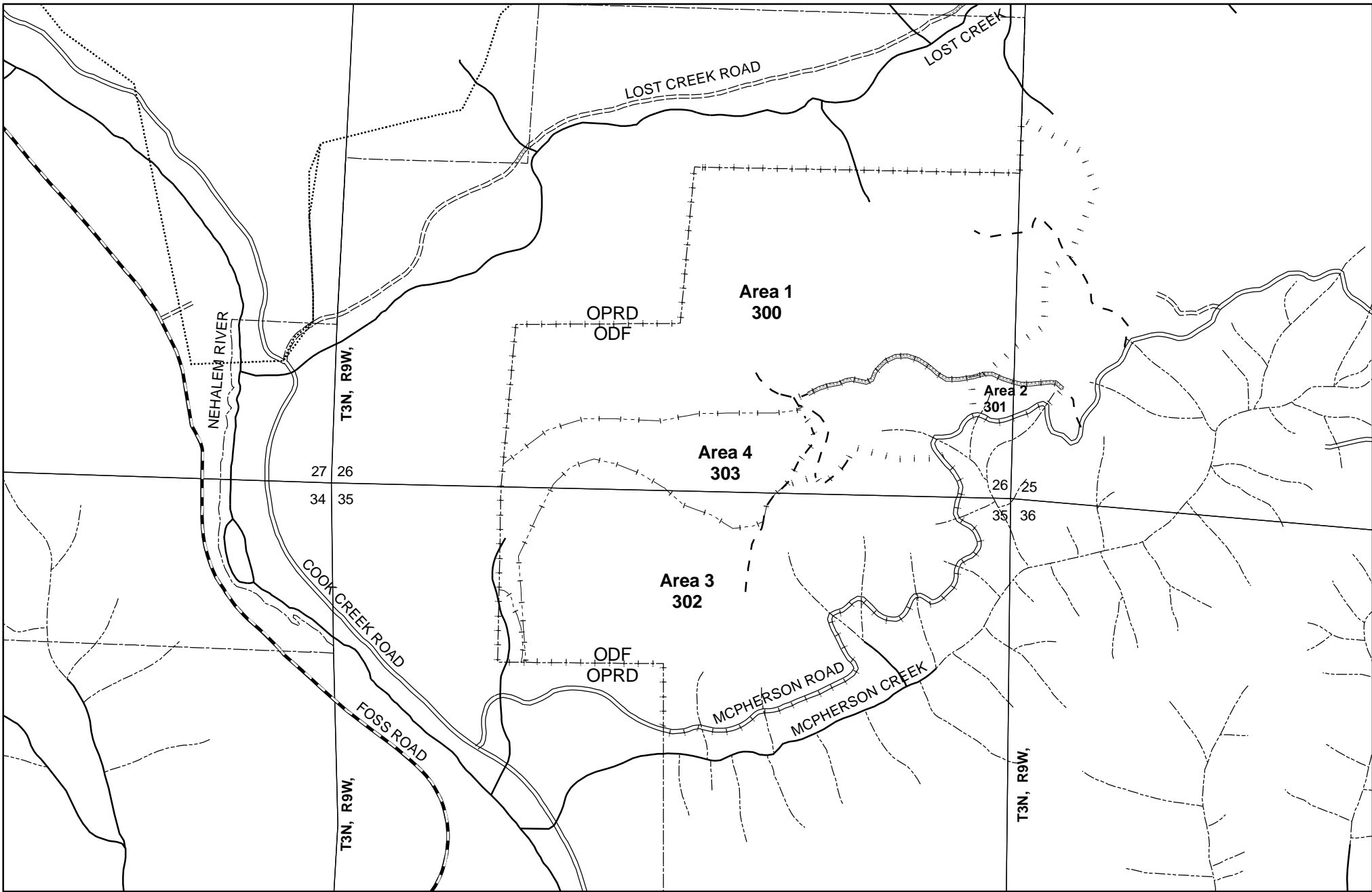
Portions of Sections 25, 26 and 35
T3N, R9W, W.M.,
Tillamook County, Oregon

*Streams of unknown fish presence are not shown but will be surveyed prior to the sale

Tillamook District GIS
10/14/2008

This product is for informational use and may not have been prepared for, or suitable for legal, engineering, or surveying purposes.

Area	Type of Operation
1	Modified Clearcut
2	Partial Cut
3	Modified Clearcut
4	Partial Cut

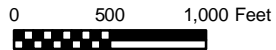


Desired future condition

- Layered
- Older forest

- Area boundary
- Sale boundary
- Ownership boundary
- Perennial Type-F stream*
- Perennial Type-N stream*
- Unsurfaced road
- Surfaced road
- State/Federal highway

- Abandoned road
- Blocked road
- Road construction
- County road
- Transmission line
- OHV trail
- Non-motorized trail



3

**McPherson Ridge
-- Current and Future Condition --
2010 SALE PLAN
TILLAMOOK DISTRICT**

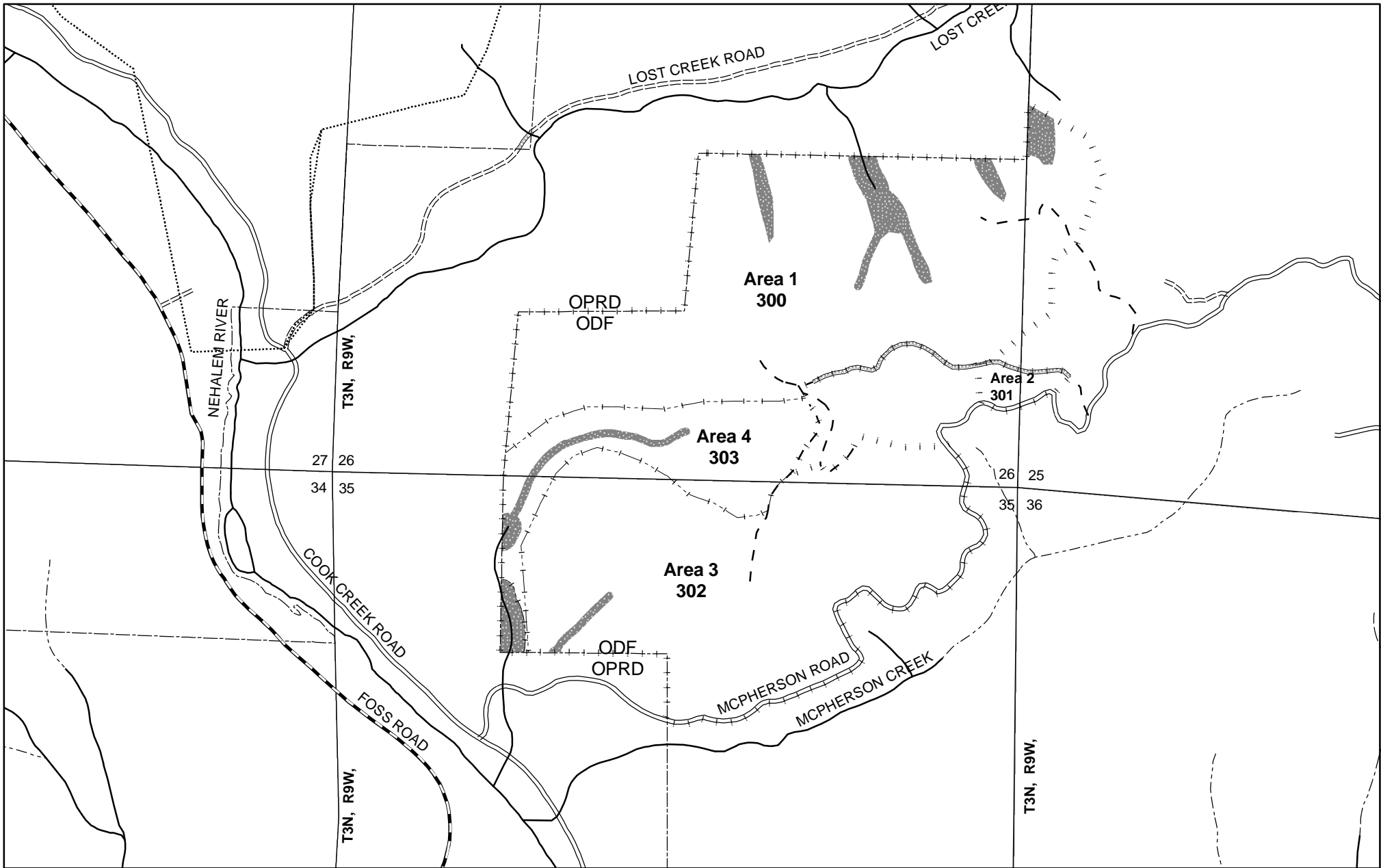
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







Tillamook District GIS
6/20/2009








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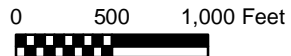
Area	Type of Operation
1	Modified Clearcut
2	Partial Cut
3	Modified Clearcut
4	Partial Cut



 Buffer
 Non-required thinning

 Area boundary
 Sale boundary
 Ownership boundary
 Perennial Type-F stream*
 Perennial Type-N stream*
 Unsurfaced road
 Surfaced road
 State/Federal highway

 Abandoned road
 Blocked road
 Road construction
 County road
 Transmission line
 OHV trail
 Non-motorized trail



3

McPherson Ridge -- Key Resources -- 2010 SALE PLAN TILLAMOOK DISTRICT

Portions of Sections 25, 26 and 35
 T3N, R9W, W.M.,
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