Pre-Operations Report

Operation Name: Clear Hembre
Legal: Portions of sections 1, 2, 11, and 12, T1S, R7W, W.M., Tillamook County
Management Basin: Trask

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres[1]
1	MC	123	120
2	MC	8	8
3	PC - Moderate	126	120
4	MC	119	114
5	PC - Moderate	17	14
6	PC - Moderate	68	66
Total		461	422

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

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I. PHYSICAL DESCRIPTION OF OPERATION AREA:

Slopes in Area 1 have primarily a southern and eastern aspect. The remaining areas mainly have 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).

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	420	DF, RA	45	12.4	142	168	40%	120
2	MC	421	RA	45	16.5	101	68	25%	8
3	PC	422	DF	45	13.5	188	188	51%	120
		Target [3]	DF	45	17.1	116	73	30%	120
4	MC	423	DF	45	12.7	130	148	36%	114
5	PC	425	DF	45	14.2	190	174	51%	14
		Target [3]	DF	45	17.6	110	65	30%	14
6	PC	426	DF	45	12.8	192	215	53%	66
		Target [3]	DF	45	14.8	108	90	30%	66

1. The source of stand inventory information is from a 2008 timber cruise.
2. The net acres are based on orthophotos and GIS and exclude roads, and stream buffers. 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.

Most areas burned in the 1933 Tillamook Fire, the only exception being the north east part of Area 1. All areas except for Area 6 burned in the 1939 Saddle Mountain Fire. Most of Areas 1, 2, and 3 burned in the 1945 Wilson River/Salmonberry Fire. These areas were seeded between 1960 and 1963. All of these stands are located on steep rocky slopes with low site quality and are primarily small conifer stands with pockets of alder that have had no prior stand management.

In Areas 1, 2, and 4 the Douglas-fir is slow growing and have poor live crown ratios (less than 30%). Due to site quality, symptoms of Swiss needle cast, and poor live crown ratios, the Douglas-fir in this stand has poor height and diameter growth. The understory is made up of very dense salmonberry and sword fern. There has been no prior stand treatment in this area.

In Areas 3, 5, and 6 the live crown ratios are at about 40% but the growth for both areas have been slowing down for the last few years. Both the Douglas-fir and hemlock are becoming overstocked which will ultimately result in the loss of live crown ratios, slowed diameter growth, and reduced understory growth. These stands have had no prior stand management.

The stands in the sale areas are classified as 100% UDS according to the 2002 Stand Level Inventory (SLI).

There are some large snags in various states of decay and/or some hard snags created from (wind, snow, and/or bear damage). 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	420	UDS	REG	GEN	120
2	421	UDS	REG	GEN	8
3	422	UDS	UDS	GEN	44
				OFS	76
4	423	UDS	REG	LYR	80
				OFS	34
5	425	UDS	UDS	OFS	14
6	426	UDS	UDS	LYR	23
				OFS	43

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.

Clear Creek – Trask River Basin Landscape View:

The landscape is dominated by timber management activities. There are mosaics of regeneration harvests and partial harvests with forested corridors created by stream buffers.

Clear Hembre Sale Areas:

Areas 1, 2, and north ½ 3 - The desired future condition (DFC) for these areas are General (GEN).

Areas 4, 5, 6, and south ½ 3 – The majority of Area 4, Area 5, and approximately half of Area 6 is designated as Older Forest Structure (OFS). The remainder of the areas are designated as layered (LYR).

Short Term Vision:

Areas 1, 2, and 4: The current stands cannot be managed to complex structure because of the lack of live crown and vigor of the stand. These regeneration harvests will remove the slow-growing Douglas-fir and alder. The area will be reforested with a mixture of conifer species: western hemlock, SNC tolerant Douglas-fir, western red cedar and/or noble fir, creating a healthier stand.

Residual trees will add decadence and legacy structure through time and provide future down wood, snags, and legacy trees.

The southern part of Area 4 will contain the majority of the green trees to accelerate its development into OFS.

Areas 3, 5, and 6: The stands will be thinned to manage stand density and allow more light to reach the forest floor accelerating understory reinitiation. The residual trees will have more growing space to maintain high live crown ratios.

Long Term Vision:

Areas 1, 2, and 4: The sale areas will be reforested with a mix of SNC resistant Douglas-fir and western hemlock. The plantations will be precommercially thinned in 10-15 years. A commercial thin will likely occur in 35 to 40 years. Following the thin, Areas 1 and 2 will be managed for production until final harvest. Area 4 will be managed for complexity as designated by the OFS desired future conditions.

Areas 3, 5, and 6: The residual trees left will serve as an overstory and add decadent structure to the new cohort. Density management will maintain high live crown ratios and allow layering of the stand. Another entry will create openings to increase light to the understory. A combination of natural regeneration and interplanting will create another canopy layer.

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. **See Table 2 for prescription targets.**

Modified Clearcut

Areas 1 and 2

Prescription: Merchantable alder and Douglas-fir will be harvested. All other conifer and hardwood species will be reserved. Approximately 5 trees per acre will be left in sale area.

Green Trees: On average, 5 green trees per acre will be left in the sale area. These green trees will be the biggest and best Douglas-fir available. Green trees will be left in clumps near head walls, in green tree retention areas, or scattered. Green tree location will depend on the availability of candidate trees, topography, and consideration for successful reforestation.

Snags: The 2008 cruise estimates 4 snags per acre greater than 15 inches in diameter that are in decay class 1 and 2 (This is an average of the three areas) No snags will be created at this time. The residual trees will serve as a source for larger hard snags in the future.

Down Wood: The existing down wood will be reserved in the sale areas and additional down wood will be created during this harvest operation. Approximately 525 cubic feet of logs in decay classes 1-2 per acre will be added to enhance down woody debris within the sale areas. The 2002 SLI data indicates a deficiency in down wood in decay classes 0-2 (approximately 72 ft^3 per acre). The Forest Management Plan goal for down wood creation will be completed by bucking and leaving obvious defect and butt logs from felled Douglas-fir and western hemlocks and if needed, additional trees may be felled to meet the down wood goal.

Pathway: This area will be reforested with a mix of conifer species. The stand will be precommercially thinned in 10 - 15 years after planting. The stand will be commercially thinned when it reaches 35 - 40 years of age. This will ensure rapid growth and maximize growing space and resources for residual trees.

Area 4 – Retention harvest

Prescription: Merchantable alder and Douglas-fir will be harvested. All other conifer and hardwood species will be reserved. Approximately 8 - 10 trees per acre will be left in sale area.

Green Trees: On average, 5 green trees per acre will be left in the sale area. These green trees will be the biggest and best Douglas-fir available. Green trees will be left in green tree retention areas. Green trees will be concentrated in the south part of the sale area which is designated as OFS.

Snags: The 2008 cruise estimates 11 snags per acre in classes 1 and 2. No snags will be created at this time. The residual trees will serve as a source for larger hard snags in the future.

Down Wood: The existing down wood will be reserved in the sale areas and additional down wood will be created during this harvest operation. Approximately 525 cubic feet of logs in decay classes 1-2 per acre will be added to enhance down woody debris within the sale areas. The 2002 SLI data indicates a deficiency in down wood in decay classes 0-2 (approximately 72 ft^3 per acre). The Forest Management Plan goal for down wood creation will be completed by bucking and leaving obvious defect and butt logs from felled Douglas-fir and western hemlocks and if needed additional trees may be felled for down wood..

Pathway: This area will be reforested with a mix of conifer species. The stand will be precommercially thinned in 10 - 15 years after planting. The stand will be commercially thinned when it reaches 35 - 40 years of age. This will ensure rapid growth and maximize growing space and resources for residual trees.

The southern part of the sale area will have most of the decadent structure. It will be managed for stand complexity. The thinning prescription for the southern part will manage for a second layer and place it on a different trajectory than the rest of the sale area.

Partial Cut

Area 3

Prescription: Douglas-fir in this area will be thinned from below to 90-110 square feet of basal area (30% SDI). All other species will be reserved for diversity.

Snags: The 2008 cruise estimates 3 hard snags per acre greater than 15 inches in diameter. No other snags will be created at this time. Natural causes and incidental logging damage likely will create additional snags. Residual trees will serve as a source for larger snags in decay class 1 and 2 in the future. If needed, snags will be created during the second 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 from felled Douglas-fir. Residual trees will serve as a source for down wood over time.

Pathway: This first entry will remove intermediate and over topped Douglas-fir. The biggest and most vigorous trees will be retained. This will ensure rapid growth and increase revenue for the final harvest.

Area 5

Prescription: Douglas-fir and noble fir will be thinned from below to 100-120 square feet of basal area (30% SDI). Noble fir will be favored as a reserve species. All other species will be reserved for diversity.

Snags: The 2008 cruise did not record any snags in this area. Natural causes and incidental logging damage likely will create snags. Residual trees will serve as a source for larger snags in decay class 1 and 2 in the future. Snags will be created if needed during the second 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 from felled Douglas-fir. Residual trees will serve as a source for down wood over time.

Pathway: This first entry will remove intermediate, over topped Douglas-fir and noble fir. The biggest and most vigorous trees will be retained. The understory will have more resources available for additional layers. This will ensure rapid growth and accelerate the development of complex structure.

Area 6

Prescription: Douglas-fir will be thinned from below to 100 -120 square feet of basal area (30% SDI). All other species will be reserved for diversity.

Snags: The 2008 cruise estimates 2 snags per acre (1 snag in decay classes 1-2). Natural causes and incidental logging damage likely will create additional snags. Residual trees will serve as a source for larger snags in decay class 1 and 2 in the future. Additional snags will be created if needed during the second 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 from felled Douglas-fir. Residual trees will serve as a source for down wood over time.

Pathway: This first entry will remove intermediate and over topped Douglas-fir. The biggest and most vigorous trees will be retained. The understory will have more resources available for additional layers. This will ensure rapid growth and accelerate the development of complex structure.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	0%		X
Planned Quarter:		3	

	Conifer	Hardwood	Total
Net Volume (MBF)	4323	323	4646
Stumpage Value ($/MBF)*	$90	$150.00	
Estimated Gross Value	$390,850	$48,450	$439,300
		Project Costs:	$37,496
		Estimated Net Value:	$401,804

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.

Approximately 1.6 miles of existing unsurfaced road will be reconstructed which includes grading, rocking, widening, culvert replacement, and adding new culverts. This work will bring all roads up to standards described in *the Forest Roads Manual*.

Approximately 1.97 miles of road will be constructed in order to provide access to cable yarding areas. Following harvest, roads within the sale areas will be reviewed for 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				1.97
Reconstruct			1.6	
Maintain[2]		11.5		
Close/Block[3]				1.97
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:

There is a Type F stream that is adjacent to eastern boundary of Areas 2 and 3. 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.

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. Some of the strategies are described below.

A 170 foot riparian management area is established on all fish streams. Management is allowed beyond 25 feet in the “inner zone.” However, it is likely that riparian no-cut buffers will extend beyond 170 feet to include steep slopes and rock outcrops (i.e. inner gorges). There is a large riparian area identified between Areas 1, 2 & 3. The resulting average buffer width is estimated to be 225 feet between Areas 1 and 3. The area encompassed in the RMA is estimated to be 11 acres . The wide RMA includes areas that are not likely to be accessible due to steep topography, headwalls and rock outcrops.

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 conducted during the 2006, 2007, 2008 survey season for northern spotted owl and will be conducted in 2009. All northern spotted owl surveys were and will be conducted in accordance with USFWS endorsed protocol. There have been no northern spotted owl detections.

Streams in this sale are in the headwaters of the Trask 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:

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.

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 a cultural site within or adjacent to the proposed sale boundary. This resource is described as P Cabin. The cultural resource classification for this site is Class I – Legally Mandated Protection. This cultural resource has not been located on the sale area during reconnaissance for the AOP. Old cabin locations will be searched for with future field work. The district will consult the Public Use Coordinator for appropriate protection measures when necessary.

XII. SCENIC RESOURCES:

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

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. Focused, Recreation, (See section X. Recreation Resources), Focused, Cultural Resources (See XI. Cultural Resources), and Special Stewardship, Operationally Limited. This area will be evaluated further with the geotechnical specialist to determine if this classification shows in the correct location. See Section IX, Slope Stability and Geotechnical Issues, for additional information.

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

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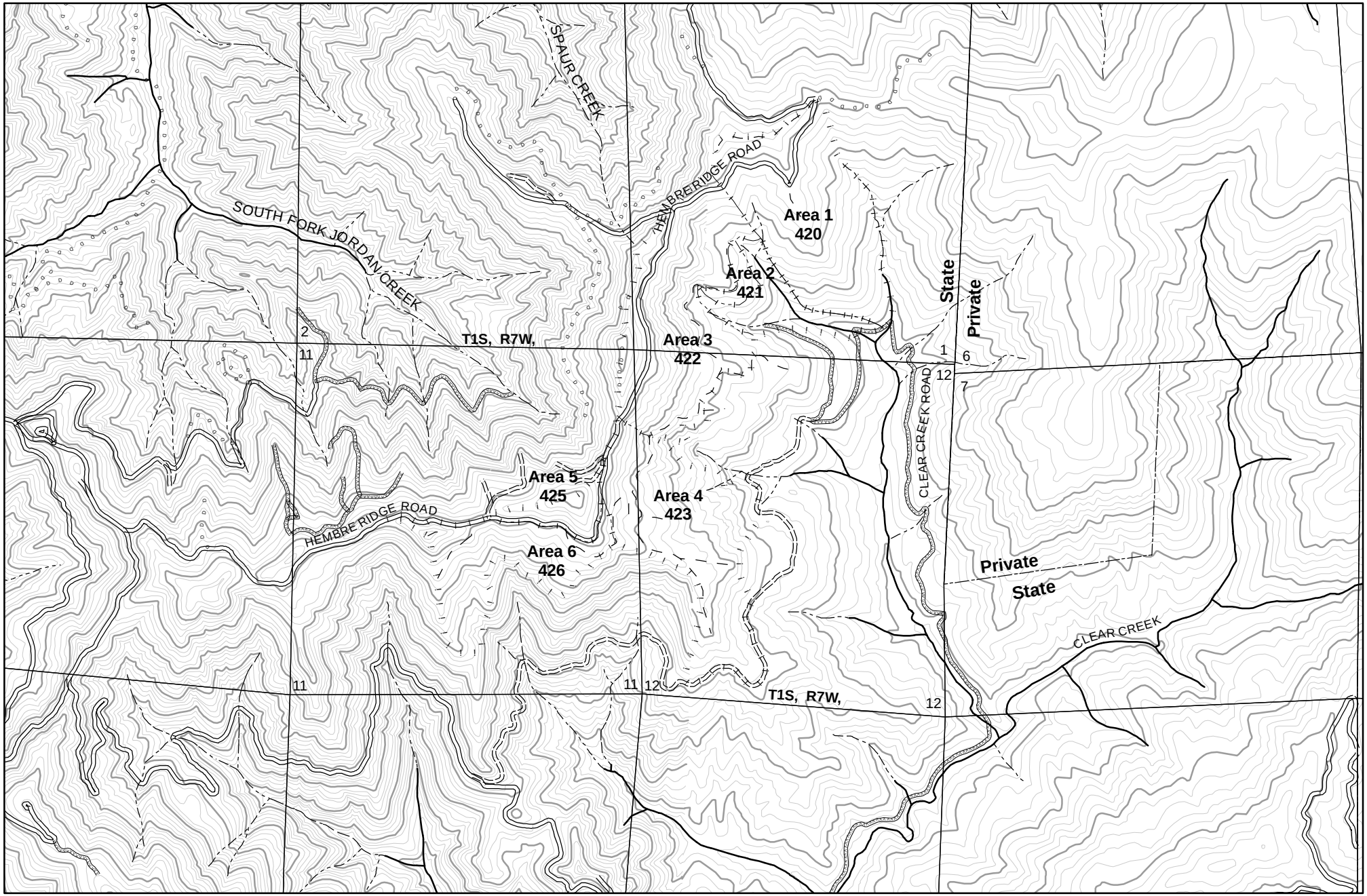


Contour Interval 40'

- 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

0 1,000 2,000 Feet

3

Clear Hembre
-- Topography --
2010 SALE PLAN
TILLAMOOK DISTRICT

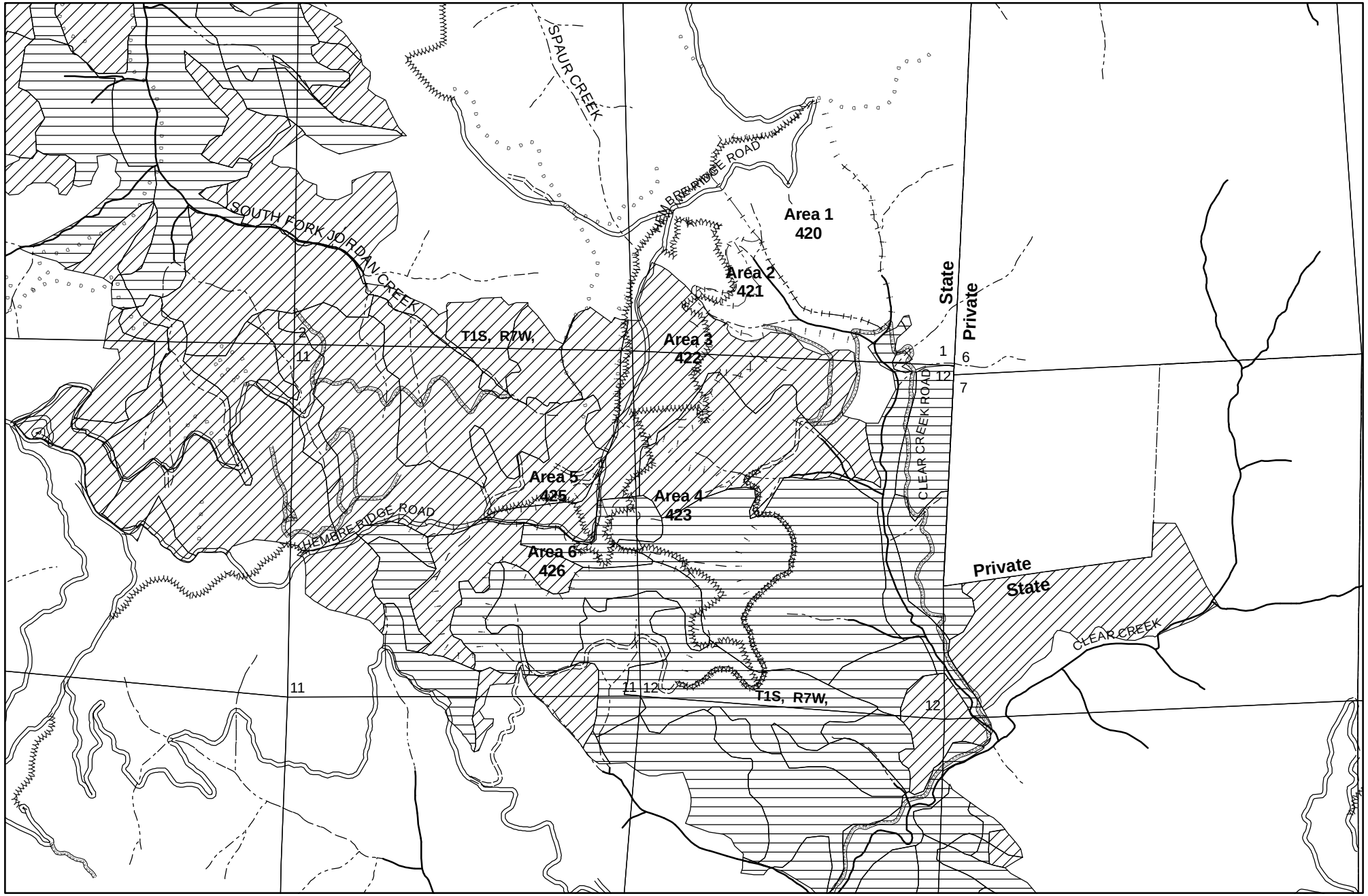
Portions of Sections 1, 2, 11 and 12
T1S, R7W, W.M.,
Tillamook County, Oregon

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

Tillamook District GIS
6/20/2009
This product is for informational use and may not have been prepared for, or suitable for legal, engineering, or surveying purposes.

Area	Type ofOperation
1	Modified Clearcut
2	Modified Clearcut
3	Partial Cut
4	Modified Clearcut
5	Partial Cut
6	Partial Cut

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

0 960 1,920 Feet

3

Clear Hembre
-- Current and Future Condition --
2010 SALE PLAN
TILLAMOOK DISTRICT

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

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Area	Type ofOperation
1	Modified Clearcut
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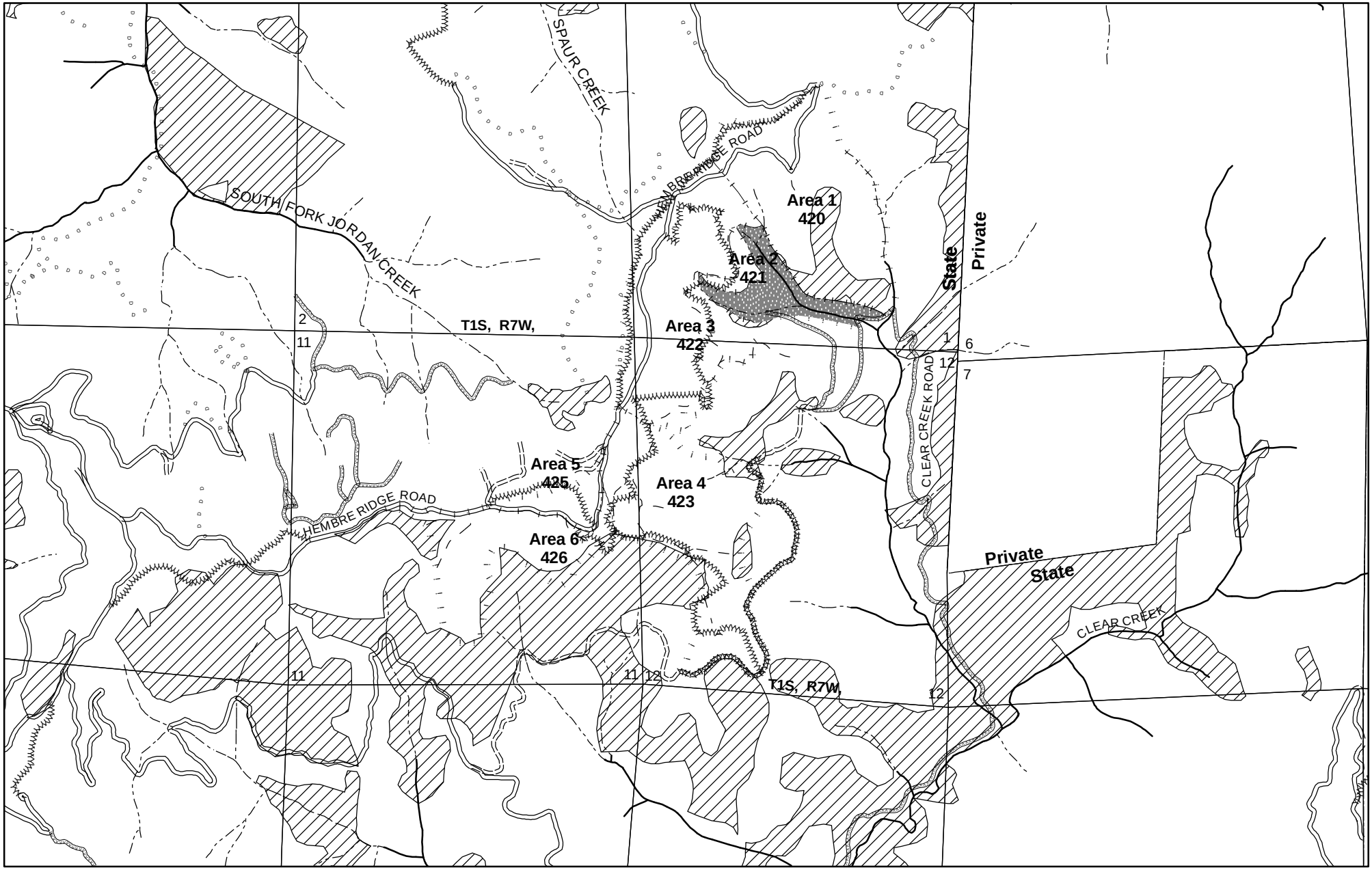
Attachment B



Buffer
Special

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

0 1,000 2,000 Feet

3

Clear Hembre
-- Key Resources/Operationally Limited --
2010 SALE PLAN
TILLAMOOK DISTRICT

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

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

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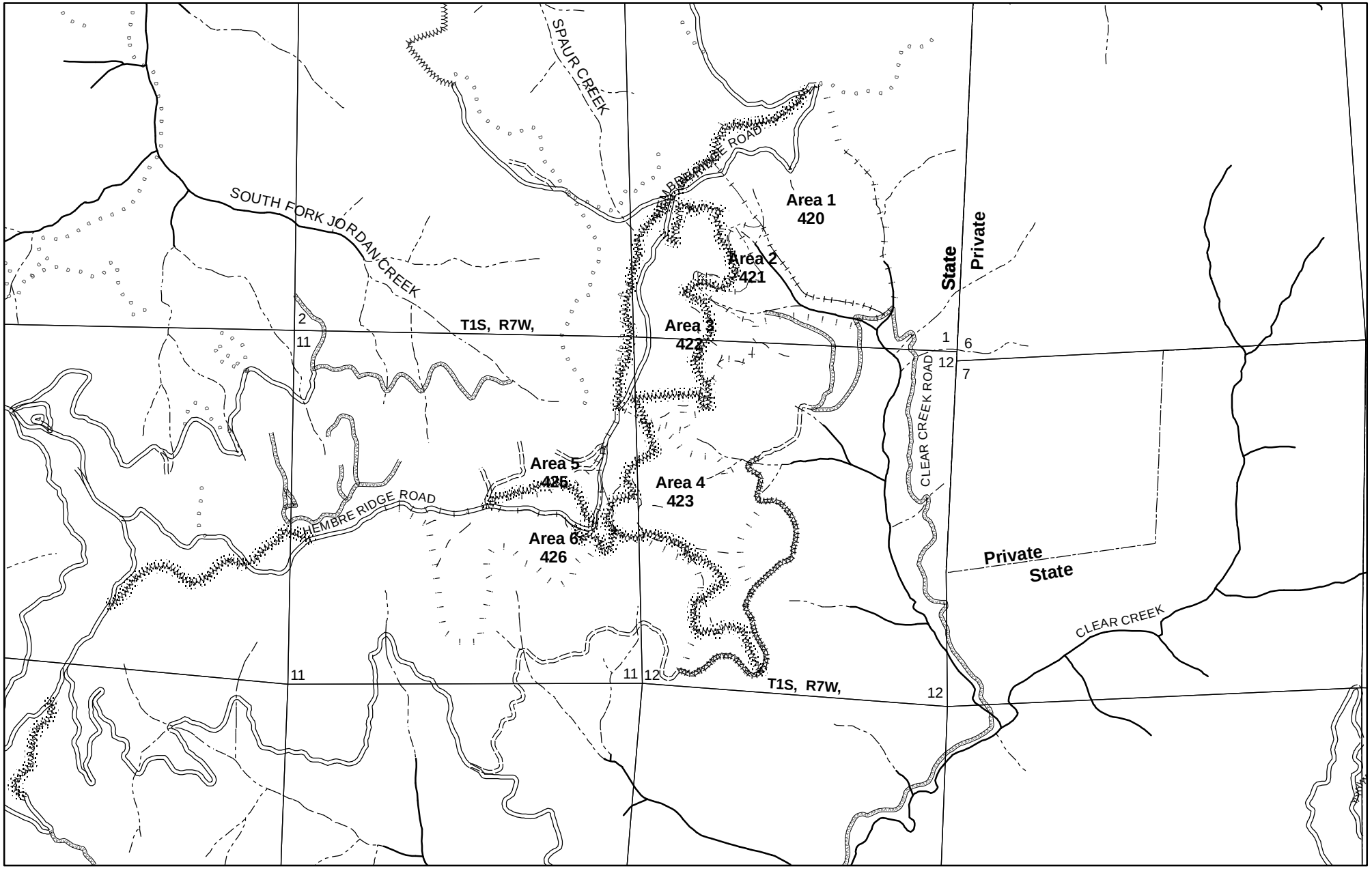
Area	Type ofOperation
1	Modified Clearcut
2	Modified Clearcut
3	Partial Cut
4	Modified Clearcut
5	Partial Cut
6	Partial Cut

Attachment C



Stewardship Focused

- 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

0 1,000 2,000 Feet

3

Clear Hembre
-- Key Resources/Recreation--
2010 SALE PLAN
TILLAMOOK DISTRICT

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

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

Tillamook District GIS
6/20/2009
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Area	Type ofOperation
1	Modified Clearcut
2	Modified Clearcut
3	Partial Cut
4	Modified Clearcut
5	Partial Cut
6	Partial Cut

Attachment C2