

Pre-Operations Report

Operation Name: Tillison Ridge
Legal: Sections 25 and 36, T1S, R9W
County: Tillamook
Management Basin: Wilson and Trask
SAH Status: None
FDF: 100% CSL: 0%

Table 1. Operation Areas, Types and Acres

| Area | Type of Operation | Gross Acres | Net Acres ¹ |
|-------|-----------------------|-------------|------------------------|
| 1 | Partial Cut | 68 | 65 |
| 2 | Partial Cut | 37 | 35 |
| 3 | Partial Cut | 34 | 30 |
| 4 | Down Wood Creation | 18 | 12 |
| Total | | 157 | 142 |

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 the sale are southern and southwest aspects with slopes varying from 10 to 85%. Elevations range from 1600 to 950 feet. The major soil type for Areas 1, 2, and 4 is Killam. Area 3 is dominated by Rye soil type.

II. CURRENT STAND CONDITION:

Table 2. Stand Inventory Information³

| Area | Prescription | Stand ID ¹ | Species | Age | DBH | BA | TPA | SDI | Net Acres ² |
|------|-----------------------|-----------------------|----------------|-------|-----|-----|-----|-----|------------------------|
| 1 | Partial Cut | 203 | WH,SS,RA | 40,60 | 19 | 232 | 117 | 48 | 65 |
| | Target | | WH, SS, RA | | 22 | 151 | 57 | 29 | |
| 2 | Partial Cut | 204 | DF,WH,SS RA | 40 | 15 | 206 | 170 | 47 | 35 |
| | Target | | DF, WH, SS | | 18 | 100 | 54 | 20 | |
| 3 | Partial Cut | 205 | DF, WH, SS | 60 | 20 | 254 | 116 | 50 | 30 |
| | Target | | DF, WH, SS | | 24 | 150 | 48 | 28 | |
| 4 | Down Wood Creation | 206 | WH,SS,RA | 60 | 19 | 244 | 117 | 67 | 12 |

1. The source of stand inventory information is from timber cruise data and stand level inventory.

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

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.

The sale areas are naturally regenerated stands likely resulting from windstorm disturbance. No previous management has occurred in the sale areas.

Stand Structure

According to SLI stand data, portions of Area 1 are classified as CSC and portions are UDS structure. The majority of Area 2 is classified as UDS structure. Area 3 does not have measured SLI data at this time. The populated stand data designates the stand as Close Single Canopy.

Area 1 is comprised of two SLI polygons. Both polygon inventory datasets show over 4000 cubic feet of down wood but less than 50 cubic feet in decay class 1 and 2. The data also shows 13-25 snags/acre with 5-8 of those being over 24" DBH.

Area 2 SLI data shows almost 5000 cubic feet of down wood with 100 cubic feet of that in decay classes 1 and 2. The stand also has approximately 12 snags per acre over 24" DBH.

Area 4 data shows 5300 cubic feet of down wood but none of that in decay classes 1 or 2. There are also approximately 14 snags per acre over 24" DBH.

Stand Conditions

Area 1 is a mixed conifer and hardwood stand. The conifer species are spruce, hemlock, and a small amount of Douglas-fir. The concentrations of alder vary from 1-2 acre pockets to the largest area of 20 acres.

Area 2 is a mixed species stand comprised of Douglas-fir, hemlock, and spruce with small pockets (1-2 acres) of alder.

Area 3 is a conifer stand with Douglas-fir, hemlock and spruce. There is a small area (2 acres) of alder in the riparian area on the southwest portion of the sale area.

Overall, the sale contains higher quality conifer and hardwoods. Hardwoods in the stand have straight boles and average log length of 35 feet. The growth of the red alder is beginning to slow in height growth due to the age of the stand.

Area 4 is an older conifer stand with hemlock and spruce. The stand is classified as OFS according the Stand Level Inventory data, however it lacks down wood in decay classes 1 and 2.

See Table 2 for specific stand data.

The brush component in the sale area is comprised primarily of sword fern, salmonberry, and small patches of vine maple.

There are few large snags in various states of decay left from the fire history of the area. Down wood consists of scattered large old logs (36"+) in Class 3 and 4 stages of decay. The Stand Level Inventory data shows approximately 1 snag per acre greater than 24" DBH. The inventory also shows 2,682 cubic feet per acre of down wood with only 3.45 cubic feet in decay class 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 | 203 | UDS | UDS | LYR | 65 |
| 2 | 204 | UDS | UDS | LYR | 35 |
| 3 | 205 | CSC | UDS | OFS | 30 |
| 4 | 206 | OFS | OFS | LYR ² | 12 |

- 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.*
- 2. This stand is currently in OFS condition. The DFC of the stand may be changed in the future as it will be managed to maintain OFS structure.*

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.

Sub-basin

This operation is located in the area of Green Peak and falls into the Wilson and Trask Basins. Past management involved several acres of clearcut harvest in the 1980's. In the past 10 years partial cutting has been completed on a small number of acres. Other areas of the small sub-basins of Hughey Creek and Green Creek have older (over 70 years old) stands mixed with stands 30-50 years of age. Very little opportunity exists in the basin for additional harvest after this sale for another 10-15 years.

The DFC for Areas 1, 2 and 4 is Layered. **Area 4 is currently in OFS condition.** The DFC of Area 4 may be changed in the future since it is currently in OFS structure. Area 3 is currently being managed to reach OFS.

Short term vision:

The short term objective for the planned operation is to remove merchantable alder and partial cut conifer to allow more understory tree establishment and continue overstory tree growth.

Long term vision:

The long term vision is to create complex stands with gaps of 1-10 acres in size with differing age classes, hemlock understory and a dominate conifer overstory. Hardwoods will be retained in headwalls and riparian areas adding to short term and long term decadence. The gaps and openings created by alder removal will be planted with conifer species. Hemlock and alder are also expected to seed back into the stand in the openings. The stand is expected to move toward a layered 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.**

Prescription:

Area 1 will be partial cut by thinning hemlock and spruce to basal area of 120-140 square feet. Douglas-fir will be reserved from harvesting since much of it originated from natural seed source and it averages one tree per acre. Alder will be thinned as well by removing merchantable alder greater than 14" DBH and less than 18" DBH. The prescription for alder will result in 8 trees per acre.

Area 2 will harvest merchantable alder creating gaps 1-2 acres in size and partial cutting conifer to a basal area of 80-100 square feet. The majority of harvested conifer will be hemlock. Douglas-fir and spruce are also found in the stand but at lower levels and larger diameters. Spruce may be reserved from harvest.

Area 3 will partial cut conifer to a basal area of 140-160 square feet. The small amount of alder in the stand will be reserved from harvest. Again hemlock will be the majority of trees per acre removed from the stand.

Area 4 will not remove any trees for harvest.

Snags

The Stand Level Inventory shows a large amount of snags in each area, therefore no snag creation will be completed with the sale.

Down Wood

Areas 1, 2 and 3 will have some down wood added to the stand through felling of snags as needed for safety and allowing long-butting in defected logs. The stand does have some defect due to mistletoe and wind damage that will require bucking-out defect. However, very little is planned for since the SLI data shows large amount of down wood in the stands.

Area 4 will not remove any trees for harvest. The area will require felling 24 trees over the 12 acres to create down wood in decay class 1 and 2 to add to the overall OFS structure. Trees selected for down wood creation are to be 20" DBH or greater and should be topped at 60 feet instead of girdled.

Pathway

Each of the sale areas are expected to have one additional thinning to manage the second cohort and add snags and down wood as needed. Additional gaps may also be created to allow for additional layering depending on the future understory health and production. These stands will have long rotation ages and be managed for complex structure through partial cut.

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) | 1,898 | 312 | 2,210 |
| Stumpage Value (\$/MBF)* | \$81 | \$200 | |
| Estimated Gross Value | \$154,050 | \$62,400 | \$216,450 |
| | | Project Costs: | \$32,170 |
| | | Estimated Net Value: | \$184,280 |

VI. HARVESTING AND ACCESS CONSIDERATIONS:

The sale areas are accessed via Mills Bridge Road to Tillison Ridge and Ginger Peak Road. All the main haul routes are surfaced with rock. Additional abandoned roads will be reopened and may be surfaced to access cable logging areas. Some use of dirt roads is likely for this sale.

See maps for specific road locations and conditions.

Approximately 0.4 mile of abandoned road will be improved which includes clearing, grading and some rocking. All areas will have some portions of reconstructed roads and short stretches of new construction. All of these roads are to access cable landing for partial cut operations.

A new construction road has no stream crossings and portions will be closed after harvest. Project work will bring all roads up to standards described in the *Forest Roads Manual*. The roads are ridgetop roads with no stream crossings.

Rock for the haul routes will come from existing stockpiles in the area. If additional rock is needed beyond the stockpiles, the rock will be purchased from a local source.

The operation will be 100% cable yarding. The yarding distances are 500-800 feet with good deflection across Hughey Creek. Some intermediate supports may be needed for Area 3.

The Trask River Road Safety Fee will apply to all volume in Area 3 and portion of Area 2 within the Trask Basin. Access is secured by an easement across private land

Table 5. Transportation Planning Summary (Miles)⁴

| Activity | Mainline | Collector | Rocked Spur ¹ | Dirt Spur ¹ |
|--------------------------|----------|-----------|--------------------------|------------------------|
| Construct | | | 0.41 | .82 |
| Improve | | | 0.41 | |
| Maintain ² | | 2.3 | | |
| Close/Block ³ | | | | .82 |
| 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 is being completed for the Wilson basin and is completed for the Trask basin. The streams within and adjacent to the sale boundary are not priorities for habitat projects. Portions of Hughey Creek have OFS stands along the riparian areas already.

Streams within and adjacent to the sale area have been surveyed for fish presence (see exhibits for additional information on location). Hughey Creek is a small fish bearing stream. In addition, there are unnamed Type N streams with the sale areas. These streams will be reviewed and posted with appropriate buffers during sale layout. All stream buffers within or adjacent to harvest unit boundaries will be managed according to *Forest Management Plan Riparian Strategies*.

There are several domestic water systems downstream of the sale area. Water right permit holders were notified of the planned sale in March. All FPA regulations will be followed for domestic water streams.

VIII. T&E SPECIES CONSIDERATIONS:

The sale has been reviewed with the ODF Northwest Oregon Area Biologist. Surveys for marbled murrelets and northern spotted owls have taken place in 2007 and will take place in 2008. The first year of surveys did not have detections for either species.

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.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

This assessment is based on analysis of USGS 1:24000 topographic maps.

There are high landslide hazard locations throughout the sale. Area 1 and portions of Area 2 drain into Hughey Creek. The rest of Area 2 and portions of Area 3 drain into Green Creek. The rest of Area 3 drains into an unnamed tributary of the Trask River. The risk of landslides delivering directly from the sale to all streams is moderate to high.

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 Non-motorized in the Tillamook State Forest Comprehensive Recreation Plan (1993). This sale will be reviewed by the District Recreation Coordinator before sale prep begins.

No recreation trails or sites are located within or in the vicinity of the sale boundary.

XI. CULTURAL RESOURCES:

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

XII. SCENIC RESOURCES:

Areas 1 and 3 will be visible from City of Tillamook. The prescription in both areas is partial cut and result in heavy tree retention. Therefore, visual impacts will be minimal.

XIII. OTHER RESOURCE CONSIDERATIONS:

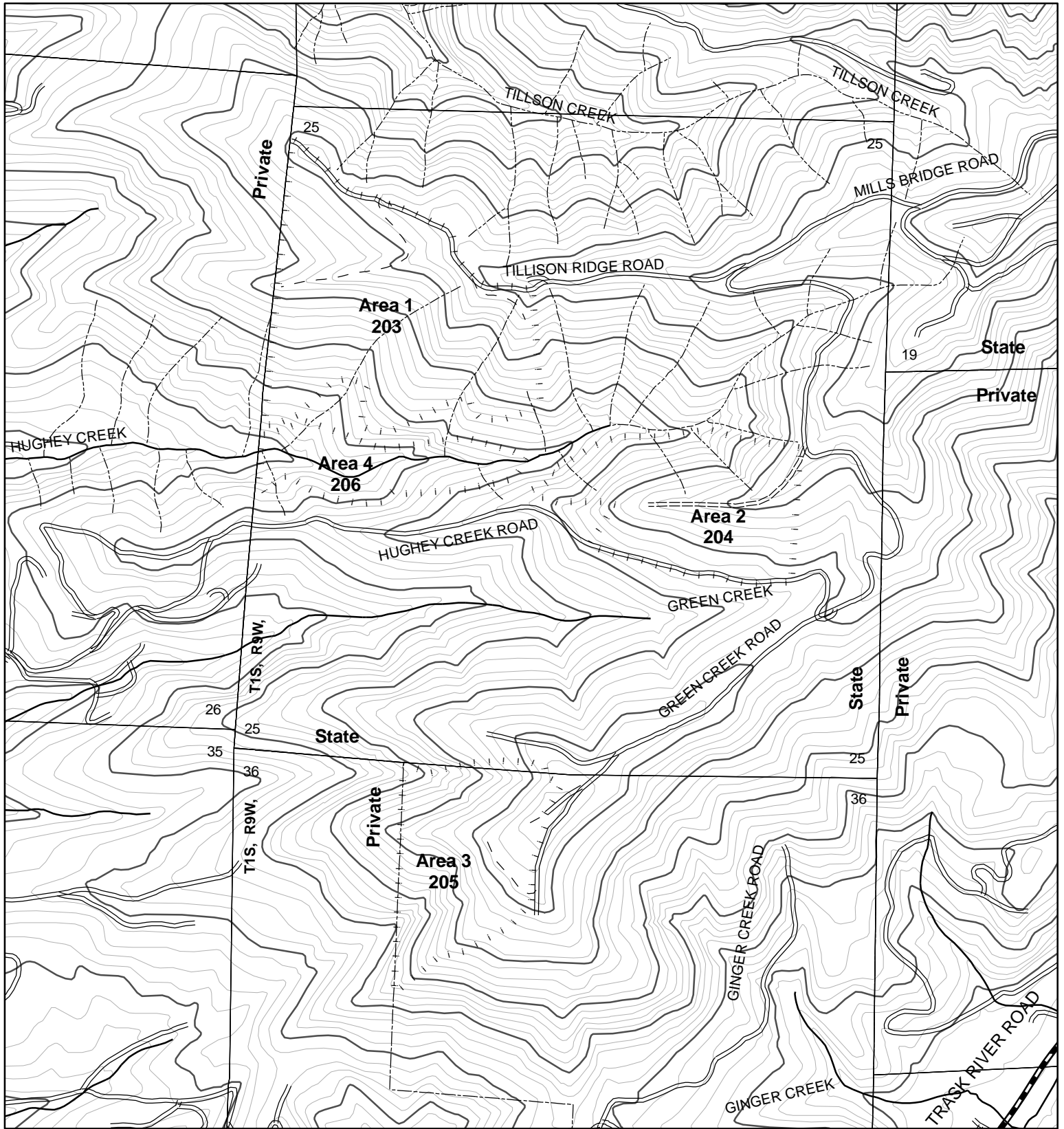
Areas 1 and 3 boundaries are adjacent to private landowners on the western boundaries. The property lines will be established by the district land surveyor before sale prep begins.

Area 1 contains a permanent plot established by ODF to measure stand growth and structure over time. The guidance provided for protection and reestablishment of the permanent plot will be followed during sale prep and harvest.

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.

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

3

**Tillison Ridge
-- Topography --
2009 SALE PLAN
TILLAMOOK DISTRICT**
Portions of Sections 25 and 36
T1S, R9W, W.M.,
Tillamook County, Oregon

0 500 1,000 Feet

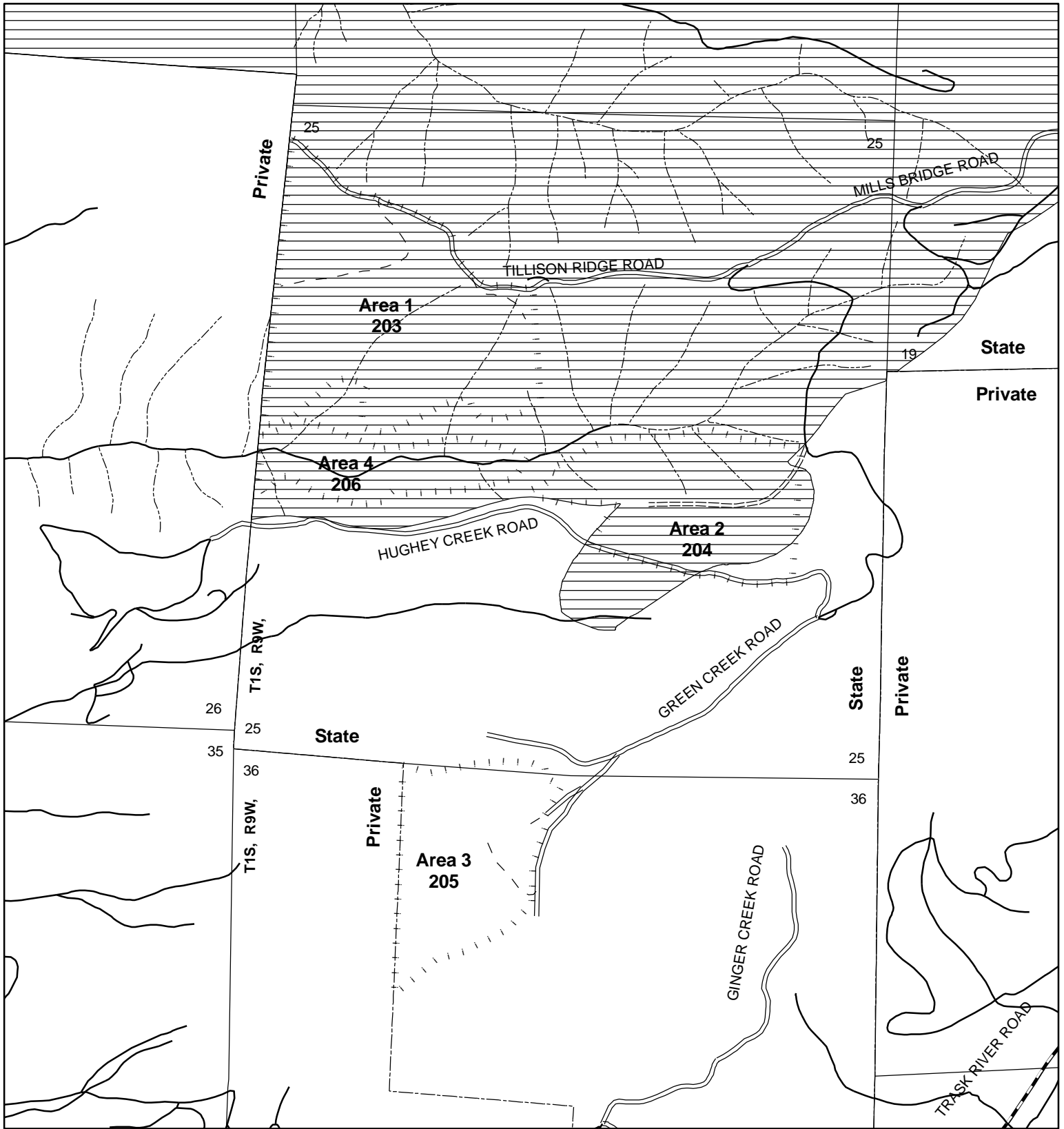


Tillamook District GIS
10/24/2007

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 | Partial Cut |
| 2 | Partial Cut |
| 3 | Partial Cut |
| 4 | Down Wood Creation |

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



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

3

Tillison Ridge
-- Current and Future Condition --
2009 SALE PLAN
TILLAMOOK DISTRICT

Portions of Sections 25 and 36
 T1S, R9W, W.M.,
 Tillamook County, Oregon

0 500 1,000 Feet

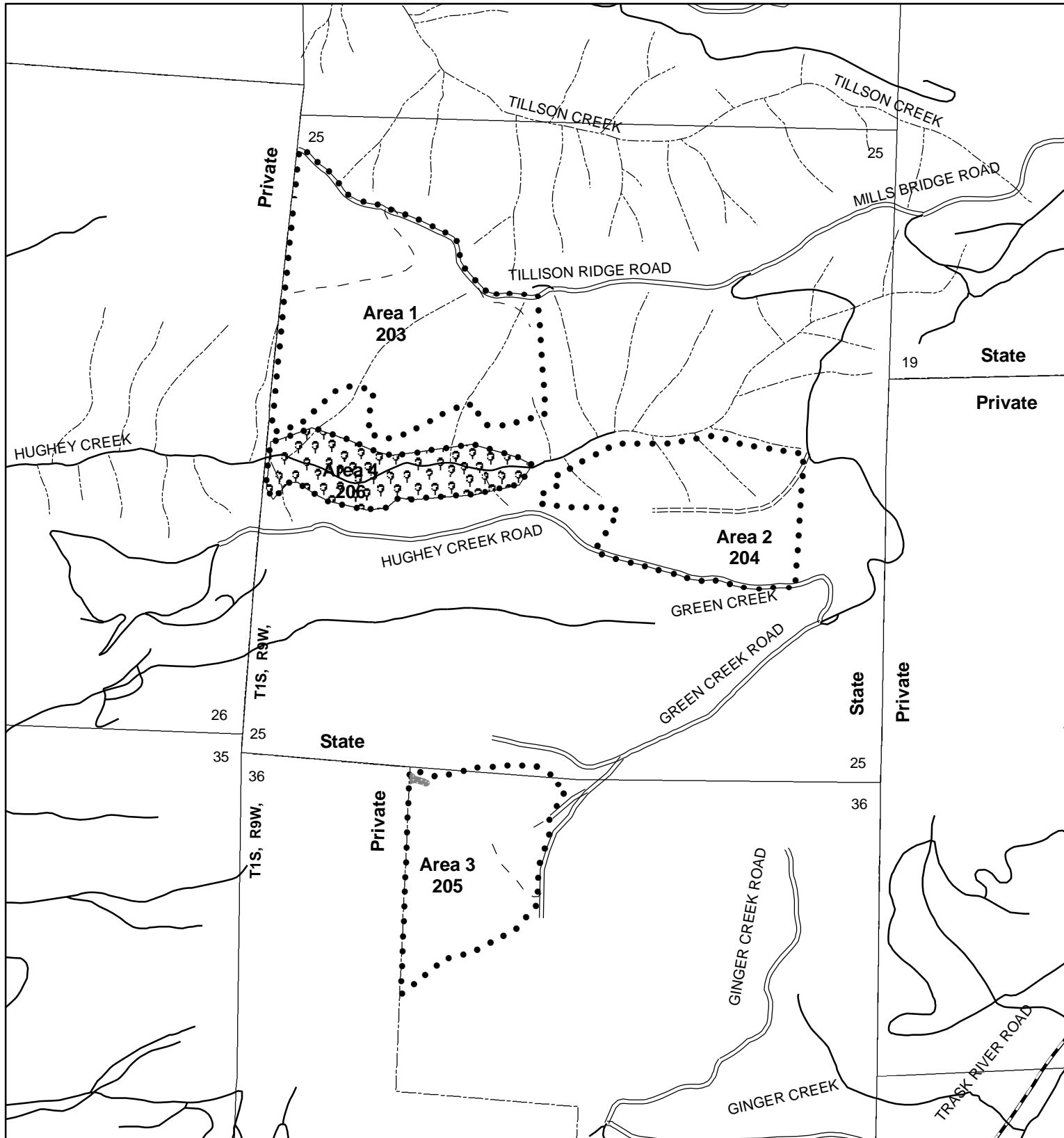


Tillamook District GIS
 01/08/2008

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| Area | Type of Operation |
|------|--------------------|
| 1 | Partial Cut |
| 2 | Partial Cut |
| 2 | Partial Cut |
| 4 | Down Wood Creation |

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



- Buffer
- Green Tree Retention
- 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

Tillison Ridge
-- Key Resources --
2009 SALE PLAN
TILLAMOOK DISTRICT
 Portions of Sections 25 and 36
 T1S, R9W, W.M.,
 Tillamook County, Oregon

3

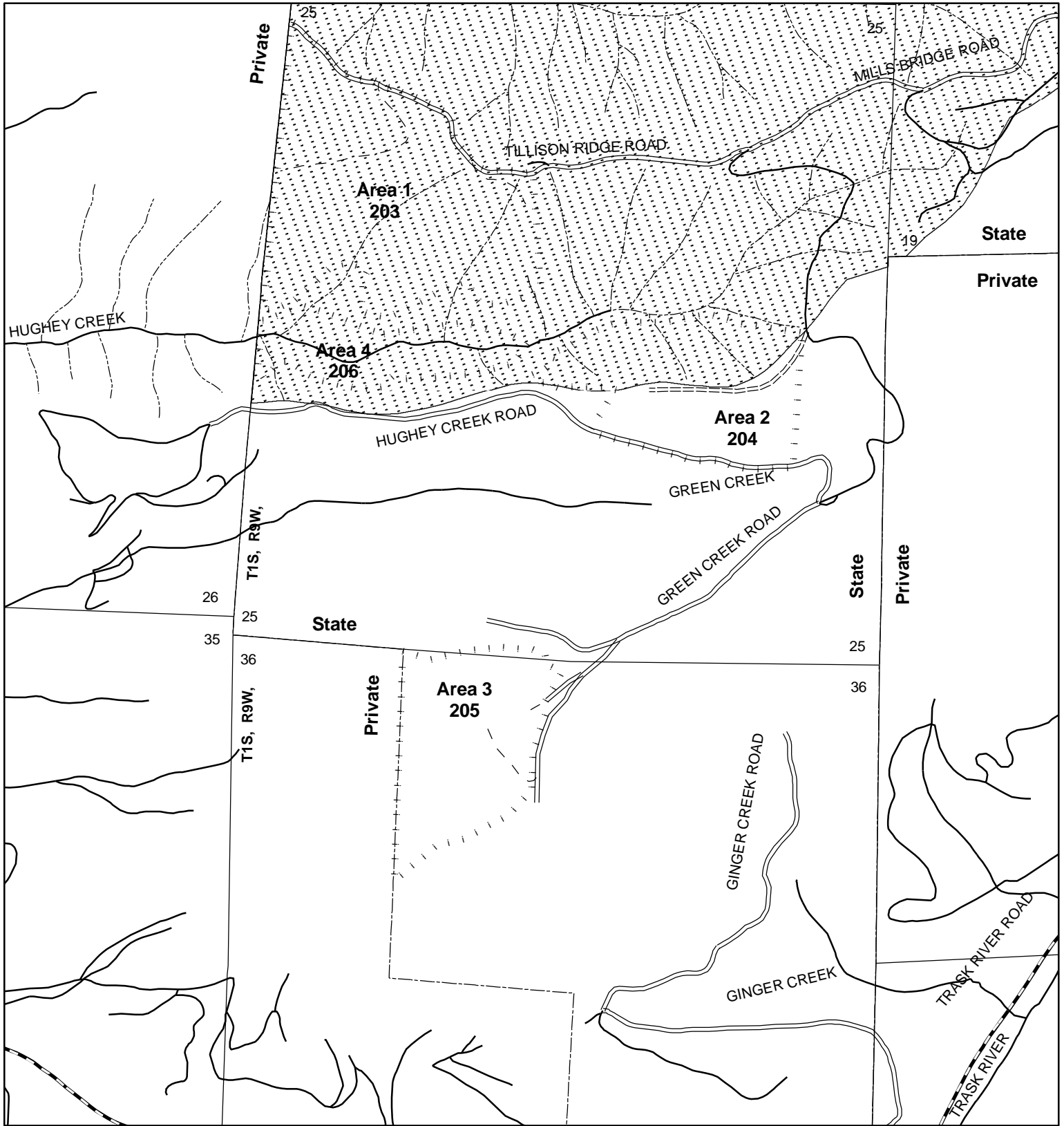
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Tillamook District GIS
 01/08/2008

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| Area | Type of Operation |
|------|--------------------|
| 1 | Partial Cut |
| 2 | Partial Cut |
| 3 | Partial Cut |
| 4 | Down Wood Creation |

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



- Stewardship**
- Focused
 - Special
- - - Area boundary
 - ! ! Sale boundary
 - - - Ownership boundary
 - Perennial Type-F stream*
 - - - Perennial Type-N stream*
 - == Unsurfaced road
 - == Surfaced road
 - State/Federal highway
 - Legacy road
 - o o Blocked road
 - - Road construction
 - County road
 - ; ; Transmission line

3

Tillison Ridge
-- Key Resources/Visual--
2009 SALE PLAN
TILLAMOOK DISTRICT
 Portions of Sections 25 and 36
 T1S, R9W, W.M.,
 Tillamook County, Oregon

0 500 1,000 Feet



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| Area | Type of Operation |
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| 1 | Partial Cut |
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| 4 | Down Wood Creation |

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