



Oregon

Theodore R. Kulongoski, Governor

Department of Forestry
Forest Grove District
801 Gales Creek Road
Forest Grove, OR 97116
(503) 357-2191
FAX (503) 357-4548

Memorandum



"STEWARDSHIP IN FORESTRY"

Subject: FY2008 AOP Modification; U-Falls Incline Timber Sale
To: Robert Gustavson; District Forester
From: Erik Marcy; Unit Forester
Date: February 1, 2008

Based on *Phellinus* surveys and our most recent reconnaissance of the planned FY08 timber sale known as U-Falls Incline, I am hereby recommending a major modification to this sale. At this time the Marketing Unit, Reforestation Unit, and Staff Resource Specialists agree that the best silvicultural decision is to emphasize clearcutting over partial cutting due to the extensive root rot problem. The DFC for the timber sale area with proposed change is 90% OFS and 10% GEN.

The recommendation is as follows:

- Area 3 changed to two separate areas. One will receive moderate partial-cut with *Phellinus* treatment (Area 3), and the other will be modified clearcut (Area 4).
- Create Area 4, a 29 acre modified clearcut (located in the middle of the old Area 3).

The result would be as follows:

- The new Area 3 is a 56 net acre moderate partial cut with *Phellinus* treatment.
- The new Area 4 is a 29 net acre modified clearcut.

The new acreage will yield approximately 6.3 MMBF, a 0.3 MMBF increase from the planned volume. Attached are the old U-Falls Incline Exhibit A, the new U-Falls Incline Exhibit A, an updated pre-operations report, and the updated FY08 AOP summary tables. This modification has been reviewed and approved by ODF resource specialists.

If you concur with this recommendation please acknowledge with your signature below, and I will send the updated information to Salem. Thank you.

Approved: Andy W. Dite (For Bob G.) 2/21/08
Robert Gustavson; District Forester Date

TABLE A-1: COMMERCIAL FOREST MANAGEMENT OPERATIONS - FINANCIAL SUMMARY

District: Forest Grove

Fiscal Year: 2008

Date: February-08

Operations	Payment Type	Fund %		County	Sale Quarter	Net Acres		Volume (MMBF)			Value		
		BOF	CSL			Partial Cut	Regen	Conifer	Hardwoods	Total	Gross	Projects	Net
Primary Operations													
C-addle	R	100%	0%	Wa/Till	3	318	148	8.3		8.3	\$3,029,500	\$196,500	\$2,833,000
Cougar Ridge	R	100%	0%	Till	3	121		1.8		1.8	\$630,000	\$45,000	\$585,000
Eye Of The Tiger	R	100%	0%	Wash	2	257		6.4		6.4	\$2,240,000	\$184,000	\$2,056,000
Joe Cockeran	R	100%	0%	Till	4	89	168	7.3		7.3	\$2,738,000	\$94,000	\$2,644,000
Nine To Five	R	100%	0%	Wash	3	383		4.9		4.9	\$1,715,000	\$75,600	\$1,639,400
Round Rice	R	100%	0%	Wash	2	105	94	5.0		5.0	\$1,874,000	\$72,000	\$1,802,000
Salmon Derby	R	100%	0%	Till	1	69	86	4.1		4.1	\$1,537,500	\$17,000	\$1,520,500
Steel Shield	R	100%	0%	Till	4	228		3.6		3.6	\$1,260,000	\$144,000	\$1,116,000
Sunday Punch	R	100%	0%	Wash	4	273		3.3		3.3	\$1,260,000	\$259,000	\$1,001,000
U Falls Incline	R	100%	0%	Till	3	147	120	6.3		6.3	\$2,047,500	\$67,000	\$1,980,500
Wildcat Stevens	R	100%	0%	Wash	4	247		4.8		4.8	\$1,680,000	\$80,000	\$1,600,000
Wiley Coyote	R	100%	0%	Till	4	87	34	2.5		2.5	\$875,000	\$52,000	\$823,000
AOP Total						2,324	650	58.3		58.3	\$20,886,500	\$1,286,100	\$19,600,400

62.0	Initial 2008 volume target
-3.7	Difference - This volume will be accomplished through salvage activities identified in the District Forester's approval memo.

Alternate Operations

Blind Faith	R	100%	0%	Wash			112	4.2		4.2	\$1,680,000	\$60,000	\$1,620,000
South Gale	R	100%	0%	Wash		44	113	4.7		4.7	\$1,878,000	\$60,000	\$1,818,000
Moose and Squirrel	R	100%	0%	Col			114	4.0		4.0	\$1,600,000	\$41,000	\$1,559,000

TABLE A-2: COMMERCIAL FOREST MANAGEMENT OPERATIONS INTEGRATED FOREST MANAGEMENT STRATEGIES

District: Forest Grove Fiscal Year 2008 Date: June-07									
Operation <i>(by basin north to south)</i>	Area	Net Acres			Stand Structure Development Pathway			Green Trees	Comments
		Regen cut	Partial Cut	Total	Current	Post-Harvest	Desired		
Wheeler Basin									
Eye of the Tiger	1		182	182	CSC 8%, UDS 92%	UDS	LYR 78%, OFS 22%		
	2		75	75	CSC	UDS	LYR		
Round Rice	1	94		94	CSC 23%, UDS 77%	REG	GEN	7	
	2		105	105	CSC 30%, UDS 70%	UDS	GEN 62%, OFS 38%		
Steel Shield	1		112	112	CSC 86%, UDS 14%	UDS	OFS		
	2		77	77	CSC	UDS	GEN 55%, OFS 45%		
	3		40	40	CSC	UDS	GEN 50%, OFS 50%		
Salmon Derby	1	86		86	CSC 66%, UDS 34%	REG	GEN	7	
	2		69	69	CSC 15%, UDS 85%	UDS	GEN 32%, LYR 41%, OFS 27%		
Upper Salmonberry Basin									
Joe Cockeran	1	67		67	UDS	REG	GEN	7	
	2		36	36	UDS	UDS	GEN		
	3	101		101	UDS	REG	GEN 84%, LYR 16%	7	
	4		53	53	CSC	UDS	OFS		
Wiley Coyote	1		87	87	UDS	UDS	LYR		
	2	34		34	UDS	REG	GEN		
Gales Creek Basin									
Wildcat Stevens	1		219	219	CSC 8%, UDS 92%	UDS	LYR 35%, OFS 65%		
	2		28	28	CSC	UDS	LYR		
Larch Mtn. Basin									
Cougar Ridge	1		121	121	UDS	UDS	OFS		
Rogers Basin									
C-addle	1		88	88	CSC 11%, UDS 89%	UDS	GEN		
	2		111	111	CSC 71%, UDS 29%	UDS	GEN 32%, OFS 68%		
	3		119	119	CSC 29%, UDS 71%	UDS	GEN 68%, OFS 32%		
	4	106		106	UDS	UDS	GEN	7	
	5	42		42	UDS	UDS	GEN	7	
U. Falls Incline	1		118	118	UDS	UDS	LYR		
	2	81		81	UDS	REG	GEN		
	3		56	56	UDS	UDS	GEN 18%, OFS 82%	7	
	4	29		29	UDS	REG	OFS		
Sunday Cr. Basin									
Nine to Five	1		349	349	CSC 10%, UDS 90%	UDS	GEN 25%, LYR 29%, OFS 46%		
	2		23	23	UDS	UDS	OFS		
	3		10	10	UDS	UDS	OFS		
Sunday Punch	1		273	273	UDS	UDS	LYR 95%, OFS 5%		
	Total	640	2351	2991				7	
	Annual Range	338 - 1,100	2,365 - 3,547	2,703 - 4,053					

Alternate Operations									
Operation	Area	Net Acres			Stand Structure Development Pathway				Comments
		Regen cut	Partial Cut	Total	Current	Post-Harvest	Desired	Green Trees	
Rogers Basin									
South Gale	1	113		113	UDS	REG	GEN		
	2		30	30	UDS	UDS	GEN 17%, OFS 83%		
	3		14	14	UDS	UDS	GEN 50%, OFS 50%		
Sunday Cr. Basin									
Blind Faith	1	112		112	UDS	REG	GEN 92%, OFS 8%		
McGregor Basin									
Moose and Squirrel	1	17		17	UDS	REG	GEN		
	2	97		97	UDS	REG	GEN		

Pre-Operations Report

Operation Name: U-Falls Incline

County: Tillamook

Management Basin: Rogers

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres
1	Moderate Partial Cut	125	118
3	Moderate Partial Cut	60	56
Total	Partial Cut Harvest	185	147
2	Modified Clearcut	100	81
4	Modified Clearcut	30	29
Total	Regeneration Harvest	130	120

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

Slopes within the sale area are predominantly east and northwest aspect and range from 0% to 90%. Elevations range from 1100 to 2000 feet. Killam, Rye, and Pinochle are the major soil types of the sale area.

The sale is located on gentle ridge-tops and steep side-slopes of Fern Rock Creek and two forks of an unnamed tributary to South Fork of the Wilson River. Area 1 of the sale is underlain in the north and south by sedimentary origin rocks of the informal Basaltic sandstone at Roy Creek capped in the central portion of Area 1 by igneous origin rocks of the Tillamook Volcanics Formation. Area 2 is underlain by sedimentary rocks of the Yamhill Formation with very small portions of igneous origin rock of intrusive Diabase along the west and south boundaries (*per Dave Michael, Northwest Oregon Area Geotechnical Specialist*).

II. CURRENT STAND CONDITION:

The sale area burned in the 1933, 1939, and 1945 Tillamook Burns. It was then seeded in the early 1950's and again in the mid 1950's. The sale area has had no other management.

The entire sale area has been inventoried using the Stand Level Inventory (SLI) procedure and the stands have been classified as UDS.

Areas 1 and 3:

The stands are almost entirely Douglas-fir with minor amounts of hemlock, noble fir, redcedar, and alder scattered throughout the sale area. The stands contain significant

amounts of *Phellinus weirii* and will be treated at time of harvest. The understory in both areas is comprised primarily of salal, vine maple, sword fern, dwarf Oregon grape, huckleberry, and bracken fern. Based on SLI data, average ground cover throughout all areas is estimated to be 80-90%.

There is a high number of snags in various states of decay throughout the sale area. According to SLI data, there are an average of approximately four, fifteen inch (Class 0-2) or greater snags per acre in Area 1, and six, fifteen inch or greater (Class 0-2) snags in Area 3. Approximately 250 ft³ of class one and two DWD is present, but this number is likely higher due to the constant recruitment from disease mortality. Both areas 1 and 3 have significant amounts of class three, four, and five DWD averaging 3750 ft³ per acre for the two areas.

Area 2:

This area is almost entirely comprised of Douglas-fir with minor amounts of hemlock, noble fir, redcedar, and alder scattered throughout. The understory is comprised primarily of salal, vine maple, sword fern, dwarf Oregon grape, huckleberry, and bracken fern.

Area 2 has four, fifteen inch or greater (Class 0-2) snags per acre, and currently contains 230 ft³ of class 1 and 2 DWD.

Area 4:

A 2007 *Phellinus weirii* survey showed the vast majority of this area is infected with the disease. The area is a Douglas-fir dominated stand with minor amounts of alder, hemlock, and other conifers. Approximately 100 ft³ of class one DWD (all in the 0-9" DBH class), and 144 ft³ of class two DWD (86 ft³ in 0-9", 58 in 0-10" DBH class), is present in the stand. The stand also has 4-5 class two snags per acre in the 10-19" DBH class. No class one snags were recorded in SLI data.

Table 2. Stand Inventory Information

Area	Prescription	Stand ID ¹	Species	Age ²	DBH	BA	TPA	SDI	Net Acres ³
1	PC-M ⁴	7861	DF	36-46	15	190	147	49	92
		7877	DF	39-45	14	195	192	53	26
		<i>Target</i> ⁵			16	140	100	35	118
2	MC ⁴	7861	DF	36-46	15	190	147	49	46
		8373	DF	51	15	242	207	63	14
		7907	DF	41-44	13	234	246	64	21
		<i>Target</i> ⁵	REG						
3	PC-M ⁴	7879	DF	37-41, 55	15	228	185	59	17
		7910	DF	27, 34- 40	15	180	154	47	39
		<i>Target</i> ⁵			17	150	95	36	56
4	MC ⁴	7879	DF	37-41, 55	15	228	185	59	5
		7910	DF	27, 34- 40	15	180	154	47	24
		<i>Target</i> ⁵	REG						

¹ The source of stand inventory information is from SLI grown forward to 2006.

² Actual measured breast height ages are shown unless labeled “est.”

³ The acres are based on GIS and exclude existing and planned roads, stream buffers, green tree retention areas, and non-thinnable areas.

⁴ PC-M is Moderate Partial Cut, MC is Modified Clearcut,.

⁵ 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 the Rogers Basin, the desired future condition (DFC) for Area 1 is 100% LYR, the DFC for Area 2 is 100% General, Area 3 is 80% OFS and 20% General, and Area 4 is 100% OFS.

Areas 1 and 3:

For both areas, controlling the spread and abundance of *Phellinus* is an important factor to consider. Moderate partial cut with additional *Phellinus* treatment will guide the residual stand into what will become an intermediate layer and to diversify species composition. Although both sale areas have the same prescription, they will take on different stand characteristics due to varying amounts of disease removal, and different DFC’s. The ultimate goal for both of these areas is to create a diverse and disease resistant stand that exhibits characteristics of LYR and ultimately OFS.

Area 2:

The DFC for Area 2 is GEN. The DFC, along with the terrain, makes the area desirable for regeneration harvest. The harvest operation will develop these stands into REG structure in the short term. The area should be planted with a range of species to strengthen disease resistance, and also promote stand level diversity. The future of this stand will be a timber production forest system.

Area 4:

The long term goal for this stand is to achieve an OFS stand type. Since *Phellinus* survey results received in December 2007 revealed nearly 100% infection of the area, the decision to conduct a regeneration harvest was made. In order to have a healthy stand in the future, controlling the abundance and spread of *Phellinus weirii* is an essential first step in creating a vigorous and resilient older forest. Post harvest, the area will be planted with a mix of *Phellinus weirii* resistant species such as alder, and western redcedar. Future pre-commercial thinning, and commercial thinning will release overstory trees, and allow for light penetration to the forest floor for understory development.

An above average amount of logging slash is anticipated due to the high levels of disease in the area. This will contribute approximately 400 cubic feet per acre of Class 1 DWD to the area. There is also a high quantity of existing snags (killed by disease) which will likely be felled to avoid safety hazards, this will contribute 200-400 cubic feet per acre of Class 1,2, and 3 DWD. All existing DWD will be reserved. All existing snags will be reserved as safety permits.

Table 3. Stand Structure Information

Area	Prescription	Stand ID	Current	Post Harvest ¹	Desired Future	Acres
1	PC-M	7861	UDS	UDS	LYR	92
		7877	UDS	UDS	LYR	26
2	MC	7861	UDS	REG	GEN	56
		7877	UDS	REG	GEN	14
		7907	UDS	REG	GEN	21
3	PC-M	7879	UDS	UDS	GEN	10
					OFS	12
		7910	UDS	UDS	OFS	63
4	MC	7879	UDS	REG	OFS	5
		7910	UDS	REG	OFS	24

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

IV. PROPOSED MANAGEMENT PRESCRIPTION AND PATHWAY:

Areas 1 and 3:

The prescription for these areas is a moderate partial cut. Douglas-fir will be selected for harvest. All other species will be reserved. The stand will be thinned to a target basal area of 120-140 square feet. The average DBH of the residual stand will be approximately 16 inches. There will be *Phellinus* treatment, creating small “patch-cuts” ¼ to 5 acres in size. All trees that show signs of having *Phellinus* and all “bridge trees” within 15 feet of infected trees will be cut. Residual trees will be the trees that have the largest DBH and height, and are of the best form and vigor.

The largest gaps created from treatment will be planted with alder. Remaining gaps will have western hemlock and other conifer underplanted or allowed to germinate naturally. The site contains a large quantity of salal. Herbicidal application in the large openings will be considered and evaluated after harvest. Approximately 10-15 years after planting, the alder will be evaluated for pruning and the dense clumps of understory trees for pre-commercial thinning.

In areas with DFC-OFS and LYR, another entry 20-30 years post harvest will reduce the overstory stocking to OFS targets and maintain the development of the understory trees and pockets of alder. Over time, Douglas-fir in the overstory will die and the thriving more shade tolerant conifer in the understory will capitalize on opportunities to reach the overstory. Approximately 20-30 years after the second entry the stands will be very close to a condition of complex structure.

By opening up disease pockets, and replanting with resistant species, both of the stands will be assisted in achieving their goals of LYR and OFS. 15-20 years later another entry may be prudent to keep the stands on their path towards LYR and OFS; an entry at this time would help maintain a healthy understory and the continued vigor of the overstory. Treatment of *Phellinus* should also be evaluated again in order to further strengthen the stand.

Area 2:

Due to difficult access and logging issues in Area 2, and a DFC of general, a modified clearcut prescription is a viable option. Road placement to the upper ridge above Bates road is economically infeasible with an estimate of \$6050 per station (26 stations of construction required), and downhill yarding is not suitable for partial cut operation. Since the area can only be downhill cable yarded, a modified clearcut prescription is planned. Only Douglas-fir will be selected for harvest, and leave trees will be scattered and in clumps. Selected leave trees will be the most dominant trees and in areas with no evidence of *Phellinus*.

An application of herbicide prior to planting will kill the heavy component of brush which existed prior to harvest. This will allow for the successful reforestation of Douglas-fir, and *Phellinus* resistant species in areas of concern. The regeneration will be composed

of a mix of western redcedar, alder, and other conifer species which are resistant to *Phellinus weirii*.

Green Tree Retention of nine trees per acre will be achieved through widening of stream buffers, and in clumps that will be left in the southeast corner of the clearcut area. Two trees will be topped for snag creation.

Average estimated additions of down wood through normal logging slash accumulations will be approximately 400-500 ft³ per acre. Additional DWD will be added over time through windthrow, some of the residual green tree retention, and recruitment from *Phellinus*.

Area 4:

In order to control the disease *Phellinus weirii* Area 4 will receive a modified clearcut. The extremely high occurrence of the disease made partial cut a non-viable option. The area contains "diffuse" *Phellinus weirii* meaning that every root system in the area potentially comes in contact with another infected root system. After meeting with the district Reforestation Unit Forester, and further discussion with the State Disease Pathologist the conclusion that modified clearcut planted back to a variety of disease immune or resistant tree species is the quickest pathway to a DFC of OFS. All red alder and western redcedar will be reserved from harvest. Green tree retention will be left in areas with the least evidence of *Phellinus weirii*. Seven trees per acre will be reserved from harvest, with two of which being topped for snag creation.

There will be no DWD enhancement at the time of harvest activity. The high level of disease in the stand is expected to contribute to high accumulations of logging slash. DWD accumulation in this area is expected to be 400-500 ft³ per acre. This in conjunction with felling of existing snags (those posing a safety hazard) on the site will add an estimated 200-400 ft³ per acre. This will meet and exceed DWD levels mandated by the FMP. In addition, all existing snags (that do not pose a safety hazard) and DWD will be reserved from harvest.

After harvest, the area will receive an herbicidal application to reduce the large brush component currently on the site. The area will then be planted with a mix of *Phellinus weirii* resistant species such as western redcedar, red alder, and western hemlock.

V. ESTIMATED TIMBER AND REVENUE OUTPUTS:

Table 4. Timber and Revenue

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

	Conifer	Hardwood	Total
Net Volume (MBF)	6300		6300
Stumpage Value (\$/MBF)	\$325.00		
Estimated Gross Value	\$2,047,500		\$2,047,500
		Project Costs:	\$67,000
		Estimated Net Value:	\$1,980,500

VI. HARVESTING AND ACCESS CONSIDERATIONS:

The sale areas are accessed via University Falls Road, which is currently an all-weather, crushed-rock surface road.

Approximately 0.8 miles of existing, unsurfaced, road will be improved which includes grading, rocking, widening, culvert replacement, and adding new culverts, costing approximately \$32,000.

Approximately 0.8 miles of surfaced road will be constructed in order to provide access to landing locations, which will cost approximately \$30,000. See maps for specific road locations and conditions. New construction is limited to mostly ridgetops and gentle to moderate sideslopes. Some portions of road construction (approximately 0.2 miles) will have steep sideslopes. Those portions are within the upper slopes of the ridgetop. This will likely be temporary road construction, and may be vacated after logging. A more thorough evaluation will be done during sale layout.

All haul roads other than the temporary road will have high quality crushed rock or pit run surfacing. Roads will provide access to all timber within the sale area and allow for logging methods and hauling which will minimize impacts to soils, residual timber, streams, and riparian areas.

In addition, OHV trail clearing and possibly reconstruction work will have to be done on parts of Bates Road, and Back to Back for a total of 1.1 miles. An estimated cost for this work is \$5,000.

Total project costs are \$67,000.

The operation will be 90% cable yarding and 10% ground based yarding. A large portion of Area 2 will be downhill cable yarded.

Table 5. Transportation Management Summary (Miles)

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construction			0.8	
Improvement			0.8	
Maintenance		2.0	1.6	
Closure/Vacation				

VII. AQUATIC RESOURCES AND WATER QUALITY:

According to the most current stream information there are five Type F perennial streams within or adjacent to the sale area. At least four of these are not likely to have fish as far up the stream as the data indicates. One other Type N perennial stream is with the sale area, and there are none adjacent to the sale.

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 usage or upon further analysis by a forester during sale layout.

Streams are tributary to the South Fork Wilson River, Devils Lake Fork Wilson River, and Elliott Creek.

Riparian area stand types along these streams are a hardwood/conifer mix, and stream buffers within harvest unit boundaries will be managed according to FMP Riparian Strategies. The riparian areas will be reviewed during sale layout for current stand conditions and/or operational constraints for implementing FMP strategies.

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, using sediment control devices in road ditches when necessary, and seasonal restrictions on logging and hauling operations. Culvert installment and replacement in live streams will be conducted between July 1 and Aug. 31. Operations outside of this period will be reviewed with ODFW.

VIII. WILDLIFE AND T&E SPECIES CONSIDERATIONS:

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

Surveys for northern spotted owls were conducted in 2006 due to the presence of potentially suitable spotted owl habitat within and adjacent to the timber sale area. U-Falls Incline was surveyed for spotted owls six times in 2006.

During the 2006 survey season, a spotted owl was heard within 1.5 miles of U-Falls Incline during two separate nighttime surveys. The first 2006 response was a vocalization that is characteristic of both sexes; therefore it is unknown whether the first observation was a male or a female. The owl was not located during the daytime follow-up visit. The second 2006 nighttime response was detected during the third additional visit. The response was confirmed as a female, but she was not located during the daytime follow-up visit. Therefore, the status of the two observations was classified as "non-territorial single" in 2006. A second year of survey will be completed in 2007. 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.

This operation does not involve an activity that is listed in the National Marine Fisheries Service (NMFS) adopted rules under Section 4(d) of the Endangered Species Act. Neither the sale area nor the haul route is in close proximity to a stream with listed fish.

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:

Most of the steepest slopes in sale areas are associated with Fern Rock Creek in Area 1 and a smaller band of steep slopes along the West boundary of Area 2. The initial risk assessment by the geotechnical specialist for the sale is moderate. If these steep sloped areas remain within the sale area as the sale layout proceeds, the geotechnical specialist will be consulted to determine if a field visit is needed (*per Dave Michael, Northwest Oregon Area Geotechnical Specialist*).

X. RECREATION RESOURCES:

The sale area is designated as Motorized in the Tillamook State Forest Comprehensive Recreation Plan (1993). The District Recreation Coordinator has reviewed this sale, and suggests:

Unauthorized OHV trails were identified within or adjacent to the sale areas. Trails will be evaluated by the District Recreation Coordinator to determine if the trails should be

protected, rehabilitated, and/or blocked to access. Further assessment will likely occur at time of timber sale preparation.

Portions of the Back to Back Trail and Bates Road Trail are within and/or adjacent to the sale area. Short term closure of these trails and associated trailheads will occur to facilitate logging and public safety. Trail replacement in specific areas and slash removal will be in order for 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. In addition, work may need to be done to make the road into a more trail-like condition. Potential work may include placing boulders and logs along the side of the road, creating drainage dips, etc.

Stagecoach Horse Camp is within close proximity to the sale area. Logging and rocking operations in portions of the sale may have restrictions. These may include start times, and no hauling during weekends or holidays.

XI. CULTURAL RESOURCES:

The sale area was checked against the Tillamook State Forest Cultural Resource Inventory GIS data. This data source identified one cultural site within Area 3.

The resource is described as:

- “Upper Switchbacks, Wilson River Wagon Rd” (Class 3 – No Protection Required)

The district will consult the Public Use Coordinator (ODF Salem Staff) for appropriate protection measures of the Wilson River Wagon Road.

XII. SCENIC RESOURCES:

Sale area 1 has a visual classification of Level 1, high sensitivity. The visual impacts have been considered and examined thoroughly. The sale is barely visible from Highway 6. Due to harvest prescription, visual impact, if any, will be negligible and short term.

Most of sale area 2 was also classified as Level 1, high sensitivity. The visual impacts have also been analyzed; considering zero visibility from highway 6, visual impact will be negligible.

The rest of the sale areas would be considered Level 2 or 3, moderate or low sensitivity. Due to harvest prescription, impacts would be minimal and short term.

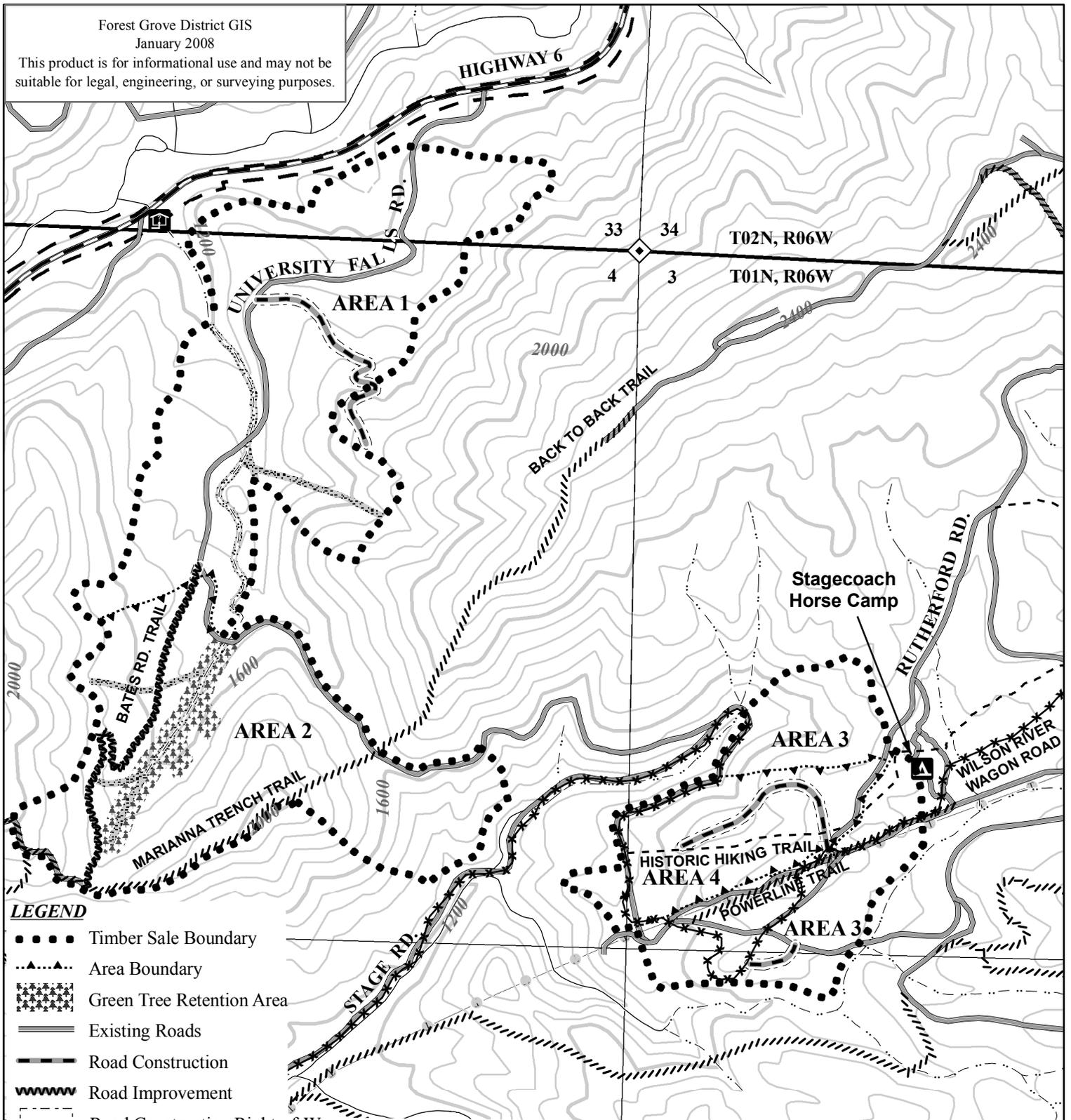
XIII. OTHER RESOURCE CONSIDERATIONS:

None of significance.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

Areas 1, 2, 3, and 4 contain Focused and Special Stewardship, Aquatic and Riparian Habitat Subclass, due to the presence of perennial Type N and Type F streams within the sale areas. All four sale areas are Focused Stewardship, Recreation Subclass. See Section X, Recreation Resources, for the strategies that will be implemented to minimize impacts to trail resources. Areas 1 and 2 also contain Focused Stewardship, Visual Subclass. See Section XII, Scenic Resources, for a discussion of scenic considerations. Area 1 and Area 3 contain Special Stewardship, Operationally Limited Subclass. The Geotechnical Specialist will conduct an onsite evaluation of the sale areas for slope stability. See Section IX, Slope Stability and Geotechnical Issues for further discussion. Area 3 also contains Focused Stewardship, Cultural Resources Subclass, and Special Stewardship, Transmission Subclass. Area 4 contains Special Stewardship, Transmission Subclass.

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



LEGEND

- Timber Sale Boundary
- ▲-▲-▲ Area Boundary
- ■ ■ ■ ■ Green Tree Retention Area
- Existing Roads
- Road Construction
- ~~~~~ Road Improvement
- - - - - Road Construction Right-of-Way
- ////// OHV Trail
- - - - - Hiking Trail
- *-*-* Wilson River Wagon Road
- Perennial Type F Stream
- - - - - Perennial Type N Stream
- ■ ■ ■ ■ Stream Buffer
- Transmission Lines
- 400' Contour Intervals
- 80' Contour Lines

FY 2008
U. FALLS INCLINE
PORTIONS OF SECTION 33, T02N, R06W, W.M. AND
SECTIONS 3, 4, & 10, T01N, R06W, W.M.
TILLAMOOK COUNTY, OREGON

Attachment A: Topography

Scale

1:12000

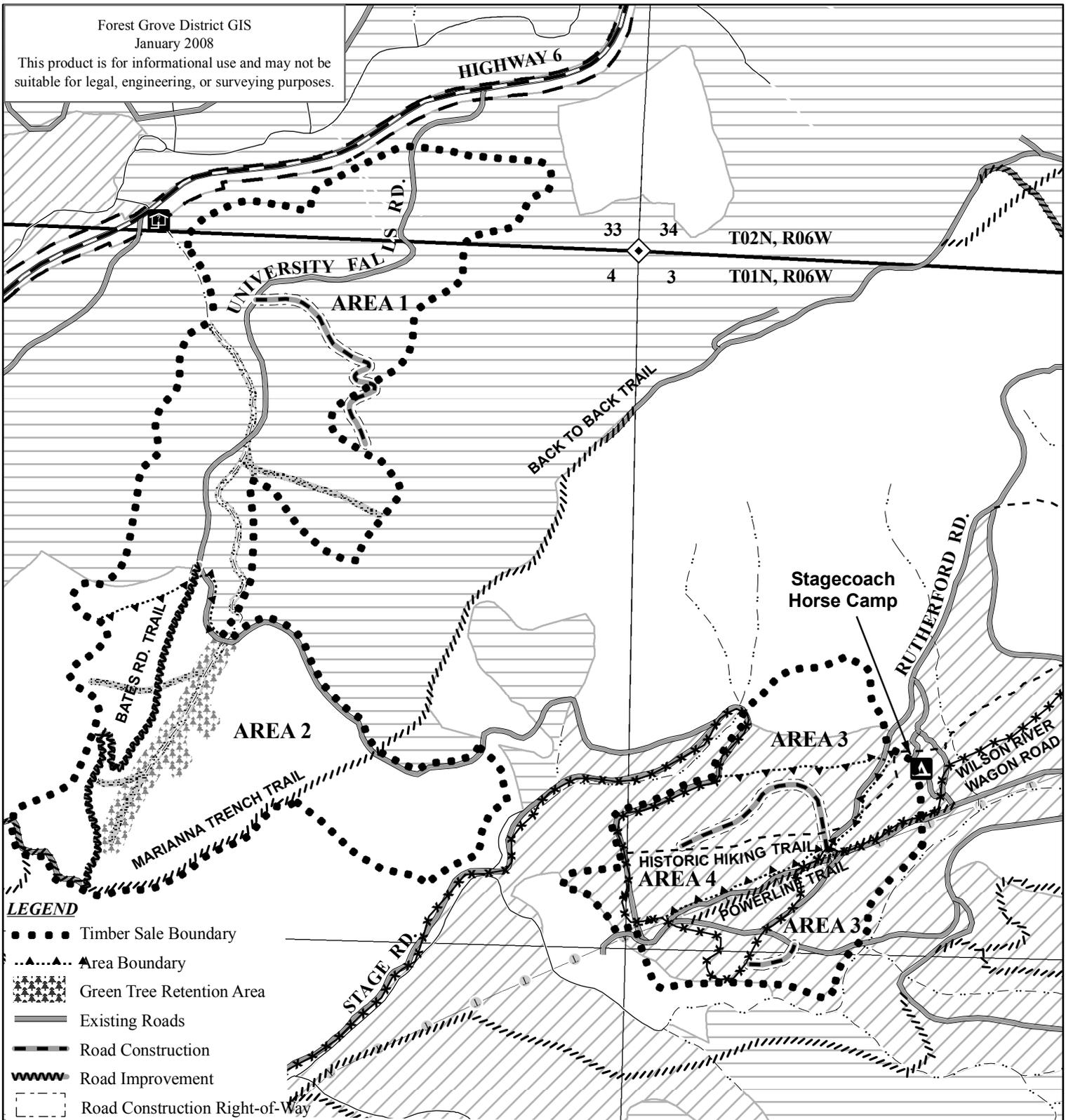
1 inch = 1000 feet



APPROXIMATE NET ACREAGE

AREA 1	118 ACRES (PC-M)
AREA 2	81 ACRES (MC)
AREA 3	56 ACRES (PC-M)
AREA 4	29 ACRES (MC)
TOTAL	284 ACRES





LEGEND

- Timber Sale Boundary
- ▲--- Area Boundary
- Green Tree Retention Area
- Existing Roads
- Road Construction
- ~~~~~ Road Improvement
- - - - Road Construction Right-of-Way
- ////// OHV Trail
- - - - Hiking Trail
- *-*-*-* Wilson River Wagon Road
- Perennial Type F Stream
- - - - Perennial Type N Stream
- Stream Buffer
- ⊕—⊕ Transmission Lines

- DFC Stand Type
- Layered
 - ▨ Older Forest Structure

FY 2008
 U. FALLS INCLINE
 PORTIONS OF SECTION 33, T02N, R06W, W.M. AND
 SECTIONS 3, 4, & 10, T01N, R06W, W.M.
 TILLAMOOK COUNTY, OREGON

Attachment B: Desired Future Condition

Scale
 1:12000

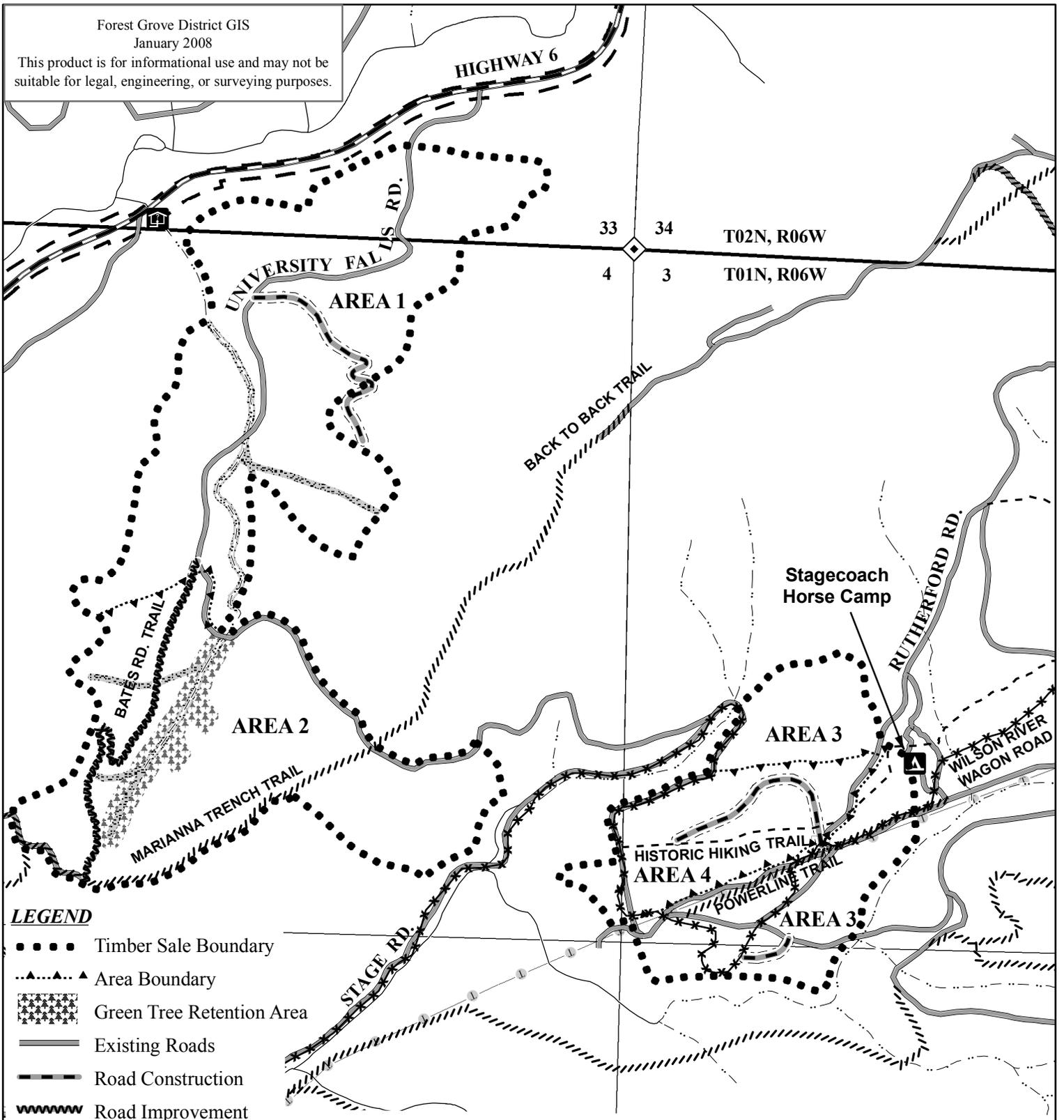
1 inch = 1000 feet



APPROXIMATE NET ACREAGE

AREA 1	118	ACRES (PC-M)
AREA 2	81	ACRES (MC)
AREA 3	56	ACRES (PC-M)
AREA 4	29	ACRES (MC)
TOTAL	284	ACRES

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



LEGEND

- Timber Sale Boundary
- ▲— Area Boundary
- Green Tree Retention Area
- Existing Roads
- Road Construction
- ~~~~~ Road Improvement
- - - - Road Construction Right-of-Way
- ////// OHV Trail
- - - - Hiking Trail
- *** Wilson River Wagon Road
- Perennial Type F Stream
- - - - Perennial Type N Stream
- Stream Buffer
- T — Transmission Lines

FY 2008
U. FALLS INCLINE
PORTIONS OF SECTION 33, T02N, R06W, W.M. AND
SECTIONS 3, 4, & 10, T01N, R06W, W.M.
TILLAMOOK COUNTY, OREGON

Attachment C1: Key Resources
(Recreation)

Scale

1:12000

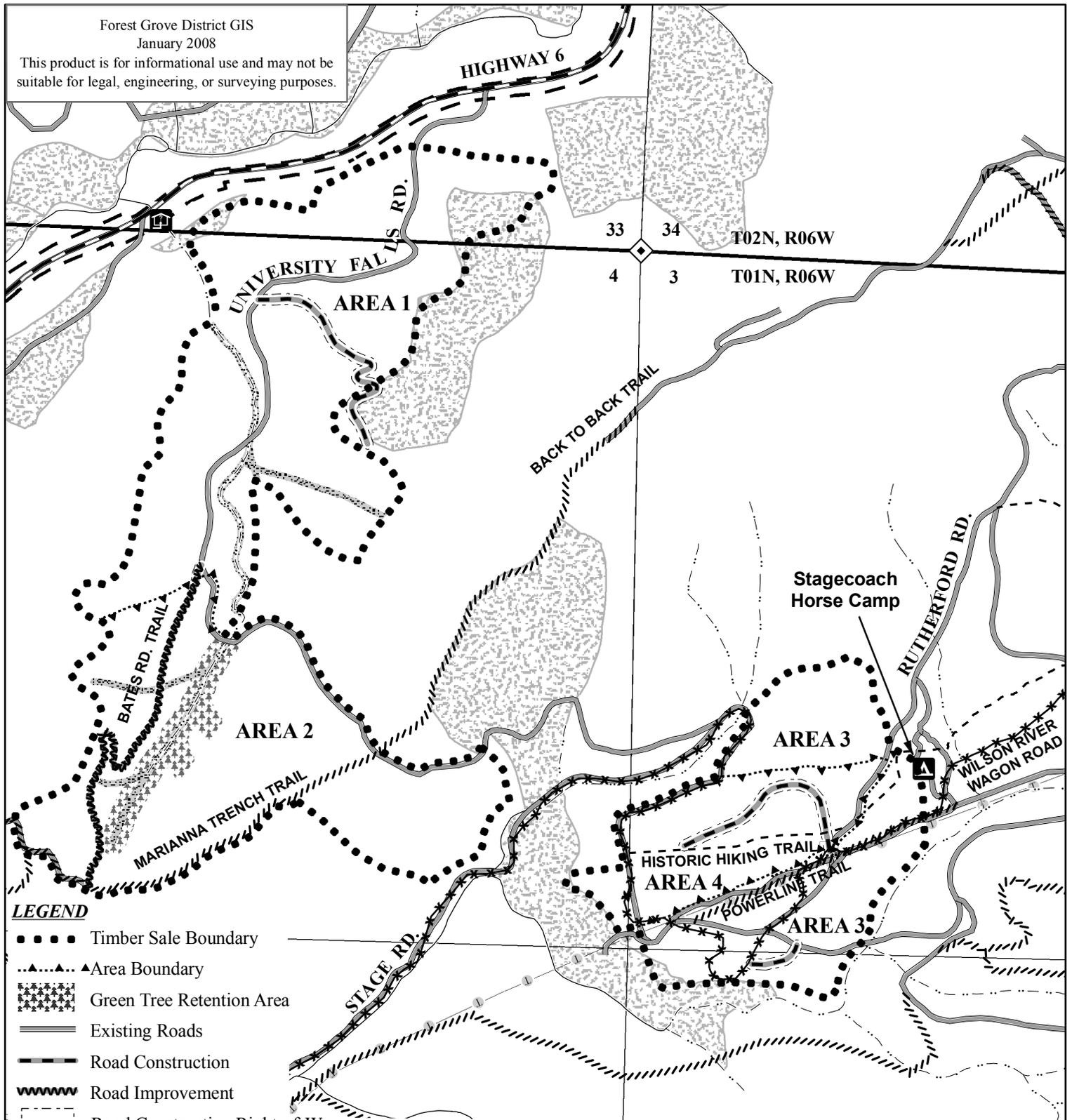
1 inch = 1000 feet



APPROXIMATE NET ACREAGE

AREA 1	118	ACRES (PC-M)
AREA 2	81	ACRES (MC)
AREA 3	56	ACRES (PC-M)
AREA 4	29	ACRES (MC)
TOTAL	284	ACRES

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



LEGEND

- Timber Sale Boundary
- ▲▲▲▲▲ Area Boundary
- ■ ■ ■ ■ Green Tree Retention Area
- Existing Roads
- Road Construction
- ~~~~~ Road Improvement
- □ □ □ □ Road Construction Right-of-Way
- ////// OHV Trail
- - - Hiking Trail
- * * * * * Wilson River Wagon Road
- Perennial Type F Stream
- - - Perennial Type N Stream
- ■ ■ ■ ■ Stream Buffer
- Transmission Lines
- ■ ■ ■ ■ Special Stewardship - Operationally Limited

FY 2008
U. FALLS INCLINE
PORTIONS OF SECTION 33, T02N, R06W, W.M. AND
SECTIONS 3, 4, & 10, T01N, R06W, W.M.
TILLAMOOK COUNTY, OREGON

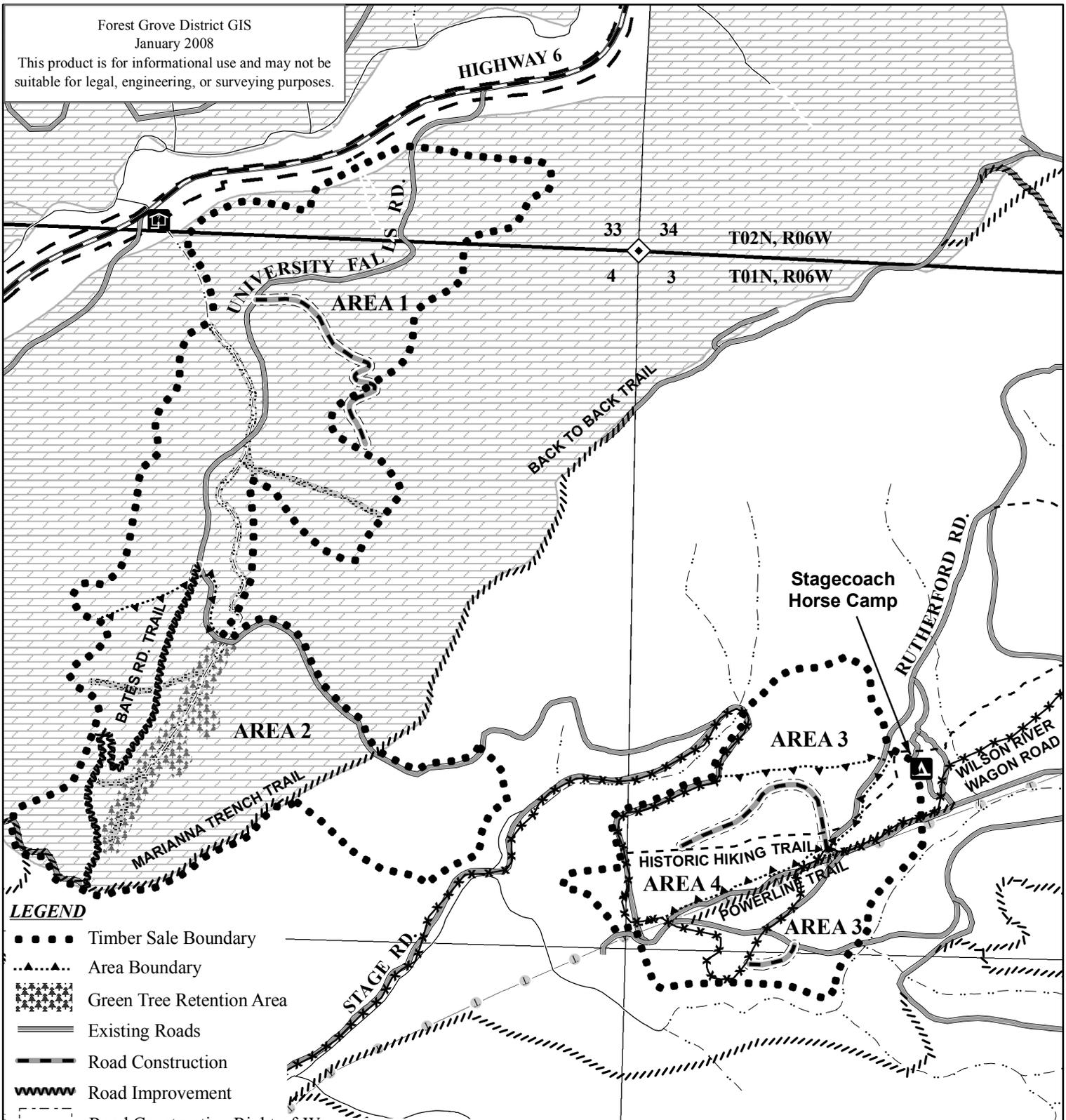
Attachment C2: Key Resources
(Special Stewardship - Operationally Limited)
Scale
1:12000
1 inch = 1000 feet



APPROXIMATE NET ACREAGE

AREA 1	118	ACRES (PC-M)
AREA 2	81	ACRES (MC)
AREA 3	56	ACRES (PC-M)
AREA 4	29	ACRES (MC)
TOTAL	284	ACRES

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



LEGEND

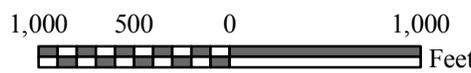
- Timber Sale Boundary
- ▲▲▲▲ Area Boundary
- ■ ■ ■ Green Tree Retention Area
- Existing Roads
- Road Construction
- ~~~~~ Road Improvement
- □ □ □ Road Construction Right-of-Way
- ////// OHV Trail
- - - - Hiking Trail
- * * * * Wilson River Wagon Road
- Perennial Type F Stream
- - - - Perennial Type N Stream
- ■ ■ ■ Stream Buffer
- ⊕ — ⊕ Transmission Lines
- ▨ ▨ ▨ ▨ Special Stewardship - Visual

FY 2008
U. FALLS INCLINE
PORTIONS OF SECTION 33, T02N, R06W, W.M. AND
SECTIONS 3, 4, & 10, T01N, R06W, W.M.
TILLAMOOK COUNTY, OREGON

Attachment C3: Key Resources
(Focused Stewardship - Visual)

Scale
1:12000

1 inch = 1000 feet



APPROXIMATE NET ACREAGE

AREA 1	118	ACRES (PC-M)
AREA 2	81	ACRES (MC)
AREA 3	56	ACRES (PC-M)
AREA 4	29	ACRES (MC)
TOTAL	284	ACRES