Pre-Operations Report

Operation Name: Clear Hembre
County: Tillamook
Management Basin: Trask

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres[1]
1	Modified Clearcut	171	120
2	Retention Cut	586	436
Total		757	556

1.The net acres are based on orthophotos and GIS and exclude roads, stream buffers, reserve area and non-required thinning areas.

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

Slopes in Area 1 have primarily a southern and eastern aspect. Area 2 has mainly an eastern and southern aspect. Elevations range from 1280 to 3000 feet. The major soil types are Jewell and Osweg.

The sale is located on and below Hembre Ridge in the headwaters of several tributaries to Clear Creek and one other tributary to the North Fork of the Trask River. There are bands of steep to very step side-slopes and draws in the lower portions of all areas of the sale. The sale is underlain by igneous origin rocks the upper slopes are intrusive igneous rock and the lower slopes are flow rocks of the "Basalt of Hembre Ridge Formation" (informal). Refer to the Overview of Harvest Operations in the Summary document for information.

II. CURRENT STAND CONDITION:

Table 2. Stand Inventory Information[4]

Area	Prescription	Stand ID [1]	Species	Age	DBH	BA	TPA	SDI	Net Acres [2]
1	MC	201	DF, RA	42	11.9	107	139	31	120
2	RC	202	DF, RA, WH, NF	42	14.1	171	157	45	436
		Target [3]	DF,WH, NF, RA	42	18.8	73	38	17	436

1. The source of stand inventory information is from SLI.
2. The net acres are based on orthophotos and GIS and exclude roads, and stream buffers, and non-required thinning areas. Modified clear cut acres are not contiguous and do not exceed 120 acres.
3. The Target identifies expected stand characteristics (DBH, BA, TPA and SDI) after harvesting has been completed.
4. 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.

Areas 1 and the majority of Area 2 burned in the 1933 Tillamook Fire and in the 1939 Saddle Mountain Fire. All of Area 1 and a small portion of Area 2 burned in the 1945 Wilson River/Salmonberry Fire. These areas were seeded between 1960 and 1963. Both of these stands are located on steep rocky slopes with low site quality and have had no prior stand management.

Stand Level Inventory (SLI) has not been completed on the sale areas but both are classified as 100% Closed Single Canopy (CSC) according to the district stand summary information (1999). Areas 1 and 2 will be further evaluated (as defined by the July 2004 guidance, "*Planned Sale Inventory Requirements – Alternative to Full Stand Level Inventory*"). See Table 2 for specific stand data.

Area 1 is primarily a Douglas-fir plantation that has alder dominated riparian areas. There are also several small pockets of alder (less than 1 acre) scattered throughout the area.

Due to site quality, symptoms of Swiss Needle Cast (SNC), and poor live crown ratios (less than 30%), the Douglas-fir in this stand has poor height and diameter growth. The alder in this stand has poor height and diameter growth due to stand age and site quality,. No other significant insect or disease problems have been discovered at this time. The understory is made up of very dense salmonberry which is found throughout the entire unit.

Area 2 is a Douglas-fir plantation that has alder dominated riparian areas and several small pockets of alder (less than 2 acres) scattered throughout. There is also a small component of hemlock and noble fir scattered in this area.

The Douglas-fir in this area shows symptoms of Swiss Needle Cast but have good live crown ratios (greater than 40%). The conifer is becoming overstocked resulting in the loss of live crown ratios and slowed diameter growth. Due to stand age, the alder in this stand has poor height and diameter growth. No other significant insect or disease problems have been discovered at this time. The brush component is comprised primarily of swordfern, huckleberry, and vine maple.

There are some large snags in various states of decay and some hard snags created from natural causes. Down wood consists of scattered large old logs (36"+) in Class 3 and 4 stages of decay and some windthrow in decay classes 1 and 2.

III. DESIRED STAND CONDITION AND VISION:

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest [1]	Desired Future	Net Acres
1	201	CSC	REG	GEN	120
2	202	CSC	UDS	GEN	211
		CSC	UDS	LYR	130
		CSC	UDS	OFS	95

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 goals.

Area 1: The Desired Future Condition (DFC) for this stand is General (GEN). Because of small live crown ratios, poor growth, and Swiss needle cast; the present stand is not a good candidate for establishing a pathway that maintains productivity. After the regeneration harvest the stand will be composed of legacy structures retained from the present stand and a young cohort of Douglas-fir, western hemlock and Douglas-fir trees. The green trees, including some hardwoods, retained on the site, provide a scattered overstory and also contribute to the down wood and snag recruitment as mortality occurs.

The DFC for Area 2 is a combination of GEN, Layered (LYR), and Older Forest Structure (OFS). The vision is for a stand comprised of large Douglas-fir trees in the overstory and a second cohort of hemlock, Douglas-fir, spruce, hardwoods, and brush species. The stand will be composed of a mixture of species, size classes, and densities. A new cohort of western hemlock in the alder clearcut areas and larger gaps will provide both horizontal and vertical diversity. After thinning in approximately 20 years the stand will have a mixture of sizes, species and densities and likely be on a pathway to a more complex stand structure.

IV. PROPOSED MANAGEMENT PRESCRIPTION AND PATHWAY:

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. **See table 2 for prescription targets.**

Area 1: Merchantable alder and Douglas-fir will also be harvested. All other conifer and hardwood species will be reserved. Approximately 6 to 9 trees per

acre will be left outside the sale area. This stand will be planted with a mixture of conifer species and it is anticipated that some natural regeneration will occur.

This harvest will remove the slow growing sprayed alder and the Douglas-fir that have poor crown ratios and slow growth. Residual trees will be located out side of the sale area to facilitate logging and reforestation. A component of alder and other conifer will be retained in the sale area within the stream buffers. These residual trees will provide future down wood and snags. The area will be reforested with a mixture of conifer species: western hemlock, SNC tolerant Douglas-fir, western red cedar and/or noble fir. A pre-commercial thinning is anticipated at 12 to 17 years when the crowns begin to close. A commercial thinning at age 40 will produce a stand that has an average diameter of about 16 inches and 125 trees per acre. This will keep the stand on the desired trajectory, and produce revenue.

Area 2: A diameter limit (approx. 15" DBH) will be used to harvest the Douglas-fir that has poor crown ratios. The remaining Douglas-fir will be thinned to a basal area range of $100ft^2$ to $120ft^2$ in order to maintain good live crown ratios in the dominant trees and promote understory growth. Merchantable alder will also be harvested. All other conifer and hardwood species will be reserved. This harvest prescription is designed to achieve variable densities throughout the area.

This partial cut prescription will remove the slow growing alder and reduce the conifer stocking to 17% which will maintain the crown ratios, stand vigor, and develop healthier and larger Douglas-fir in the residual stand. The harvest prescription is designed to achieve variable densities throughout the area and promote understory growth. There will be several small alder clearcuts (less than 2 acres). The openings and gaps will allow for understory reinitiation of shrubs and tree species creating horizontal and vertical diversity. Another thinning will likely be needed in 20 years to keep this stand on a trajectory to complex stand structure. At this time managers will review density, stand health, and landscape goals to decide future management prescriptions

Green Tree, Down Wood and Snag Strategies

A variety of methods will be used to achieve green tree retention requirements in Area 1. These residual green trees will supplement the future stand by promoting growth of dominant/co-dominant leave trees. Small non-merchantable hardwood and conifer will also be retained where possible. These leave trees function as future source of snags and down wood recruitment across the landscape. Green trees will be left on precipitous slopes, headwalls, and those areas not reached by conventional logging methods. Stream buffers adjacent to small perennials and the outer Riparian Management Area (RMA) will also contribute additional green trees. Many of these areas will be posted so they are outside of the timber sale boundary.

Due to the size of the trees in Area 1, it is unrealistic to expect that the snag and down wood targets in the FMP will be met with this operation. During sale layout an assessment will be done to help determine the best green tree retention prescription to help meet these goals in the future.

Existing down wood will be left in the sale areas. Down wood recruitment is expected through mortality and windthrow of residual or leave trees, felled snags and tops left during harvest. Obvious defect in conifer logs will be bucked out in all harvest areas to enhance down wood levels. Small non-merchantable hardwood and conifer will be retained where possible in harvest units with the expectation they will become short term snags and down wood. Tops resulting from ground yarding will also be left in the unit.

Existing snags not determined to be a safety hazard will be retained and any felled snags will be left for down wood. Creation of snags is expected during harvest activities (rub trees, lift trees, or tail trees) and over time by natural processes. Snags will be created in Areas 2. A prescription will be developed after the cruise has been completed.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	0%	□	X
Planned Quarter:		2	

	Conifer	Hardwood	Total
Net Volume (MBF)	5032	467	5499
Stumpage Value ($/MBF)*	$197	$210	
Estimated Gross Value	$991,304	$98,0701	$1,089374
		Project Costs:	$257,257
		Estimated Net Value:	$832,117

Combined Douglas-fir and hemlock stumpage values based on harvest type.

VI. HARVESTING AND ACCESS CONSIDERATIONS:

The sale areas are accessed via Fox Creek Ridge Road, Hembre Ridge Road, Phipps Creek Road and Clear Creek Ridge Road. These are currently all weather, crushed rock roads. See maps for specific road locations and conditions. The Trask Road Use fee will be applied to this sale.

Approximately 2.5 miles of existing unsurfaced road will be improved which includes grading, rocking, widening, culvert replacement, spot rocking, sidecast

pullback, and adding new culverts. This work will bring all roads up to standards described in *the Forest Roads Manual*.

Approximately 1.7 miles of road will be constructed in order to provide access to cable yarding areas. Following harvest it is anticipated that the roads within the sale areas will be blocked. Ground yarding roads will be closed and water-barred following harvest. See summary document for more information on road closure. The operation will be 95% cable yarding and 5% ground yarding.

Table 5. Transportation Planning Summary (Miles)[4]

Activity	Mainline	Collector	Rocked Spur[1]	Dirt Spur[1]
Construct			1.7	
Improve			3.0	
Maintain[2]		11.5		
Close/Block[3]			1.7	
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:

A watershed analysis has been completed for the Trask basin. The following actions are being planned as a result of the analysis recommendations.

There is a Type F stream that is adjacent to eastern boundary of Area 2. There are also several perennial Type N streams that are within and adjacent to the sale areas. There are additional unnamed small seasonal Type N streams within the sale areas. These streams will be reviewed and protected appropriately during sale layout based on flow, topography, and terrain. In Area 2, the inner and outer riparian zones of these Type N streams will be managed towards mature forest condition.

The Oregon Department of Fish and Wildlife (ODFW) will be requested to complete stream surveys prior to sale layout. 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.

The ODFW fish biologist has identified this sale as having some possible stream enhancement project areas. These opportunities will be looked at during sale contract preparation.

Refer to Aquatic Resource Protection Strategies in the Summary document for information on in the "in stream work period' road work and stream improvement projects.

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 for due to the absence of potentially suitable habitat.

It was determined that in the sale areas there is potential northern spotted owl habitat within or adjacent to the sale boundary. Surveys have been and will be conducted during the 2006 and 2007 survey season for northern spotted owl. All northern spotted owl surveys were and will be conducted in accordance with USFWS endorsed protocol. There have been no northern spotted owl detections during the 2006 survey season.

T & E P 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:

There are bands of steep to very steep side-slopes and draws in the lower portion of all areas of the sale. The initial risk assessment by the geotechnical specialist for the sale is high. The geotechnical specialist will be consulted during sale layout field work.

X. RECREATION RESOURCES:

The sale areas are designated as Motorized in the *Tillamook State Forest Comprehensive Recreation Plan* (1993). This sale has been reviewed by the District Recreation Coordinator.

Off Highway Vehicles (OHV) trails (Radio Silence, Firefox, and Clear Creek tie-in) are present within the sale areas. Short term closure of these trails may occur to facilitate logging and public safety. Portions of trails will be improved for logging access. Slash will be removed from the OHV trails upon completion of the operation. A plan will be developed to advise the public when trails are closed due to harvest activity. The District Recreation coordinator will be consulted during sale layout. Recreational use common to this area includes OHV use and hunting.

XI. CULTURAL RESOURCES:

The *Tillamook State Cultural Assessment* does list cultural sites within the proposed sale boundary. A site has been identified just inside the northern boundary of Area 2. The cultural resource classification for this site is Class I – Legally Mandated Protection. The district will consult the Public Use Coordinator for appropriate protection measures of this site.

XII. SCENIC RESOURCES:

The sale areas have a visual classification of Level 3, low sensitivity. No scenic impact is expected.

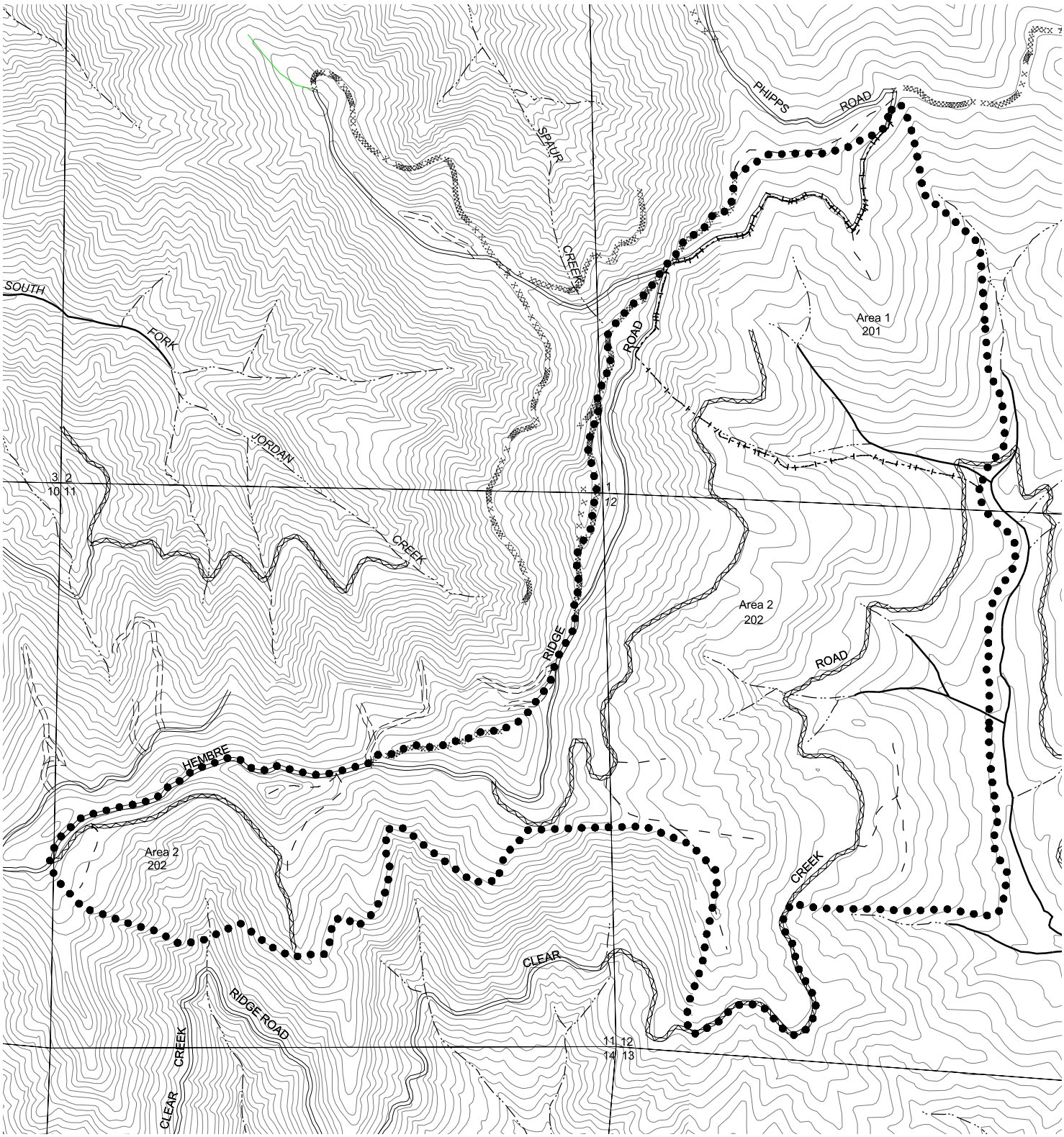
XIII. OTHER RESOURCE CONSIDERATIONS:

None known.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

The sale area contains Focused and Special, Aquatic and Riparian Habitat. See Section VII. Aquatic Resources and Water Quality, for the management guidelines to be utilized. The sale areas also contain Focused, Wildlife Habitat. (See section VIII. T&E Species Considerations) Focused, Recreation and Deeds, (See section X. Recreation Resources).

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
- Legacy road
- Blocked road
- Road construction
- County road
- Transmission line

Clear Hembre
-- Topography --
2008 SALE PLAN
TILLAMOOK DISTRICT

Portions of Sections 1, 2,10, 11, and 12
T1S, R7W, W. M.
Tillamook County, Oregon

Area	Type of Operation
1	MC
2	PC

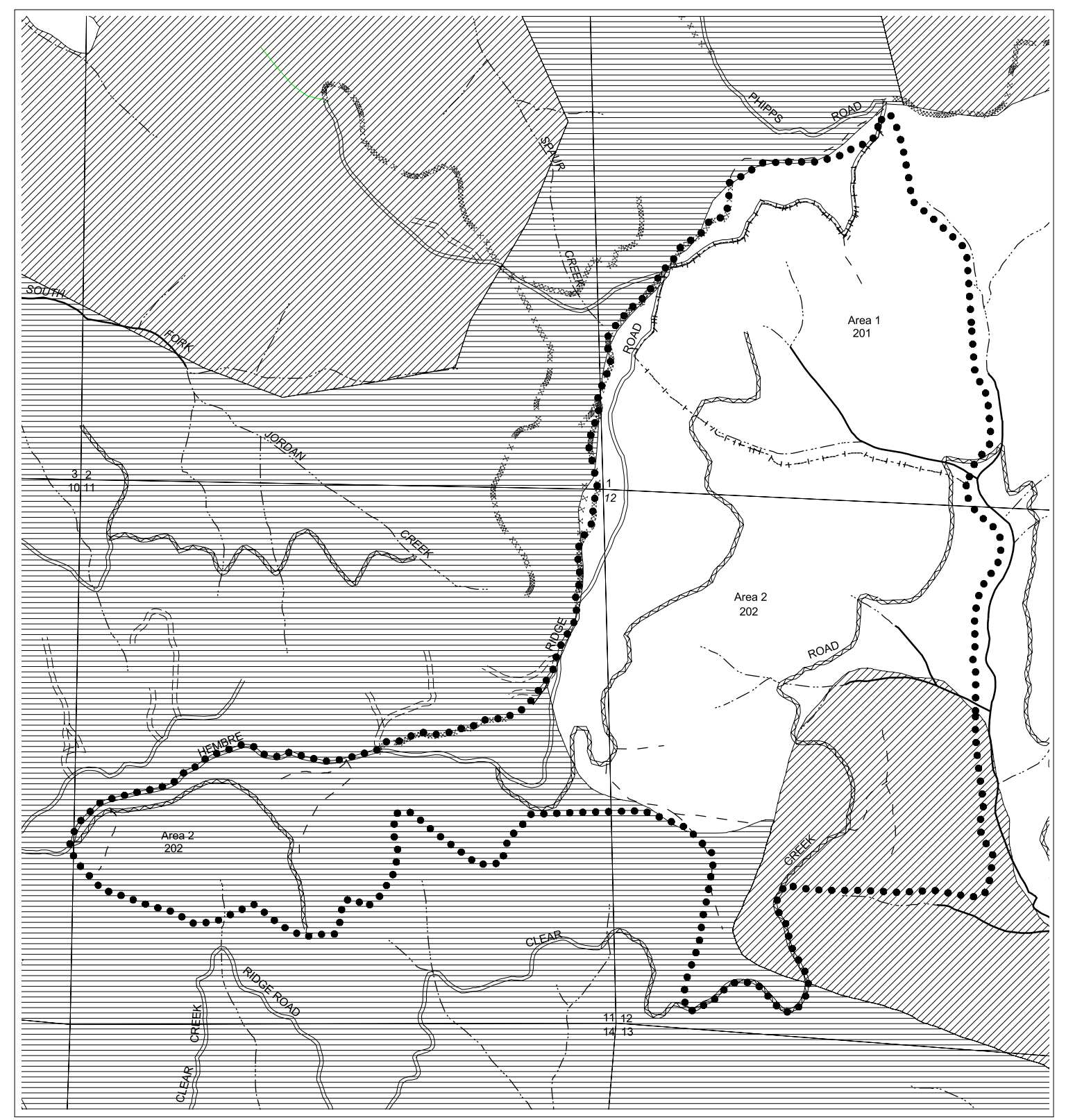
N

1000 0 1000 Feet

Tillamook District GIS
02/06/2007
This product is for informational use and may not have been prepared for, or suitable for legal, engineering, or surveying purposes.

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

Attachment A



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
- Legacy road
- Blocked road
- Road construction
- County road
- Transmission line

Clear Hembre
-- Current and Future Condition --
2008 SALE PLAN
TILLAMOOK DISTRICT

Portions of Sections 1, 2,10, 11, and 12
T1S, R7W, W. M.
Tillamook County, Oregon

1000 0 1000 Feet

N

Tillamook District GIS
02/06/2007
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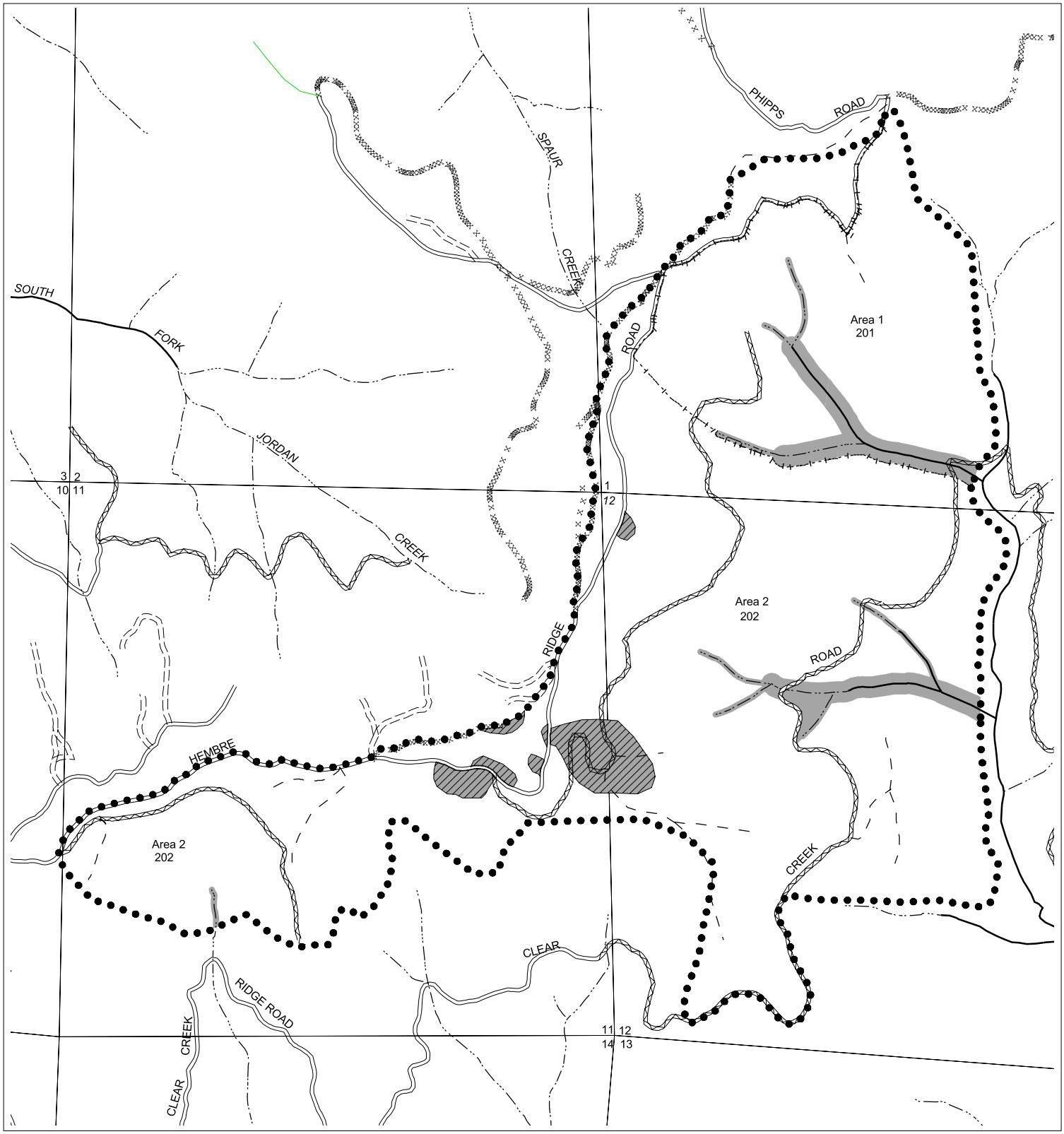
Area	Type of Operation
1	MC
2	PC

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

Attachment B



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

Legacy road

Blocked road

Road construction

County road

Transmission line

Clear Hembre
-- Key Resources --
2008 SALE PLAN
TILLAMOOK DISTRICT

Portions of Sections 1, 2,10, 11, and 12
T1S, R7W, W. M.
Tillamook County, Oregon

Area	Type of Operation
1	MC
2	PC

1000 0 1000 Feet

N

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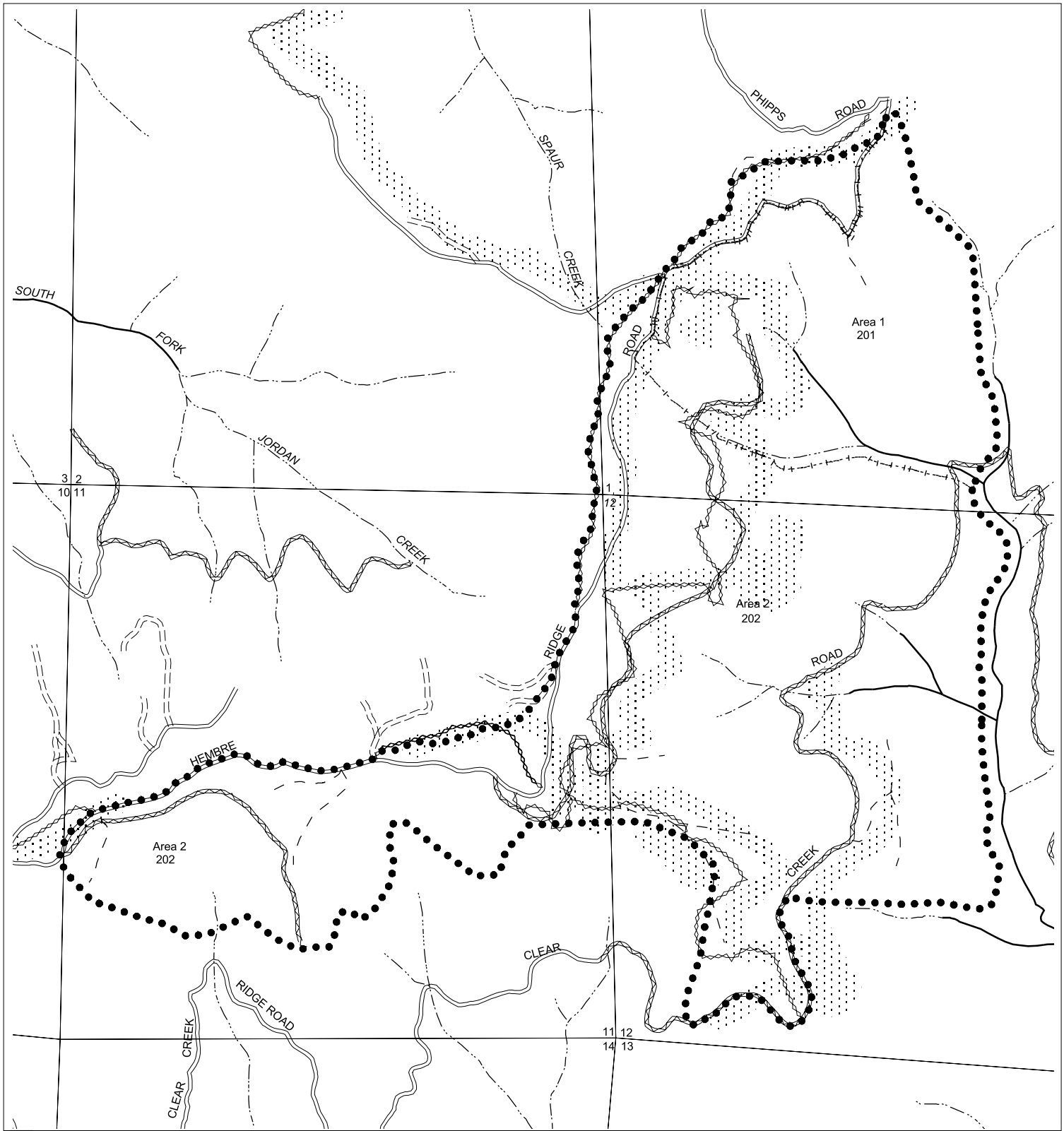
Attachment C



Campground
Day Use Site
OHV Staging Area
Trail Head
Boat Launch
Interpretive or Administrative Site
Stewardship
Focused
Special
OHV trail
Non-motorized trail

Area boundary
Sale boundary
Ownership boundary
Perennial Type-F stream *
Perennial Type-N stream *
Unsurfaced road
Surfaced road
State/Federal highway
Legacy road
Blocked road
Road construction
County road
Transmission line

Clear Hembre
--Key Resources/Recreation --
2008 SALE PLAN
TILLAMOOK DISTRICT

Portions of Sections 1, 2,10, 11, and 12
T1S, R7W, W. M.
Tillamook County, Oregon

1000 0 1000 Feet

N

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02/06/2007
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Area	Type of Operation
1	MC
2	PC

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

Attachment C2