

Pre-Operations Report

Operation Name: Zig Zag Alder (Alt)

Legal: Portions of Section 21, 22 and 28, 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	Modified Clearcut	48	39
2	Modified Clearcut	90	86
Total		211	125

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

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

Slopes generally have a northwestern aspect and range from 10 to over 90%. Elevations range from 760 feet to 2320 feet. The major soil type is Rye with minor amounts of Killiam.

II. CURRENT STAND CONDITION:

Table 2. Stand Inventory Information⁴

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	SDI	Net Acres ²
1	MC	231	DF/RA	44	14	168	150	44	39
2	MC	232	DF/RA	44	13	193	199	53	86

1. The source of stand inventory information is from recon cruise plots.

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

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 2: The sale areas burned in the 1939, Saddle Mountain, fire. The majority of the sale areas were planted in 1961 and 1963.

The sale areas are predominately Douglas-fir and red alder arranged in various combinations and densities. In Area 1 the basal area of the Douglas-fir is 118 ft² and the red alder is 59 ft². In Area 2 the basal area of the Douglas-fir is 155 ft² and the red alder is 38 ft². The Douglas-fir was planted from 1961 to 1963 and the red alder regenerated naturally.

Due to the low site and the lack of stocking control, the overall growth of the stands is low. The Douglas-fir shows symptoms of Swiss needle cast (SNC) and the stands are becoming overstocked resulting in the loss of live crowns. Due to stand age, the alder has slowing height and diameter growth. The red alder was also sprayed in 1977 causing most of it to be deformed resulting in significant loss of volume.

The brush component is comprised primarily of Oregon grape, salal, sword fern, salmonberry, vine maple and huckleberry.

No other significant insect or disease problems have been discovered at this time.

III. DESIRED STAND CONDITION AND VISION:

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest	Desired Future	Net Acres
1	231	UDS	REG	GEN	39
2	232	UDS	REG	GEN	86

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

Sub-Basin Perspective

The Zig Zag Alder sale is within the North Fork Trask River sub-basin. Much of the basin is mixed species conifer stands and recent management has focused on partial cut of mixed conifer stands and regeneration harvest of hardwood stands and stands severely impacted by Swiss needle cast.

Areas 1 and 2-The DFC is GEN.

Short Term Vision:

The regeneration harvest will remove the slow-growing sprayed alder and Douglas-fir. After the regeneration harvest this stand will be composed of legacy structures retained from the present stand and a new cohort of Douglas-fir, western hemlock, and cedar that will provide both horizontal and vertical diversity.

Long Term Vision: The vision for this stand is to have a fully stocked mixed species stand that contains legacy structures for wildlife. It will be managed to maintain productivity and to maximize revenues at final harvest.

IV. PROPOSED MANAGEMENT PRESCRIPTION AND PATHWAY:

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

Modified Clearcut

Areas 1 and 2:

Prescription:

The regeneration harvest in the two areas will remove the slow-growing Douglas-fir and sprayed red alder.

Green Tree: On average 5 green trees per acre will be left in a variety of combinations; both within the sale areas and in Green Tree Retention Areas. A limit of 2 per acre per will be left within the sale area. The remaining 3 per acre will be left in the Green Tree Retention Area. A component of conifer and red alder will also be retained in the stream buffers adding additional green trees within and adjacent to the sale area.

Snags

Snag creation will be done with this harvest operation. Approximately 2 snags per acre greater than 15" will be created within the sale area. Snags currently present in the stand will be reserved from felling as long as the snags are not a safety issue. If snags are cut, they will be left to contribute to down wood goals.

Down Wood

The existing down wood will be reserved in the sale areas and additional down wood will be created during this harvest operation to enhance down woody debris within the sale area to equal approximately 600 cubic feet of logs in decay classes 1-2 per acre. The goal for down wood creation will be completed by bucking and leaving obvious defect from logs from felled Douglas-fir. If necessary, additional trees may be felled to meet the down wood goal. Down wood recruitment is also expected through mortality and windthrow of residual trees, felled snags and tops left during harvest. Non-merchantable hardwoods and conifers will be retained in the sale areas with the expectation that they will eventually contribute to snags and down wood.

Pathway:

The areas 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 will then be planned at age 35 to 40. This will ensure rapid

growth and maximize growing space and resources for residual trees, setting it up for a final harvest.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	%	<input type="checkbox"/>	X
Planned Quarter:		(Alt)	

	Conifer (MBF)	Hardwood (MBF)	Total (MBF)
Net Volume (MBF)	1342	153	1,495
Stumpage Value (\$/MBF)	\$125	\$200	
Estimated Gross Value	\$167,750	\$30,600	\$198,350
		Project Costs:	\$49,067
		Estimated Net Value:	\$149,283

VI. HARVESTING AND ACCESS CONSIDERATIONS:

Area 1 and Area 2 are accessed via Trask Cut-Off Road or the Kansas Creek Road, Hembre Ridge Road and Zig Zag Road. The Trask River County Road Fee will apply to this sale.

Approximately 1.0 miles of road will be constructed and 0.24 miles of road will be improved to provide access to cable and ground systems harvest areas. See summary document for more information on this topic. The operation will be 80% cable harvested and 20% ground harvested.

Activity	Mainline	Collector	Rocked Spur ¹	Dirt Spur ¹
Construct			0.27	0.72
Improve			0.24	
Maintain ²		6.2		
Close/Block ³				0.72
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. Recommendations from this assessment will be incorporated into the sale where feasible.

Oregon Department of Fish and Wildlife (ODFW) have completed stream surveys of all the streams in the sale areas.

The sale areas are adjacent to Hembre Creek, a Type F stream and a medium, Type N stream. There are other unnamed small Type N streams within the sale area. These streams will be reviewed and protected appropriately during sale layout based on flow, topography, and terrain.

Other known aquatic habitat within the sale areas includes seeps, springs and waterfalls.

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. A sub-set of those standards are highlighted below for this sale.

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 170' riparian management area is established on all fish streams. Management is allowed beyond 25' in the "inner zone". The goal for harvesting within 100 feet (inner zone) of type F streams is to achieve mature forest condition in a timely manner. Management in the inner zone will result in larger diameter trees in a shorter time frame than if no harvesting were to take place and will maintain all snags and downed wood. Once mature forest condition is achieved there will be no management in the inner zone of type F streams.

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 has been reviewed with the ODF Northwest Oregon Area Biologist. Surveys for marbled murrelets are not required for this sale due to the absence of potentially suitable habitat. Surveys for northern spotted owls are not required as the sale is within the Tillamook Burn (see November 2002 ODF Policy Guidance: Northern Spotted Owl Surveying on State Forest Lands).

T&E Plant Species: The sale areas were checked against the Oregon National 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.

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.

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 Hembre Creek. The risk of landslides delivering to Hembre Creek from the sale area is low to moderate. Portions of the sale area appear to be located on large, deep-seated landslide landforms. The geotechnical specialist will be consulted if evidence of recent landslide activity is identified during sale layout.

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.

Sections of Zig Zag motorcycle trail within the sale area. The sections that will be impacted are on ridge tops where dirt spurs will be constructed. These roads will be converted back to a trail upon completion of the sale. The trail will be closed during active operations and blocked to truck traffic at the end of the sale. A plan will be developed in conjunction with the District Recreation Coordinator to address these situations.

XI. CULTURAL RESOURCES:

The *Tillamook State Cultural Assessment* does not list any cultural sites within or adjacent to the proposed sale boundary.

XII. SCENIC RESOURCES:

The sale area has a visual classification of Level 3 – Low sensitivity. No scenic impact is expected.

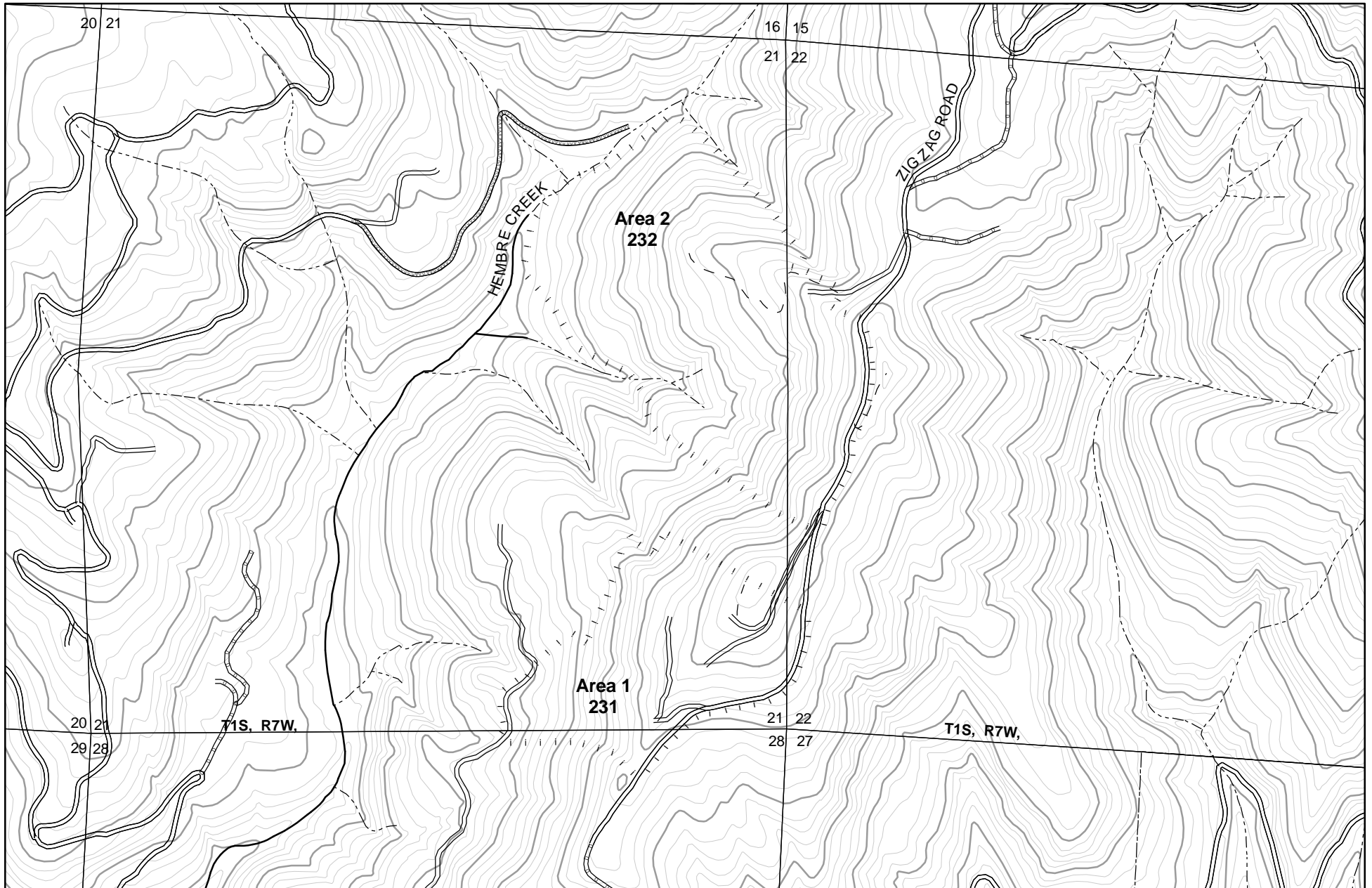
XIII. Other Resource Considerations

None known.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

The sale area contains Focused and Special, Aquatic and Riparian Habitat designation (See Section VII, Aquatic Resources and Water Quality, for the management guidelines to be utilized) and Focused, Recreation, (See Section X. Recreation Resources). This sale also includes 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.

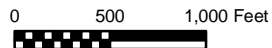
Boundary lines depicted on Attachment C are approximate; exact locations and site specific management activities will be determined during the sale preparation process.



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
- o o o Blocked road
- - - Road construction
- County road
- ; ; Transmission line



3

**Zig Zag Alder
-- Topography --
2010 SALE PLAN
TILLAMOOK DISTRICT**

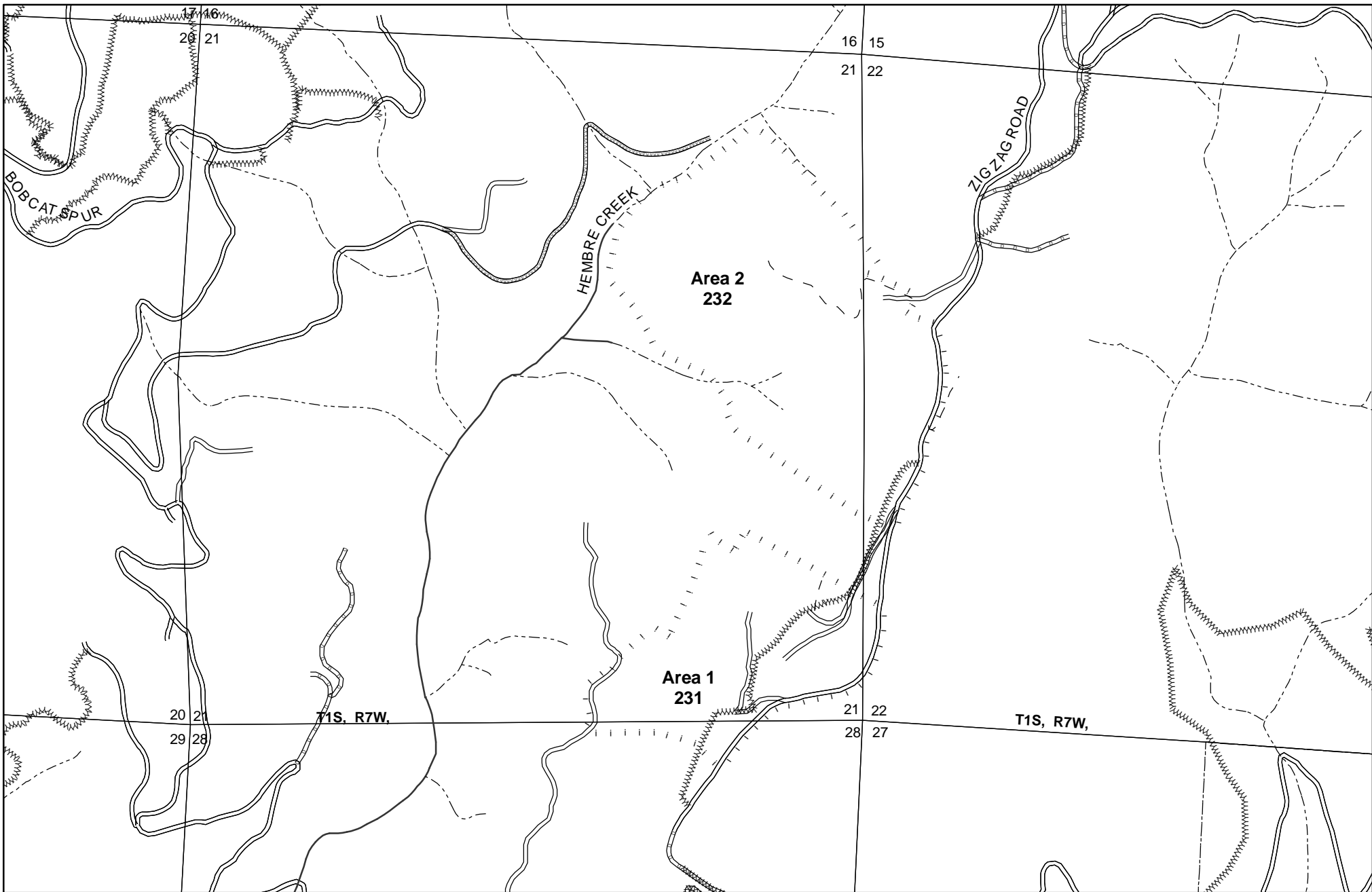
Portions of Sections 21, 22, and 28
T1S, R7W, W.M.,
Tillamook County, Oregon

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

Area	Type of Operation
1	Modified Clearcut
2	Modified Clearcut

Tillamook District GIS
3/20/2009

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



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
 o o o Blocked road
 - - - Road construction
 — County road
 ; ; Transmission line
 w w w w OHV trail
 Non-motorized trail

0 500 1,000 Feet

3

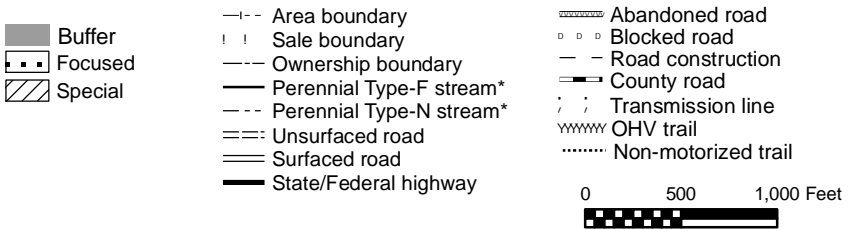
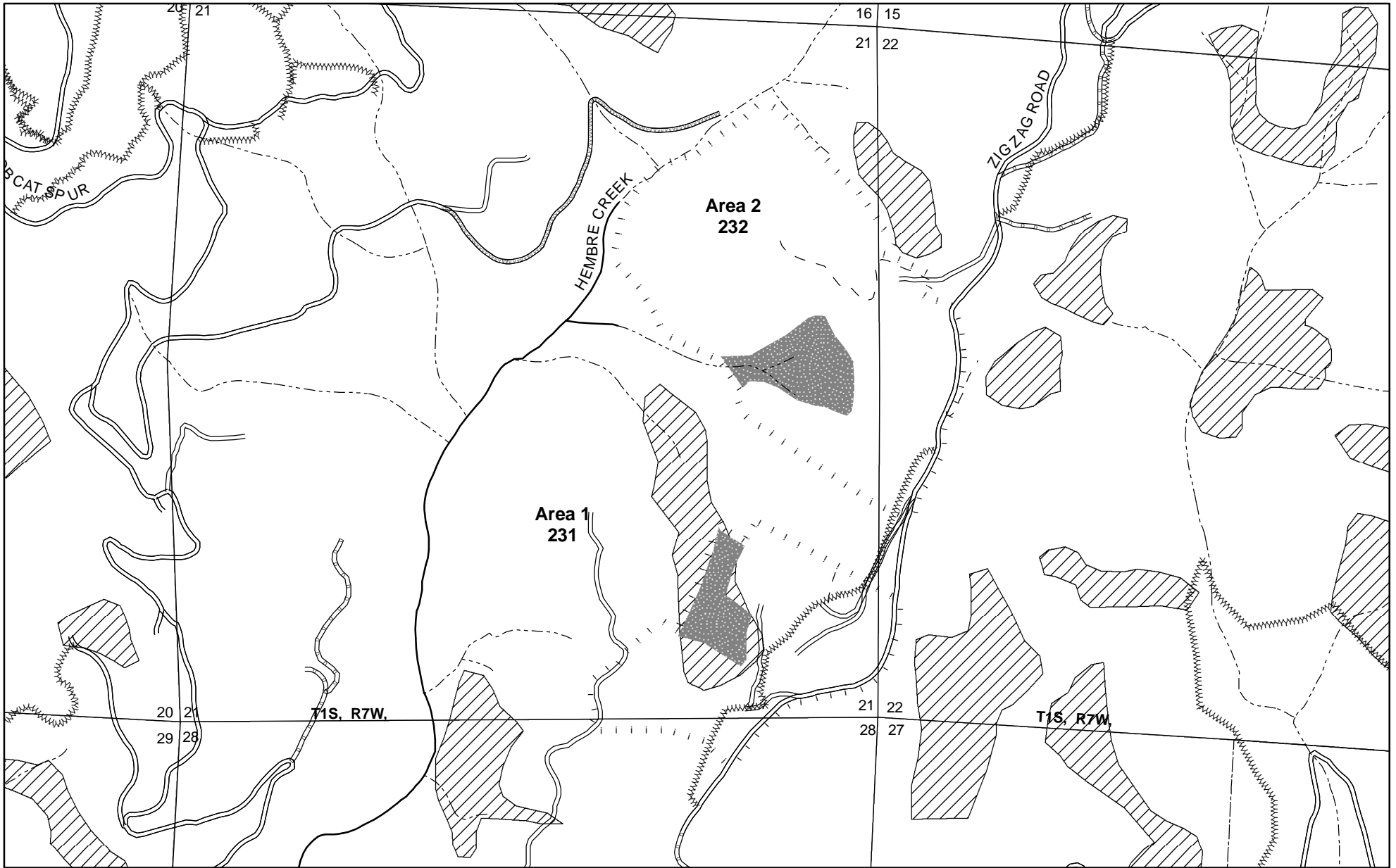
**Zig Zag Alder
 -- Current and Future Condition --
 2010 SALE PLAN
 TILLAMOOK DISTRICT
 Portions of Sections 21, 22, and 28
 T1S, R7W, W.M.,
 Tillamook County, Oregon**

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

Area	Type of Operation
1	Clearcut
2	Clearcut

Tillamook District GIS
 6/20/2009
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Attachment B



3

Zig Zag Alder -- Key Resources/Operationally Limited -- 2010 SALE PLAN TILLAMOOK DISTRICT

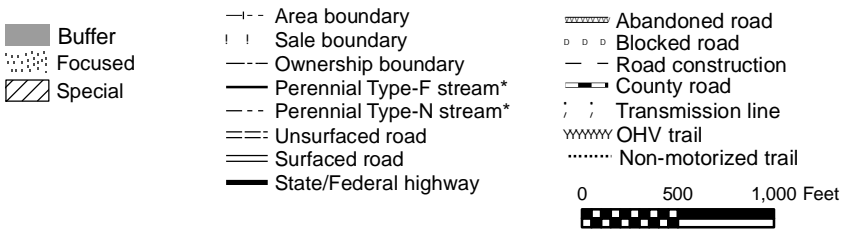
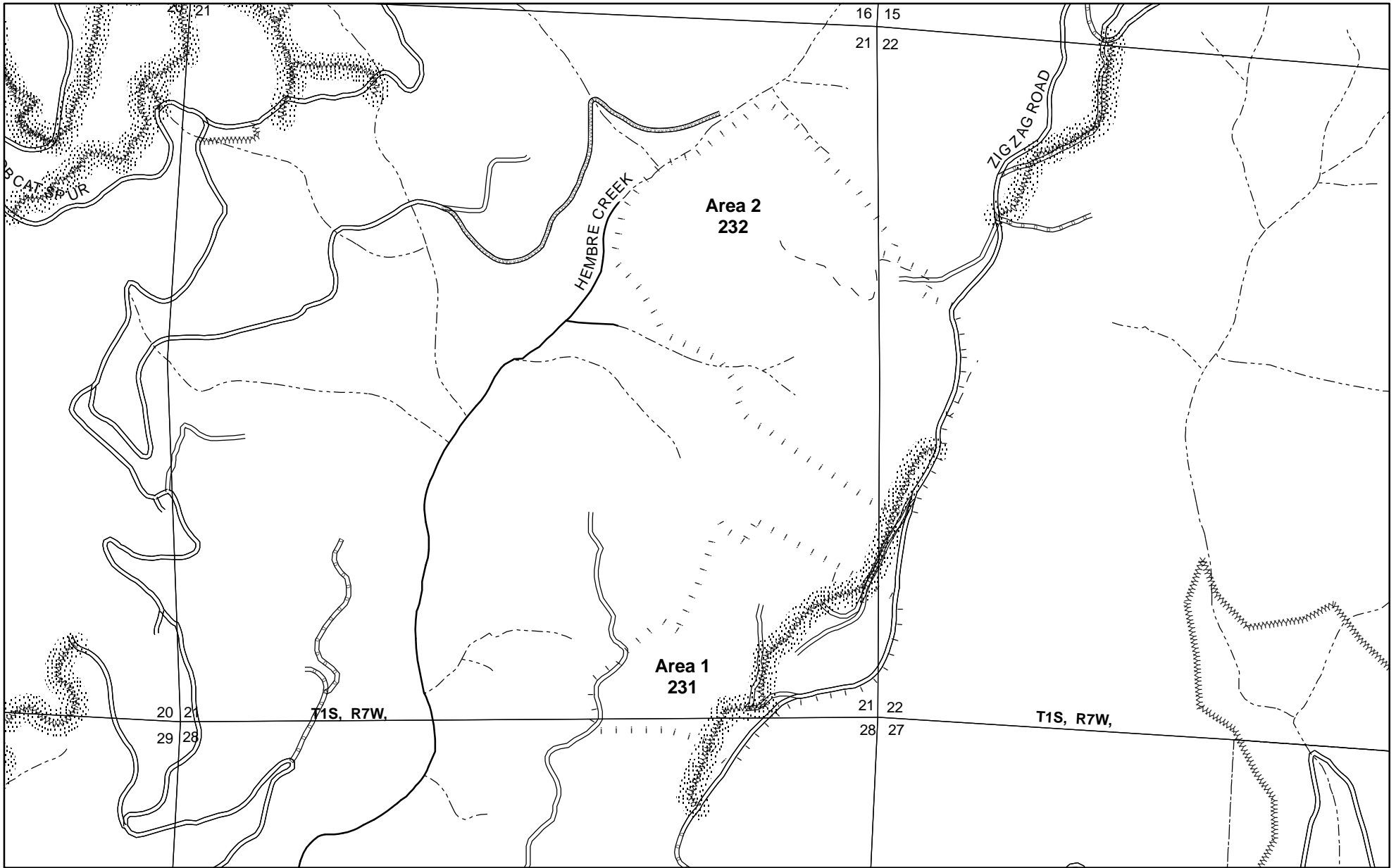
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3

Zig Zag Alder
-- Key Resources/Recreation --
2010 SALE PLAN
TILLAMOOK DISTRICT
 Portions of Sections 21, 22, and 28
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Area	Type of Operation
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