

Pre-Operations Report

Operation Name: Holey Oak
County: Columbia
Management Basin: Wilark

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres
1	Modified Clearcut	55	53
Total	Regeneration Harvest	55	53
2	Moderate Partial Cut	67	65
3	Moderate Partial Cut	56	51
Total	Partial Cut Harvest	123	116

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

The sale is located on a gentle ridgetop and moderate slopes in the headwaters of Oak Ranch Creek.

Slopes have a varied aspect and range from 0% to 40%. Elevations range from 1240 to 1640 feet. Birkenfeld, Tillamook, and Wauna are the predominant soil types of the sale area.

II. CURRENT STAND CONDITION:

Areas 1 and 2 are unmeasured stands, and the current stand structure has been estimated to be CSC, according to SLI expanded data. Stand classification plots are planned prior to February 2008 to confirm that the unmeasured stand in the clearcut unit is not complex structure (LYR or OFS). Area 3 has been inventoried using the Stand Level Inventory (SLI) procedure and this stand has been classified as UDS.

Area 1:

This is a 70-year-old stand according to SLI expanded data that is classified as CSC. The stand consists of Douglas-fir, hemlock, noble fir, cedar with some isolated areas of mature alder. The understory consists of vine maple, sword fern, dwarf Oregon-grape, huckleberry, and small shade tolerant conifers.

Area 2:

A 75-year-old mixed noble fir, Douglas-fir, hemlock stand. Stocking is somewhat clumpy with overstocked and understocked areas in the northwest third of the area. The southeast portion of the stand has little understory development. The

remaining portion of this area has an understory consisting of hemlock, noble fir, swordfern, vine maple and huckleberry.

Area 3:

This is a 75 year-old, predominantly Douglas-fir, noble fir, and hemlock stand type. Stocking is uniform and dense. Current condition is UDS. There is scattered dwarf Oregon-grape, salal, fern and huckleberry in the understory.

Snags and DWD:

Based upon available SLI data there are approximately 20 hard snags per acre, including 1.13 snags per acre $\geq 15''$ +DBH. The data shows down wood in decay class 1 and 2 averages 476 ft³/acre. Areas 2 and 3 DWD volumes are more similar to Area 3 than average basin levels. All existing DWD will be reserved in the sale areas. Additional DWD recruitment is expected through mortality, windthrow of residual trees, felled snags, tree topping(Area1), cull log segments and logging slash. Logging operations are anticipated to generate an additional 400-600 ft³/acre slash accumulation immediately post harvest.

Table 2. Stand Inventory Information

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	SDI	Net Acres ²
1	MC ³	7072*	DF	70	17	215	136	53	53
		<i>Target⁴</i>	<i>REG</i>						53
2	PC-M ³	7073*	DF	75	17	215	136	53	65
		<i>Target⁴</i>	<i>DF</i>		<i>20</i>	<i>130</i>	<i>64</i>	<i>29</i>	<i>65</i>
3	PC-M ³	7088	DF, WH	75	17	266	163	65	51
		<i>Target⁴</i>			<i>21</i>	<i>120</i>	<i>64</i>	<i>26</i>	<i>51</i>

¹ The source of stand inventory information is from SLI inventory grown forward to 2007. Stand ID's shown with a (*) are unmeasured stands, and the source of inventory information for these stands is expanded SLI data.

² The acres are based on GIS and exclude existing and planned roads, stream buffers, green tree retention areas, and non-thinnable areas.

³ MC is Modified Clearcut, PC-M is Moderate Partial Cut.

⁴ The Target row for partial cut areas identifies expected stand characteristics (DBH, BA, TPA and SDI) after harvesting has been completed.

III. DESIRED FUTURE CONDITION/VISION:

According to the Forest Grove District's landscape design for Area 1 is 100% GEN, the DFC for Area 2 is 100% LYR, and the DFC for Area 3 is 100% OFS.

Area 1:

Area 1 is GEN. The DFC, along with the terrain, makes the area desirable for regeneration harvest. The vision for this area is a modified clearcut to establish a vigorous growing regeneration stand of predominantly Douglas-fir with a diverse

mix of other conifer tree species. This area will be clearcut again in approximately 50 to 60 years.

Area 2:

The DFC for Area 2 is LYR. The vision for this stand is to develop a complex forest structure as quickly as possible creating habitat for older forest dependant wildlife species. In order to help facilitate growth, these stands will receive a first entry moderate partial cut. By releasing the trees with best form and vigor, the understory will gain growing space, and vegetation will improve at ground level.

All existing snags and down woody debris of all decay classes shall be retained as safety allows.

Area 3:

The DFC for Area 3 is OFS. As with Area 2 the vision for this stand is to develop a complex forest structure as quickly as possible creating habitat for older forest dependant wildlife species.

Table 3. Stand Structure Information

Area	Prescription	Stand ID	Current	Post Harvest ¹	Desired Future	Acres
1	MC	7072	CSC ²	REG	GEN	53
2	PC-M	7073	CSC ²	UDS	LYR	65
3	PC-M	7088	UDS	UDS	OFS	51

¹ The stand is expected to develop into this condition in the five to ten years after this operation is completed.

² Current stand condition is based on expanded data; see discussion above.

IV. PROPOSED MANAGEMENT PRESCRIPTION AND PATHWAY:

Area 1: Modified Clearcut

The unit is essentially flat, with some south aspect and minor slope at the south end. One small pitch in the southeast corner is too steep for ground equipment, but is a good candidate for short distance jammer logging.

A variety of methods will be used to achieve green tree retention requirements, which include green tree retention clumps, stream buffers and reserving some minor tree species such as cedar and hemlock. From these residual green trees, two trees per acre shall be topped to create additional hard snags. Snags shall have a DBH of at least 16 inches, and be at least 60 feet in height.

After snag creation is completed, seven green trees per acre will remain available as a source for snags and DWD, which are expected to develop over time through natural processes.

Existing snags determined not to be a safety hazard will be retained and any felled snags will be left for down wood. There is quite a bit of down wood, most of it in advanced stages of decay.

Felling of all non-merchantable stems (stems less than 8 inches DBH) will be required to promote a healthy replacement stand.

All existing DWD will be reserved in the sale areas. DWD recruitment is expected through mortality, windthrow of residual trees, felled snags, and logging slash.

It is anticipated that 25 acres of mechanical site prep will be needed to slash non-merch stems, pull vine maple, and manipulate slash concentrations to facilitate planting spots.

The area will be planted with a mix of conifer species, predominantly Douglas-fir, and managed for timber production. Retaining some green trees and reserving larger cedars, creating snags, adding down woody debris and planting a variety of tree species will provide habitat for early seral wildlife species between harvest intervals. It is anticipated that the newly established plantation will be scheduled for pre-commercial thinning at approximately age 15 and commercial thinning at approximately age 40 before the next modified clearcut harvest at age 60. The stand will move through the REG, CSC and UDS conditions between harvest intervals.

A 2007 *Phellinus* survey done on Area 1 showing about 35% *Phellinus* present that will be managed with the modified clearcut prescription.

Area 2: Partial Cut – Moderate w/ *Phellinus* Treatment

The harvest operation in Area 2 will continue the development of UDS structure in the short term. All trees less than 8 inches and all species other than Douglas-fir shall be retained. All existing snags which do not present a safety hazard, and down woody debris of all decay classes shall be retained. As the understory develops, future operations will remove more of the overstory. This will provide more light and nutrients to promote the continued vigor of the understory. In time, a second and third layer of trees and other vegetation will develop, producing the desired complex structure.

Based on the thinning prescription, the DFC of LYR, the challenges of competing vegetation (heavy salal and vine maple), fragile top soils, and potential damage from mechanical site prep, and the potential to take advantage of natural reproduction... an underburn will be considered for site preparation.

Phellinus treatment is planned based on additional field recon which picked up heavier amounts of *Phellinus* in Area 2. Thinning plus *Phellinus* treatment should

open the stand sufficiently to provide adequate light for the establishment of a second cohort.

Area 3: Partial Cut - Moderate

This area is a first entry partial cut. Stocking is dense with little understory vegetation. An aggressive moderate thinning would provide dominant residual trees with a needed release. In addition, added light to the understory will promote further development of a second cohort. Decaying downed wood is abundant and loaded with equally abundant advanced reprod, mostly hemlock and some cedar. Lucky Lars, the adjacent thinned unit, displayed a plethora of natural regeneration, which would seem to assure success if an ample seed source of hemlock and cedar are left in the residual overstory.

The amount of natural regeneration in the adjacent thinned unit observed during field recon, suggests that an ample seed source of hemlock and cedar will be left in the residual overstory. Mechanical site prep and non-merch slashing not needed.

Some *Phellinus* was noted, but not enough to warrant treatment.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

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

	Conifer	Hardwood	Total
Net Volume (MBF)	4,500		4,500
Stumpage Value (\$/MBF)	\$350		
Estimated Gross Value	\$1,575,000		\$1,575,000
		Project Costs:	\$66,000
		Estimated Net Value:	\$1,509,000

VI. HARVESTING AND ACCESS CONSIDERATIONS:

The sale areas are accessed via Karth, Rudy Pit, Beaverhome and Larson Roads, which are currently all weather, crushed rock surface roads.

Approximately 1.1 miles of rock roads will be constructed for sale access costing approximately \$66,000.

The rock source will be the Rudy Pit.

Total project costs are \$66,000.

The operation will be 10% cable yarded and 90% ground based yarded.

Table 5. Transportation Management Summary (Miles).

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construction	0	0	1.1	0
Improvement	0	0	0	0
Maintenance	0	7.0	1.1	0
Closure/Vacation	0	0	0	0

VII. AQUATIC RESOURCES AND WATER QUALITY:

According to Forest Grove's GIS stream layer, in Area 2 there are two tributaries of Oak Ranch Creek within or adjacent to the sale area. One tributary is a medium Type F; the other is a small Type F. The northern boundary of Area 3 is adjacent to a medium Type F. There are a few unnamed small perennial and seasonal Type N streams within Areas 1, 2, and 3. Stream buffers within harvest unit boundaries will be managed according to FMP Riparian Strategies.

During sale layout, all streams will be field verified as to size, type, locations, and/or source.

Riparian area stand types along these streams are a mix of conifer and hardwood.

This operation involves an activity that is listed in the National Marine Fisheries Service (NMFS) adopted rules under Section 4(d) of the Endangered Species Act. The sale area is in close proximity to a stream with listed fish. In addition, the haul route crosses or is in close proximity to a stream with listed fish.

In order to protect water quality during active operations, a variety of methods will be used to prevent sediment from entering live streams. These methods include (but are not limited to) maintaining culverts and other road drainage structures, and using sediment control devices in road ditches when necessary.

High quality crushed rock road surfaces will be maintained and log hauling will be restricted between November 1st and March 31st of each year. Restrictions may include limiting the number of loads hauled per day, not hauling during periods of heavy moisture, or having an alternate haul route. Culvert installment and replacement in live streams will be conducted between July 1 and September 15. Operations outside of this period will be reviewed with ODFW.

The Upper Nehalem Watershed Analysis was checked for recommendations that could be applied to this sale. The watershed analysis notes that the reaches shortly downstream of the sale area may have low wood recruitment potential because of sparse conifer. The watershed analysis also cited an ODFW restoration report as saying that this reach of Oak Ranch Creek was a moderate priority for restoration projects, up to the end of coho use. ODFW Fish Habitat Biologist (Dave Plawman) has evaluated potential opportunities for stream enhancement (large wood placement) projects associated with this sale. Plawman has indicated that the reach of Oak Ranch Creek downstream of the sale area is a good candidate for a stream enhancement project. During sale prep, Plawman will be consulted for input regarding the design and implementation of the project.

VIII. T&E SPECIES CONSIDERATIONS:

The sale areas have been reviewed with the ODF Northwest Oregon Area Biologist.

Surveys for northern spotted owls were conducted in 2007 due to the presence of potentially suitable spotted owl habitat within and adjacent to the timber sale area. Holey Oak was surveyed for spotted owls three times in 2007 with no responses, and the second year of survey will be completed in 2008. All surveys were/will be conducted in accordance with USFWS protocol.

Surveys for marbled murrelets are not required, due to the absence of potentially suitable habitat within the sale area. The District T&E Coordinator made the determination that the sale area is non-suitable habitat for marbled murrelets. The ODF wildlife biologist for the NW Oregon Area reviewed and approved this determination.

The sale areas were checked against the Oregon Natural Heritage Program (ONHP) database of known listed plant locations, as well as against local records in the Land Management Classification System (LMCS). No listed plant records were identified within or adjacent to the sale areas.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

This assessment is based on analysis of USGS 1:24,000 topographic maps.

There are no high landslide hazard locations within the sale. All three areas of the sale drain to the headwaters of Oak Ranch Creek. The risk of landslides delivering directly to Oak Ranch Creek from the sale is low (*per Northwest Oregon Area Geotechnical Specialist*).

The geotechnical specialist will be consulted if evidence of recent landslide activity is identified during sale layout.

X. RECREATION RESOURCES:

The District Recreation Coordinator has reviewed this sale, and suggests:

Spurs should be evaluated for closure after operation. No other specific trail network plans in association with this sale.

XI. CULTURAL RESOURCES:

The sale area and proposed road construction right-of-way were checked against the Tillamook State Forest Cultural Resource Inventory Database (GIS format). No cultural resource records were identified within or adjacent* to the operation areas. If any significant cultural resources are located during sale preparation, the Public Use Coordinator (ODF Salem Staff) will be consulted regarding potential protection measures.

**Adjacent refers to approximately one tree length from an operation area. For the purpose of this screen, a 200 foot buffer around the sale boundary and proposed road construction right-of-way was assessed for cultural resource locations.*

XII. SCENIC RESOURCES:

The sale area is in an area of low visual sensitivity.

XIII. OTHER RESOURCE CONSIDERATIONS:

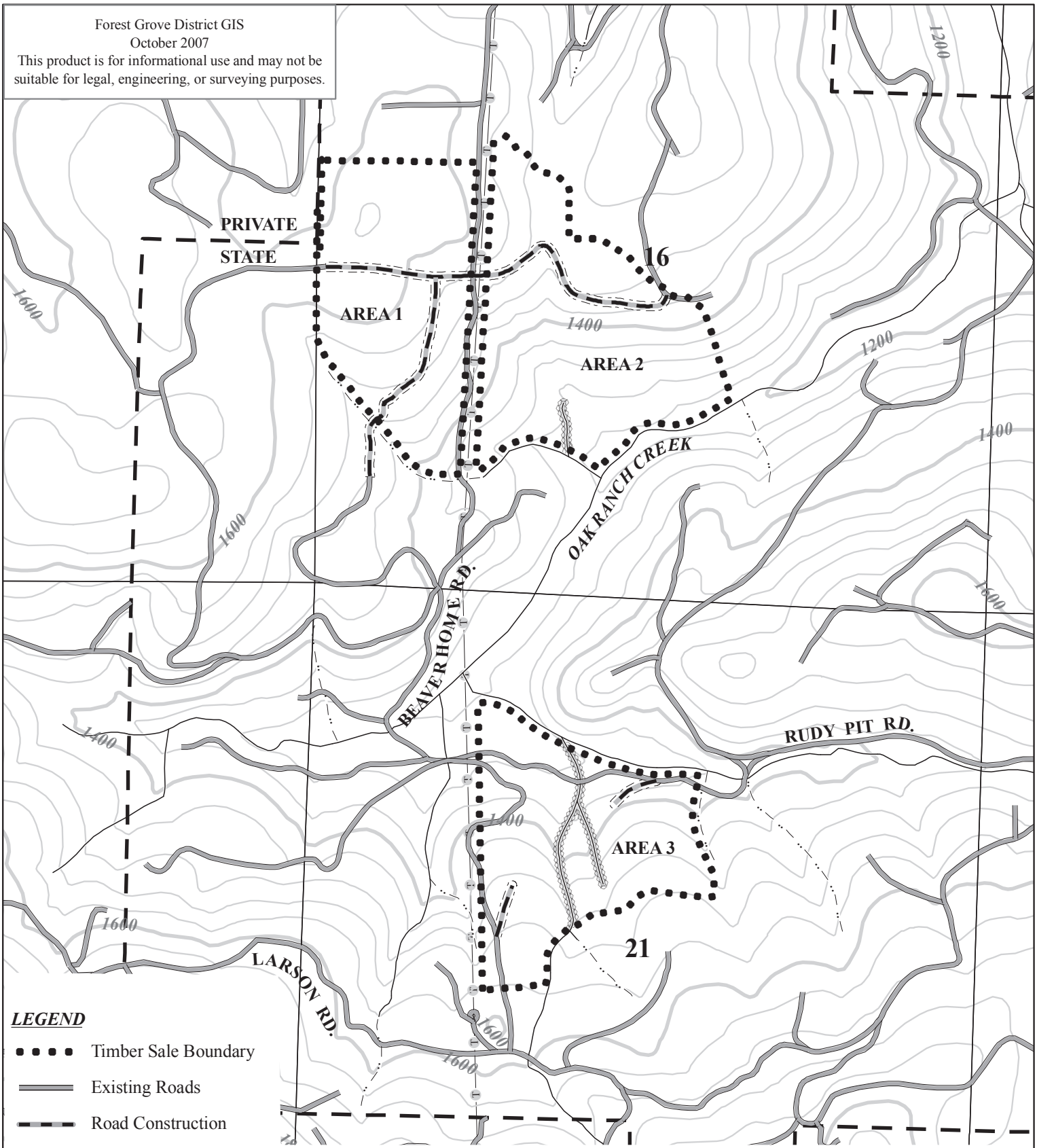
The property lines have been true blazed and posted.

All known survey corners and witness trees shall be protected from damage during any operations.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

Area 1 contains Focused Stewardship, Aquatic and Riparian Habitat Subclass. Areas 2 and 3 contain Focused and Special Stewardship, Aquatic and Riparian Habitat Subclass. See Section VII, Aquatic Resources and Water Quality, for the management guidelines to be utilized.

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



LEGEND

- Timber Sale Boundary
- Existing Roads
- - - Road Construction
- Perennial Type F Stream
- · - · - Perennial Type N Stream
- ▨ Stream Buffer
- | - | ODF Ownership
- 400' Contour Intervals
- 80' Contour Lines

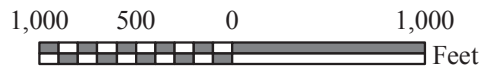
FY 2009
HOLEY OAK
PORTIONS OF SECTION 16, & 21, T05N, R03W, W.M.
COLUMBIA COUNTY, OREGON

Attachment A: Topography

Scale

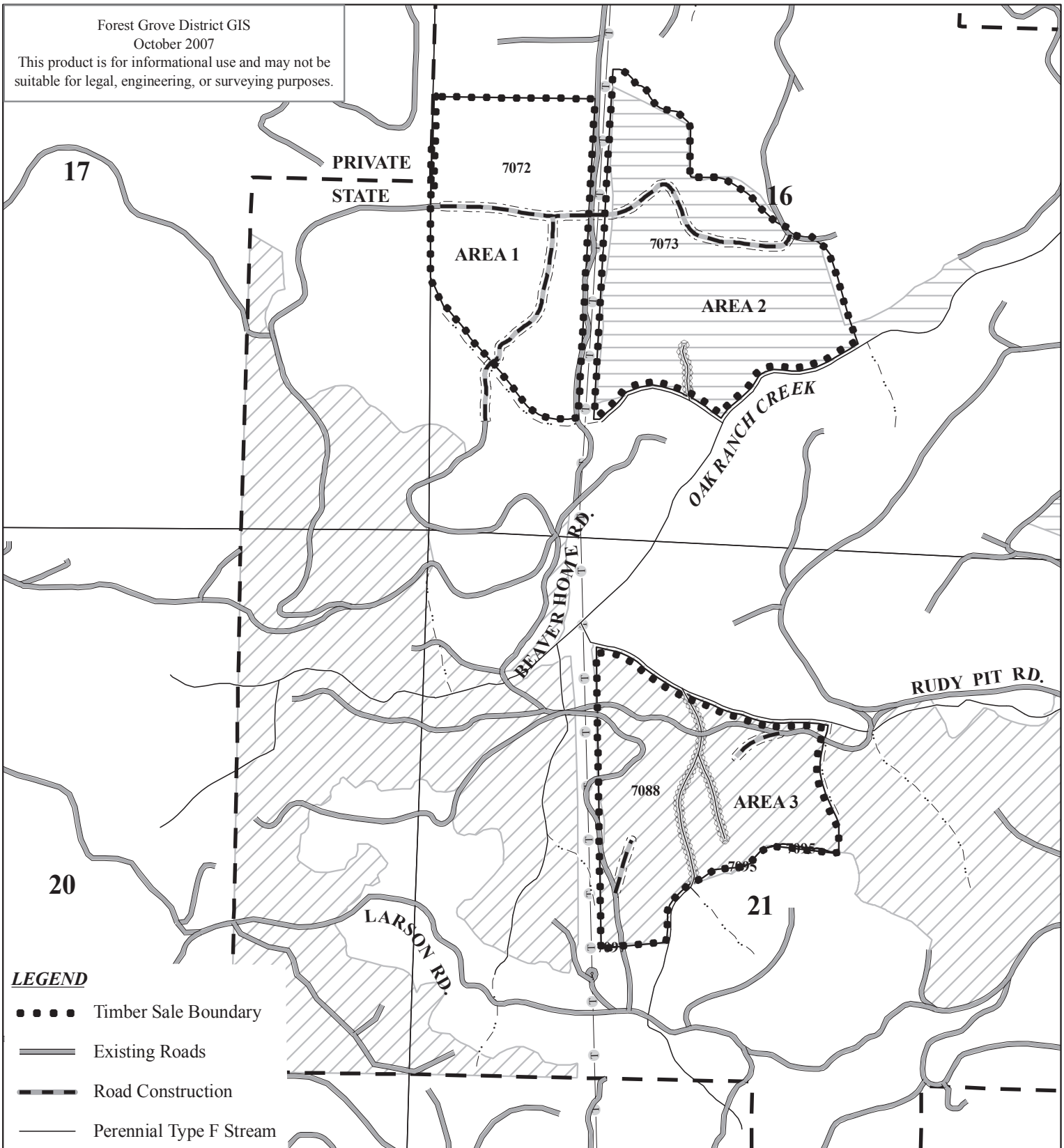
1:12000

1 inch = 1000 feet



APPROXIMATE NET ACREAGE

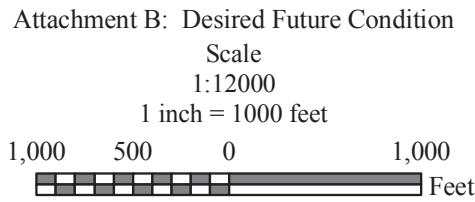
AREA 1	53	ACRES (MC)
AREA 2	65	ACRES (PC-M)
AREA 2	51	ACRES (PC-M)
TOTAL	170	ACRES



LEGEND

- Timber Sale Boundary
- Existing Roads
- - - Road Construction
- Perennial Type F Stream
- · - · Perennial Type N Stream
- ▨ Stream Buffer
- | - | ODF Ownership
- SLI Polygons (Stand ID#)
- DFC Stand Type
- ▨ Layered
- ▨ Older Forest Structure

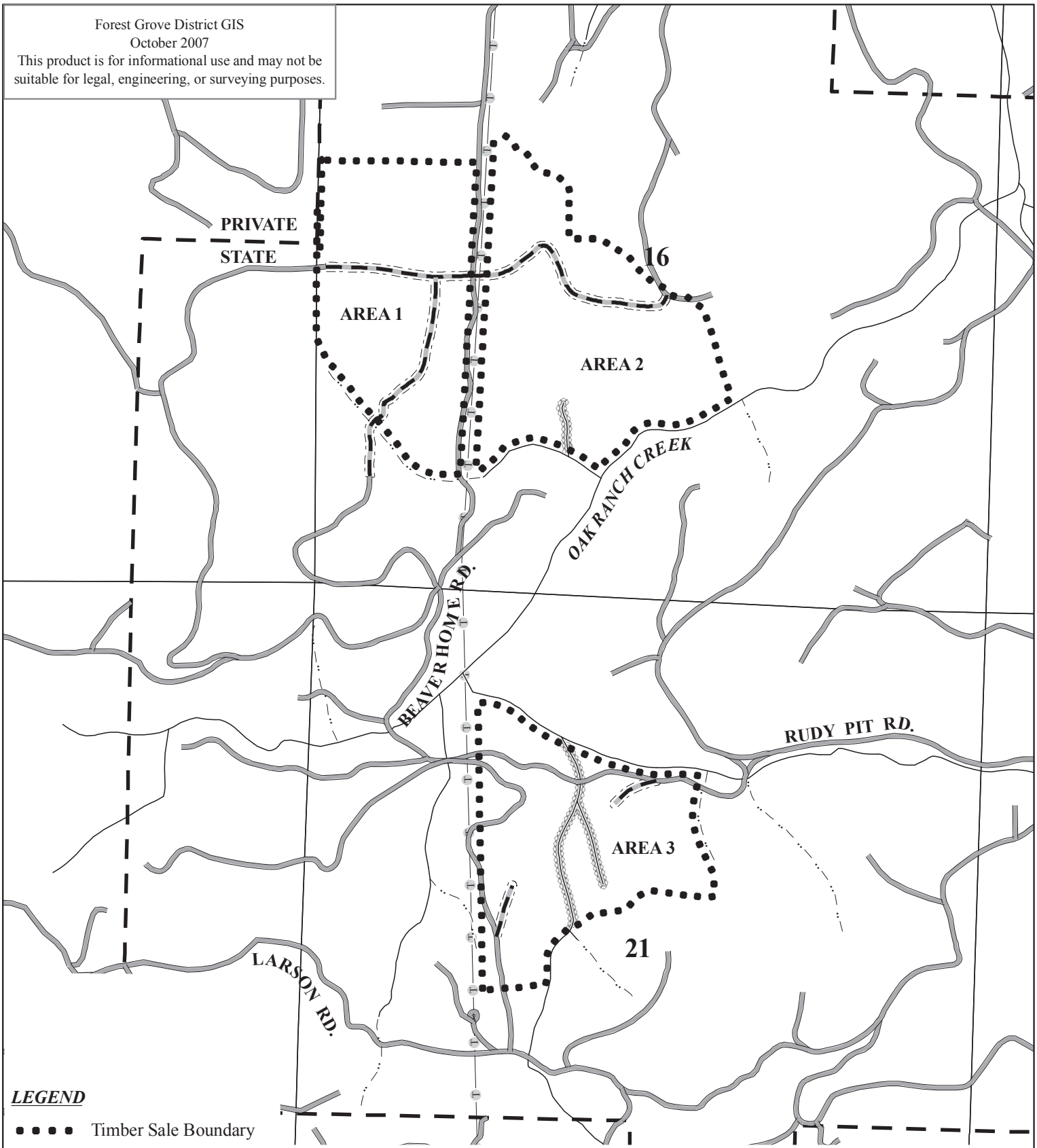
FY 2009
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APPROXIMATE NET ACREAGE

AREA 1	53	ACRES (MC)
AREA 2	65	ACRES (PC-M)
AREA 2	51	ACRES (PC-M)
TOTAL	170	ACRES

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LEGEND

- Timber Sale Boundary
- Existing Roads
- Road Construction
- Perennial Type F Stream
- - - Perennial Type N Stream
- ▨ Stream Buffer
- || ODF Ownership

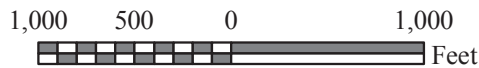
FY 2009
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Attachment C: Key Resources

Scale

1:12000

1 inch = 1000 feet



APPROXIMATE NET ACREAGE

AREA 1	53	ACRES (MC)
AREA 2	65	ACRES (PC-M)
AREA 2	51	ACRES (PC-M)
TOTAL	170	ACRES