



Humboldt Redwood
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June 9th, 2010

Ms. Catherine Kuhlman
California Regional Water Quality Control Board
North Coast Region
5550 Skylane Blvd, Suite A
Santa Rosa, CA 95403

Subject: Enrollment of THP 1-09-108 HUM (Unit 4) in the Elk River WWDR, "Tier II"

Dear: Ms. Kuhlman

HRC is requesting Tier II enrollment under Watershed-Wide Waste Discharge Requirement (WWDR) Order No. R1-2006-0039 for unit 4 of THP 1-09-108 HUM. This Tier II portion of the unit is comprised of 45.7 acres of group selection and 1.6 acres of right of way construction (24.1 clear-cut equivalent acres). Total acres currently enrolled or proposed for enrollment under Order No. R1-2006-0039 Tier II is shown in the Attached Pre-Harvest Planning Report. The Erosion Control Plan (ECP), Form 200 and an annual waste discharge enrollment fee have already been submitted for this THP.

Landslide risks associated with this plan were evaluated in compliance with the Freshwater Creek and Elk River WWDR Permit Acreage Enrollment and Compliance Monitoring Program Quality Assurance Project Plan (Version 2.0, September 1, 2006) approved by the Executive Officer of the North Coast Regional Water Quality Control Board. This approach uses commonly accepted standards for geologic practices in forest management (Sidle et al. 1985, Soeters and Van Western 1996, and Sidle and Ochiai 2006) to assess factors known to contribute to landslides, such as steepness of slope, slope convergence, hydrology, geologic features, and visibly unstable areas. Overlapping and complementary scientific techniques combining state-of-the-art digital elevation model (DEM) slope stability models, field investigation, and terrain analysis were used in this assessment.

Unit 4 is underlain by Yager Terrane sediment rocks. These rocks are comprised of siltstone, sandstone, and conglomerate. Where slightly metamorphosed, the clay-silt-mudstones convert to argillite. Six unstable areas were identified by the project geologist during THP layout. The proposed activities were evaluated with respect to reactivating the failures and mitigations were implemented. As a result, two of the six were included in no harvest zones, one is by default a no harvest due to insufficient tree size and the remaining areas were evaluated with respect to delivery potential. With a low potential for reactivation following the cable yarded Single tree selection, their delivery potential was determined negligible. As such, it is our opinion that this harvest unit, as an approved THP, meets the requirements for Tier 2 enrollment.

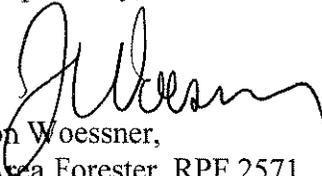
The THP proposes an uneven-age silviculture retaining 75 sq.ft. of basal area. Sub-merchantable trees and those with specific wildlife value characteristics (e.g., cavities, large limbs, broken tops,

snags, etc.) will be retained within the harvest area to the extent feasible. Cable and tractor yarding are approved for the entire unit. Post-harvest no site preparation will occur.

Greater detail regarding this landslide hazard assessment is provided in the attached *THP Unit Review for Tier 2 Enrollment*. The licensed geologist involved with the Tier 2 landslide risk evaluation has concluded the proposed harvest operation, if implemented as planned and approved, will result in a negligible increase in potential for post-harvest landsliding; and thereby meets the applicable Zero Delivery of landslide related sediment performance standards of NCRWQCB Orders R1-2006-0039 and R1-2008-0071.

Please do not hesitate to contact me should you have any questions or comments regarding this application for enrollment into WWDR (Order No. R1-2006-0039).

Respectfully,



Jon Woessner,
Area Forester, RPF 2571
Humboldt Redwood Company, LLC

Attachments:

Professional Certification of Design
THP Unit Review for Tier II enrollment
Pre-harvest Planning Report
Maps

THP: South Elk Ridge THP 09-108 Unit # 4 June 9, 2010

Tools Used in This Assessment	Figure Number
Elevation Map with 10 ft Contours (HRC LiDAR)	1
SHALSTAB (Montgomery and Dietrich, 1994 and Palco, 2006) / Slope Class / Hillshade Maps	2
CGS Geology and Geomorphic Features (CGS, 2005)	3
Mass Wasting Potential Map (HRC, 1999)	4
Aerial Photo Map (HRC, 2007)	5
HRC Elk River and Salmon Creek WA deep-seated LS inventory (HRC, 2004)	6
Road Condition Map	7

Please see back of enrollment for references

Summary of Changes to THP Prescriptions Based on Tier II Analysis in this Unit:

Geologic Review	Forestry Silviculture/Site Prep Plan	Operational Design Plan
4-1	<p>THP approved silviculture within polygon 4-1 is group selection with single tree selection in RMZ and identified potentially unstable areas.</p> <p>No site preparation will occur due to partial harvesting.</p>	<p>The approved THP proposes ground based yarding within polygon 4-1.</p> <p>No change to approved yarding methods.</p>

Geological Summary (information presented from existing bodies of work):

Unit 4 is located on a low relief ridge. The overall slope morphology is somewhat uniform resulting in typically planar slope forms. Watercourses are few in number and typically poorly defined. The southern boundary of the unit is bordered by Headwaters Reserve land.

Figure 3 shows the unit to be underlain by the Yager Terrane. These sediments are composed of silts, sands, clays, and infrequent gravels that are well consolidated, potentially low grade metamorphosed. Nearly all of the moderate to steeply inclined slopes within the unit are mapped as debris slide slopes / source areas. One area located in the west is mapped as a debris flow.

Figure 6 maps no areas of mass wasting within the unit.

Figure 2 (Hillslope shade) reveals shadows indicative of consistent and even weathering of the slopes within the unit. The transitions from planar side slopes to ridgetop is smooth and subdued. Legacy skid roads are easily observed.

The THP included a Note 45 Geology report to address several unstable areas within the THP. The report identified six unstable areas within Unit 4. For a more comprehensive review of the geology associated with this harvest unit, please see the report in Section 5 of the THP.

The area has been previously clearcut and ground-based logged with bulldozers. Significant ground disturbance is observable throughout the unit in response to past harvest practices. The unit has been addressed as one polygon.

THP Unit: # 4

Polygon: 4-1

A) General Observations

The entire unit is to be enrolled as Tier II acres.

The unit is bound to the west by a Class II watercourse, Bound to the southeast by a Class I watercourse, and includes five short Class III watercourses.

A) General Observations

Class I watercourse Riparian Management Zones include a 50 foot no harvest inner band and an outerband that extends to 150 feet. Harvest is permitted in the outerband provided that 50% canopy closure be retained post harvest.

Typical Riparian Management Zones for the Class II watercourses includes a 30-foot no harvest inner band and a selection buffer that extends the RMZ out to between 75 and 100 feet. The outerband may be harvested but must retain a minimum of 60% canopy closure. For this unit, the entire Class II RMZ has been established as a no harvest zone.

The implemented THP mitigation for the Class III watercourses includes the retention of all trees growing within the active channel and all trees 8 inches and less within 15 feet of the channel. Where channel sideslopes are greater than 50%, a 50' RMZ has been established and maintaining 75 sq. ft (or the unit wide retention standard if greater) evenly distributed in the buffer. Where side slopes are less than 50% employ a 25' RMZ that maintains 75 sq. ft (or the unit wide retention standard if greater) evenly distributed in the buffer and no group opening greater than ¼ acre immediately above the terminus of class III with slopes greater than 40% or immediately above a headwall swale. Additionally sub-merchantable trees and those with specific wildlife value characteristics (e.g., cavities, large limbs, broken tops, snags, etc.) will be retained within the harvest area to the extent feasible.

SHALSTAB modeling (Figure 2) highlights one area Value 1. The area is located within a Class III watercourse along the western edge of the unit. The watercourse channel is well entrenched (a product of erosion over time), includes steeply inclined side slopes and has a moderately inclined gradient. Old Growth stumps are located throughout the area and atop the channel sidewalls. The standing timber is straight and moderately dense. Harvest within atop these areas will be minimal since one of the pixels is located within the outerband for the downslope Class II and the other is within a single tree selection area (See Class III RMZ above). Value 2 shalstab is modeled central to the unit and upslope of the main haul road. A portion of this area is within a geology no harvest zone for landslide 4-4. The remaining areas of Value 2 include a mature 2nd growth stand of redwood and fir trees with typically small diameters. Intact skid road cross the nearly planar slope and may be the reason for the Shalstab modeling (Cutslopes). Additional Value 2 shalstab modeling is located flanking a Class III watercourse located at the western edge of east0west harvest unit boundary. This area is very steeply inclined and well vegetated. The steepness of the slope is a product of well indurated sandstone bedrock. With respect to potential failure, we considered it minimal since soils are very shallow and the current stand of timber is dense. Based on this review, the proposed harvest appears reasonable. Where the most critical (associated with watercourses), the stand will be partially harvested.

Mass Wasting Potential (MWP) modeling for the unit varies from low to high. The slope inclination is the factor that has resulted in the modeling of high mass wasting potential.

A) General Observations

Six landslides were identified in the unit by the project geologist. 4-1 is a no harvest mini-inner gorge. 4-2 is an area of disrupted ground with extensive wind throw. No trees are marked for harvest within the feature. 4-3 is an interpreted debris slide slope in response to construction of the main haul road. Past failures associated with this slope appear to initiate from skid roads cut across the slope. Therefore, the volume of material to fail is typically the fill component of the skid road. With the main haul road downslope, it was interpreted that these fill failures would be captured on the road surface and not deliver to any watercourse. The area is within a single tree, cable yarded selection zone. 4-4 is an active suspended deep seated landslide that if failed catastrophically, could potentially cross the main haul road and extend downslope to Elk River. The landslide is within a no harvest zone. 4-5 is subtle amphitheater with evidence of shallow soil creep. The timber is straight but includes butt sweep suggesting activity following clearcutting. The area is within a single tree selection harvest. The remaining unstable area is an old landing failure off of the main haul road in the western most portion of the unit. This is a one and done type failure that once the fill failed, there is little potential for the retrogression into the bedrock material. This area is within a selection harvesting zone, however no merchantable trees are located atop the failure plane.

B) Harvest Related Impacts and Hillslope Sensitivity

Extensive ground disturbance appears to be the most significant component to develop a landslide atop the soils within the unit. Those activities are not proposed in this plan. The current planned cable yarding of the more steeply inclined slopes will result in less surface disturbance and significantly reduce the potential for mass wasting. Coupled with a partial harvest, the mass wasting potential is reduced even more.

Significant surface disturbance has occurred within the unit in response to past logging activities. The disturbance is the culmination of road and layout construction. Following that impact, the area appears to have adjusted through minor slumping and settling.

The extensive RMZs were designed to provide sediment filtration bands adjacent the watercourses should extensive sediment be generated from the clearcut harvesting. The current level of harvest will retain both canopy closure and slash from the harvested trees potentially increasing the effectiveness of the sediment filtration band to the whole unit.

Overall hillslope sensitivity to harvest activities appears minimal with respect to mass wasting.

B) Harvest Related Impacts and Hillslope Sensitivity

Please see the THP geology report for a more comprehensive assessment of the role that timber harvesting has on slope stability.

C) Forestry / Silviculture Plan

We have not changed the silviculture in response to this evaluation.

D) Operational Design Plan

THP approved yarding method is cable where moderate to steeply inclined and ground based atop the ridge. As delineated, the proposed yarding methods appear appropriate.

References:

- CGS, 2005, Geologic and Geomorphic Features Related to Landsliding, Elk River Watershed, Humboldt County, California. Department of Conservation, now California Geological Survey (CGS) Watershed Mapping Series, Mapset 4, Plate 1. Available via the web at ftp://ftp.consrv.ca.gov/pub/dmg/thp/maps/elk/elk_color.pdf
- Montgomery, D.R. and W.E. Dietrich, 1994. A physically based model for the topographic control on shallow landsliding. *Wat. Resour. Res.* 30: 1153-1171. For specific details regarding the model used in this evaluation, please see Palco, 2006. Additional information from the model authors is available at the following website: <http://socrates.berkeley.edu/~geomorph/shalstab>
- HRC, 2007, Ortho-photo rectified aerial photographs flown by 3Di West, Eugene Oregon,
- HRC, 2008. Freshwater Creek and Elk River WDR Permit Acreage Enrollment and Compliant Monitoring Program, NCRWQCB R1-2006—0039 and R1-2006-0041, Quality Assurance Project Plan, Version 3.0. Policy document submitted to NCRWQCB dated June 7, 2006.
- HRC, 2004, Elk River / Salmon Creek Watershed Analysis, Scotia, California, prepared for Pacific Lumber Company (PALCO) dated 2004?, and acquired by Humboldt Redwood Company, LLC in 2008.
- HRC, 2005, (Policy Acquired from The Pacific Lumber Company (PALCO)) Prescriptions Based on Watershed Analysis for Freshwater Creek, California, August 15, 2002.
- HRC, 1999, The Pacific Lumber Company's Habitat Conservation Plan, Vol. 2 Part D, Landscape Assessment of Geomorphic Sensitivity, Public Review Draft.
- SGD, 2008, Geologic Evaluation of the Moss Elk THP, Humboldt County, California, unpublished report to Wayne Rice RPF, Scotia Pacific Company LLC, dated April 30, 2008. Included within section V of the THP 1-08-072.

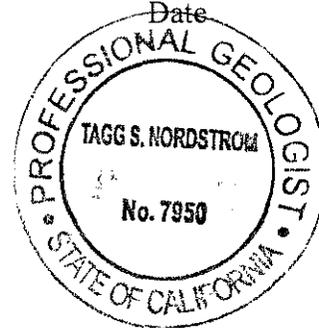
Brief descriptions of the models used in this evaluation:

SHALSTAB was first described in Dietrich and Montgomery (1994). SHALSTAB is a simple, physically-based model based on the Mohr-Coulomb failure law that can be used to map shallow landslide potential. The model calculates the potential for failure using gridded digital elevation data. The simplicity of the model lies in the formulation of slope stability parameters that allow the model to be run parameter-free using default values suggested by the authors or determined by local measurement. Because the model uses no field measurements of critical characteristics that determine slope stability, the evaluation of potential instability is only an approximation. In applying SHALSTAB for Tier 2 enrollment, HRC has run the model on a 10-m spatial grid using LiDAR elevation data and applied the parameters as suggested by the model authors. HRC's application of the method and parameters is described in HRC (2008).

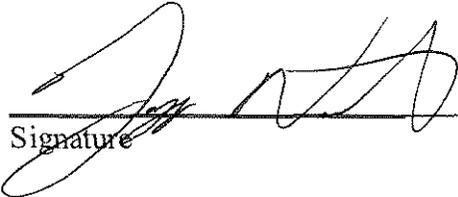
Mass Wasting Potential (MWP) modeling is a cursory regional assessment that numerically values soil, slope inclination, geology type, and geomorphology with respect to past mass wasting (HRC, 1999). The sums of the values specific to an area are measured against a set ranking system that extends from very low to extreme. The model's intent is to highlight areas of high potential for instability at the planning level. The model's use at the site specific level is limited in that pedogenic soil types are used, not textures, the geologic formations utilized provide one value for all of the incorporated facies, and the model is heavily biased if past mass wasting has occurred or has been mapped as occurring in the area.

Professional Certification of Design

I, Tagg Nordstrom, P.G. 7950, 6/9/10,
Name license # Date



Place licensed seal here


Signature

hereby certify, in accordance with North Coast Regional Water Quality Control Board (NCRWQCB) Order Nos. R1-2006-0039 and R1-2006-0041, that the attached application and the description of THP modifications, and the materials submitted along with:

THP No. 1-09-108 HUM (South Elk Ridge) Unit # 4

- a. are in accordance with accepted practices, and recognized professional standards;
- b. comply with the requirements of the Monitoring and Reporting Program No. R1-2008-0071, approved by the Executive Officer of the North Coast Regional Water Quality Control Board; and
- c. provided that the THP is properly implemented, operated, and maintained, are adequate for the THP to meet the applicable Zero Net Delivery performance standards of NCRWQCB Orders R1-2006-0039, R1-2006-0041, and R1-2006-0103, insofar as such performance can reasonably be predicted by accepted engineering geologic practices.

The opinions presented in the subject THP have been developed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable engineering geologists practicing in this or similar localities. No other warranty, expressed or implied, is made as to the professional advice included in this report.

Table 1. Proposed 2010 Harvest in South Fork Elk River.

THP Name	THP Number	Unit Number	Silviculture					CC Equivalent	Hazard ²	
			CC	ROW	Disp VR	SHR	SEL		Low	High
						187	0.0	140.3	185	2
Tom Collins	07-189	1					4.9	2.5	4.9	0
Tom Collins	07-189	2					24	12.0	24	0
Tom Collins	07-189	3					5.3	2.7	5.3	0
Tom Collins	07-189	4					2.3	1.2	2.3	0
South elk ridge	09-108	3					10.2	5.1	4.5	5.7
South elk ridge	09-108	2*					41.9	21.0	48.6	0
South elk ridge	09-108	1a					55.6	27.8	55.6	0
South elk ridge	09-108	1b					8.8	4.4	8.8	0
South elk ridge	09-108	1c					11.5	5.8	3.8	7.7
South elk ridge	09-108	4		1.6			45.7	24.1	37.0	10.3

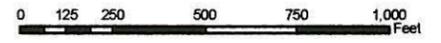
Table 3. Summary of THPs by Yarding System and Site Preparation for South Fork Elk River.

THP Name	THP Number	Unit Number	Yarding System			Site Preparation	
			Ground Based	Yarder	Helicopter	Mechanical	Broadcast
Tom Collins	07-189	5	145.6	40.4			
Tom Collins	07-189	1	4.9				
Tom Collins	07-189	2	24				
Tom Collins	07-189	3	5.3				
Tom Collins	07-189	4	2.3				
Soi elk ridge	09-108	3		10.3			
South elk ridge	09-108	2		41.9			
South elk ridge	09-108	1a	55.6				
South elk ridge	09-108	1b		8.8			
South elk ridge	09-108	1c		11.5			
South elk ridge	09-108	4	33.8	18.92			

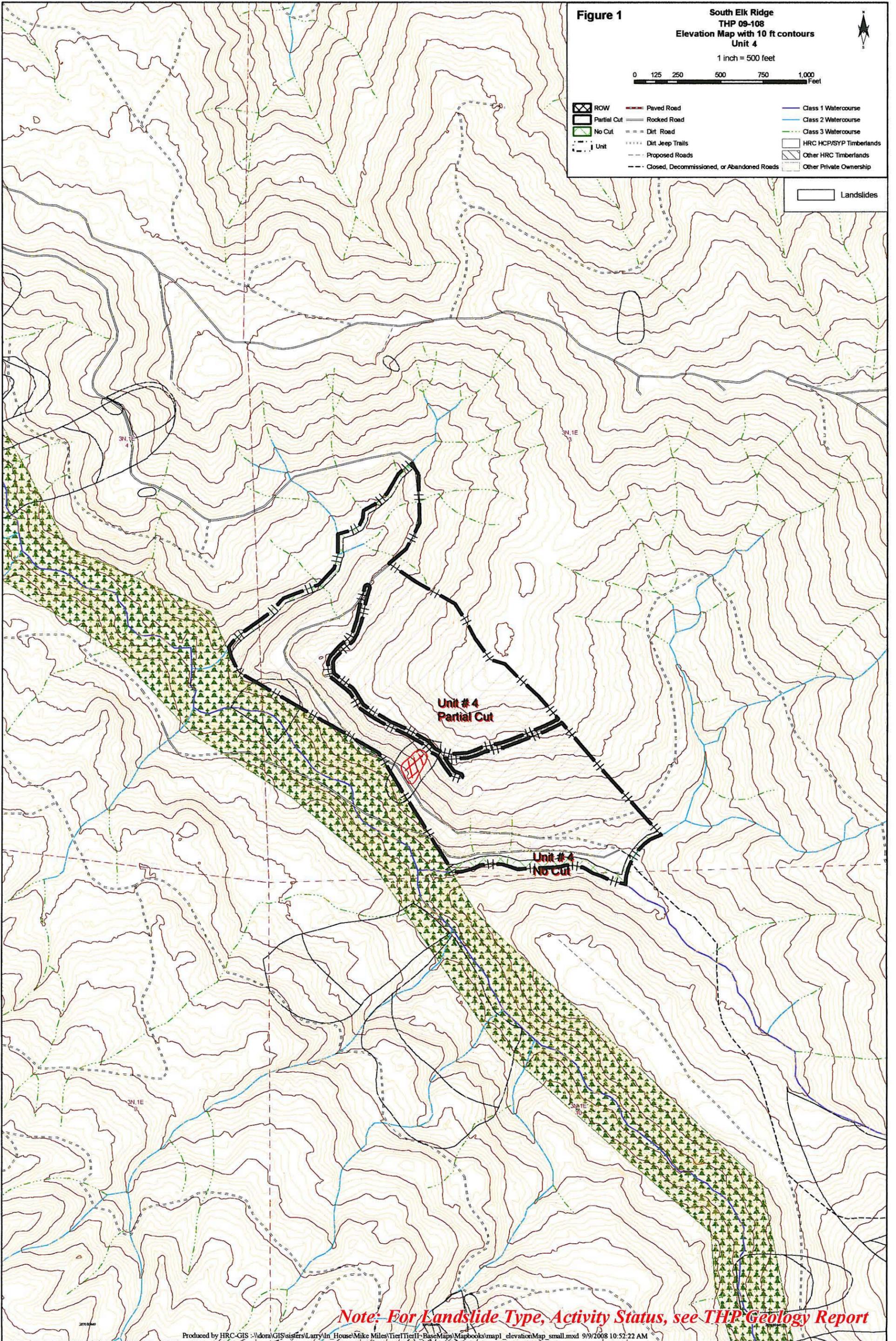
Figure 1

South Elk Ridge
THP 09-108
Elevation Map with 10 ft contours
Unit 4

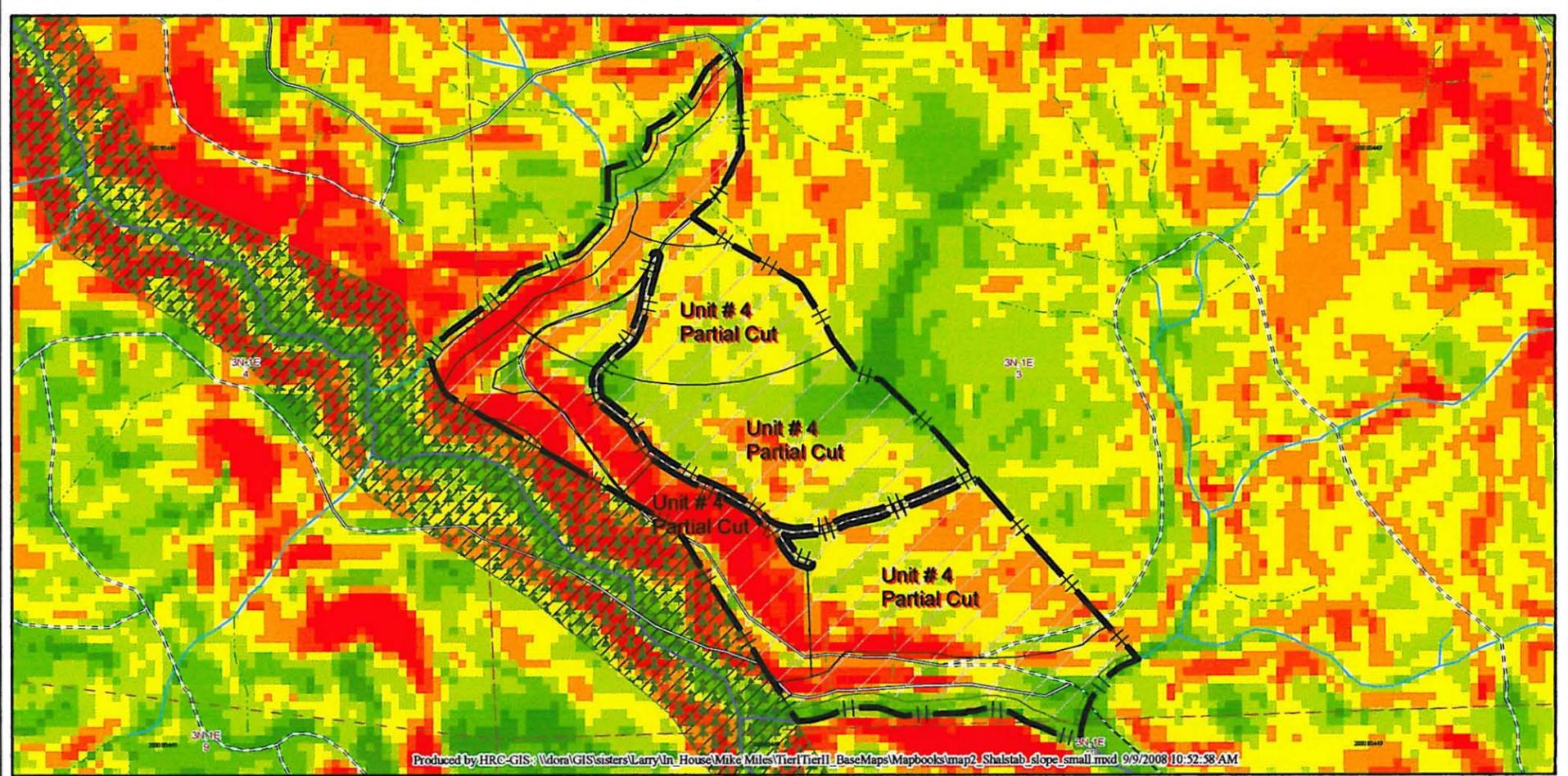
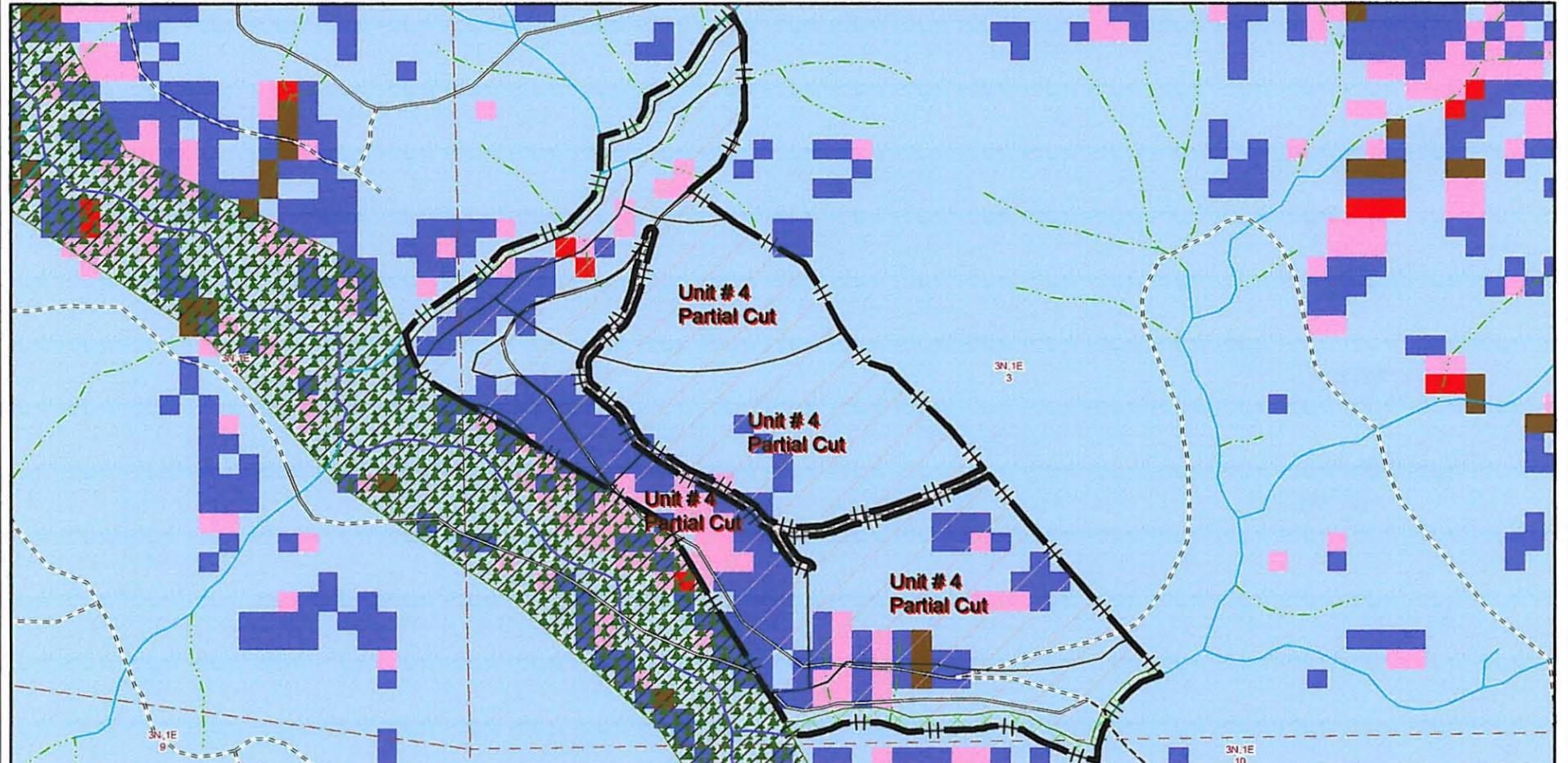
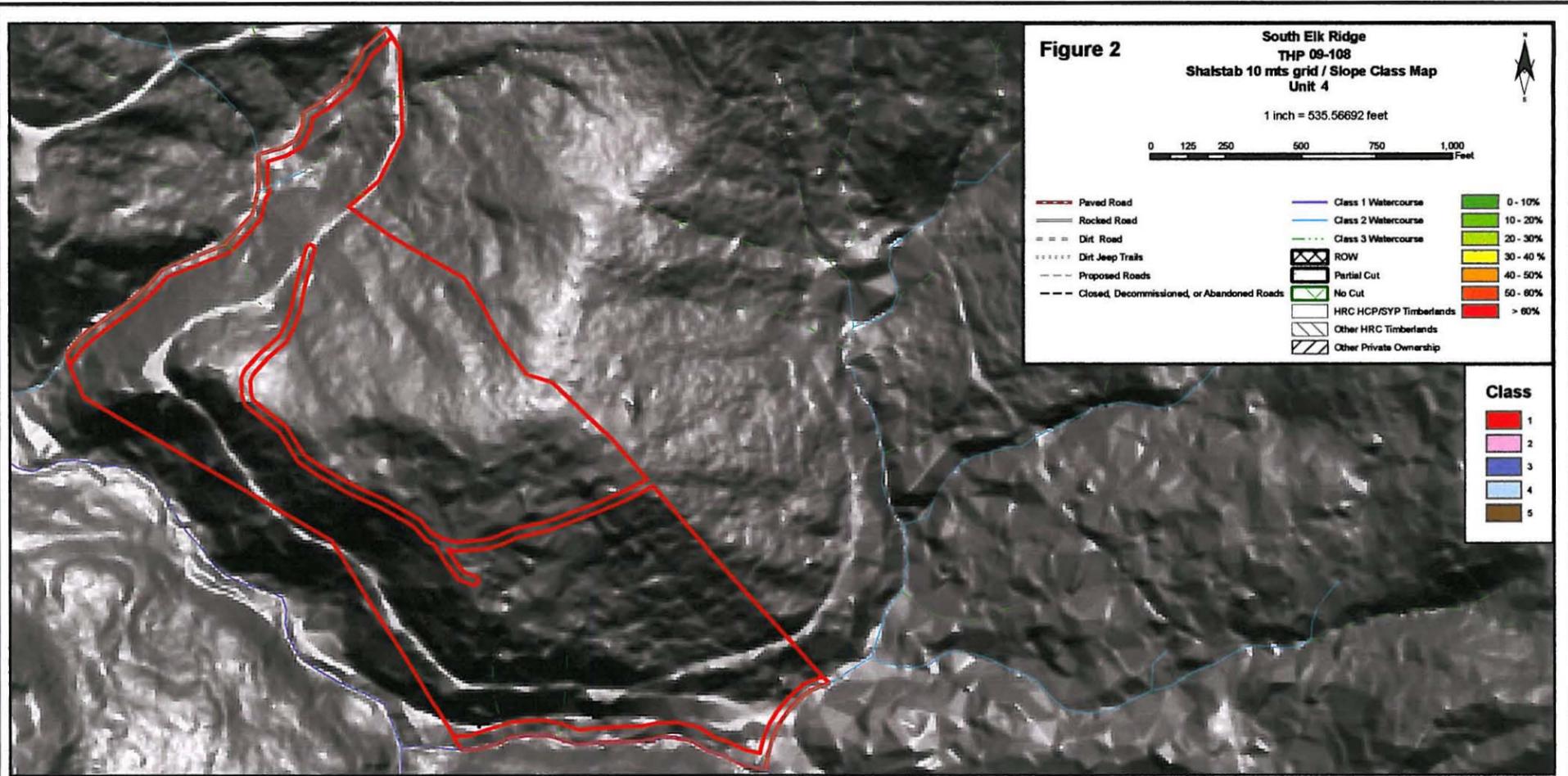
1 inch = 500 feet



- | | | | | | |
|--|-------------|--|--|--|-------------------------|
| | ROW | | Paved Road | | Class 1 Watercourse |
| | Partial Cut | | Rocked Road | | Class 2 Watercourse |
| | No Cut | | Dirt Road | | Class 3 Watercourse |
| | Unit | | Dirt Jeep Trails | | HRC HCP/SYP Timberlands |
| | | | Proposed Roads | | Other HRC Timberlands |
| | | | Closed, Decommissioned, or Abandoned Roads | | Other Private Ownership |
| | | | | | Landslides |



Note: For Landslide Type, Activity Status, see THP Geology Report



Geologic Units

Q (Qal of McLaughlin and others, 2000) Alluvium consisting of sands, silt, clays, and gravel along major stream channels. Because of the location of this material mass wasting is typically not an issue, but in certain locations, in streams alluvium can be incorporated into debris torrents traveling the channel.

Qrt (included in Qt of McLaughlin and others, 2000) Quaternary river terrace deposits. Unconsolidated generally poorly sorted pebble sands and sandy pebble-to-boulder-conglomerates with silt interbeds. Generally flat-laying but can be susceptible to debris sliding on steep slopes and small-scale rotational landsliding where adjacent to streams.

Oh (included in Qt of McLaughlin and others, 2000) Hookton Formation. Wrapped and folded unconsolidated marine and non marine sands, gravel and silt. Fossiliferous. Contains rare thin beds of volcanic ash. This formation is prone to erosion and debris sliding. Can be subject to shallow and deep-seated bedding plane failures resulting in translation and earthflow landslides where out of slope bedding occurs.

Qtwu (Included in Qtw of McLaughlin and others, 2000) Marine and non-marine sedimentary rocks of the Wildcat Group. Typically consists of poorly to moderately consolidated siltstone and fine-grained silty sandstone with some lenses of pebble conglomerate. These deposits are moderately susceptible to deep-seated landsliding, with rotational displacements in massive units and translation along planar weaknesses such as bedding planes, joints and fractures.

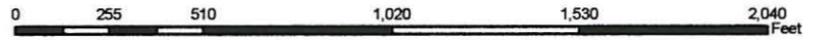
Ty (yl of McLaughlin and others, 2000) Yager terrane of the Franciscan Complex Coastal Belt. In the Elk River Watershed it typically consists of well-indurated and highly folded arkosic sandstone and argillite. The sandstone is typically very strong and often forms cliffs. The argillite is prone to slaking, and deep weathering and is often very sheared. Slopes underlain by this material are often irregular and lack well developed sidehill drainages. The slaking, shearing and deep weathering results in deep-seated flow type failures on moderate slopes.

Kjfs (cm2 of McLaughlin and others, 2000) Melange of the Franciscan Complex Central Belt. Deeply sheared meta-sandstone and meta-argillite with chert and carbonates. Includes large rock block with diverse lithologies. Where the unit deeply sheared, particularly within the argillite, the rock of the regolith may fail as earthflows. Because this unit may contain large deep-seated earthflow failures with large inclusions of well indurated sandstone, areas underlain by this unit may appear hummocky and may lack well-defined drainages. Because of the pervasive shearing that limits internal cohesion of the sliding mass, relatively deep-seated translational sliding occurring on steeper slopes underlain by this material can develop into debris flows and occasionally torrents. Soils developed from this sheared rock are typically plastic sandy clays and clayey sands. Large block of massive sandstone present in the central belt are typically well indurated and support steep slopes. The soils and colluvium developed from the sandstone are sandy silts to silty to sand that have relatively low cohesion and are susceptible to debris flows.

Figure 3

**South Elk Ridge
THP 09-108
CGS Map Unit 4**

1 inch = 500 feet



- | | | | |
|-------------------------|-------------|--|---------------------|
| HRC HCP/SYP Timberlands | ROW | Paved Road | Class 1 Watercourse |
| Other HRC Timberlands | Partial Cut | Rocked Road | Class 2 Watercourse |
| Other Private Ownership | No Cut | Dirt Road | Class 3 Watercourse |
| | Unit | Dirt Jeep Trails | |
| | | Proposed Roads | |
| | | Closed, Decommissioned, or Abandoned Roads | |

Legend

- dss
- a
- df
- ph
- sb
- y
- contact, approx. located
- contact, approx. located,
- contact, approx. located, concealed
- f.a., anticline, approx. located
- f.a., anticline, approx. located, concealed
- f.a., anticline, certain
- fault, approx. located
- fault, certain
- thrust fault, approx. located
- thrust fault, concealed
- thrust fault, concealed, queried
- thrust fault, inferred
- tt
- df, h
- ds, dm
- ds, dy
- ds, h
- ef, dm
- ef, do
- ef, dy
- ef, h
- rs, dm
- rs, do
- rs, dy
- rs, h
- u
- Q
- Qrt
- Oh
- Qtwu
- Ty
- Kjfs

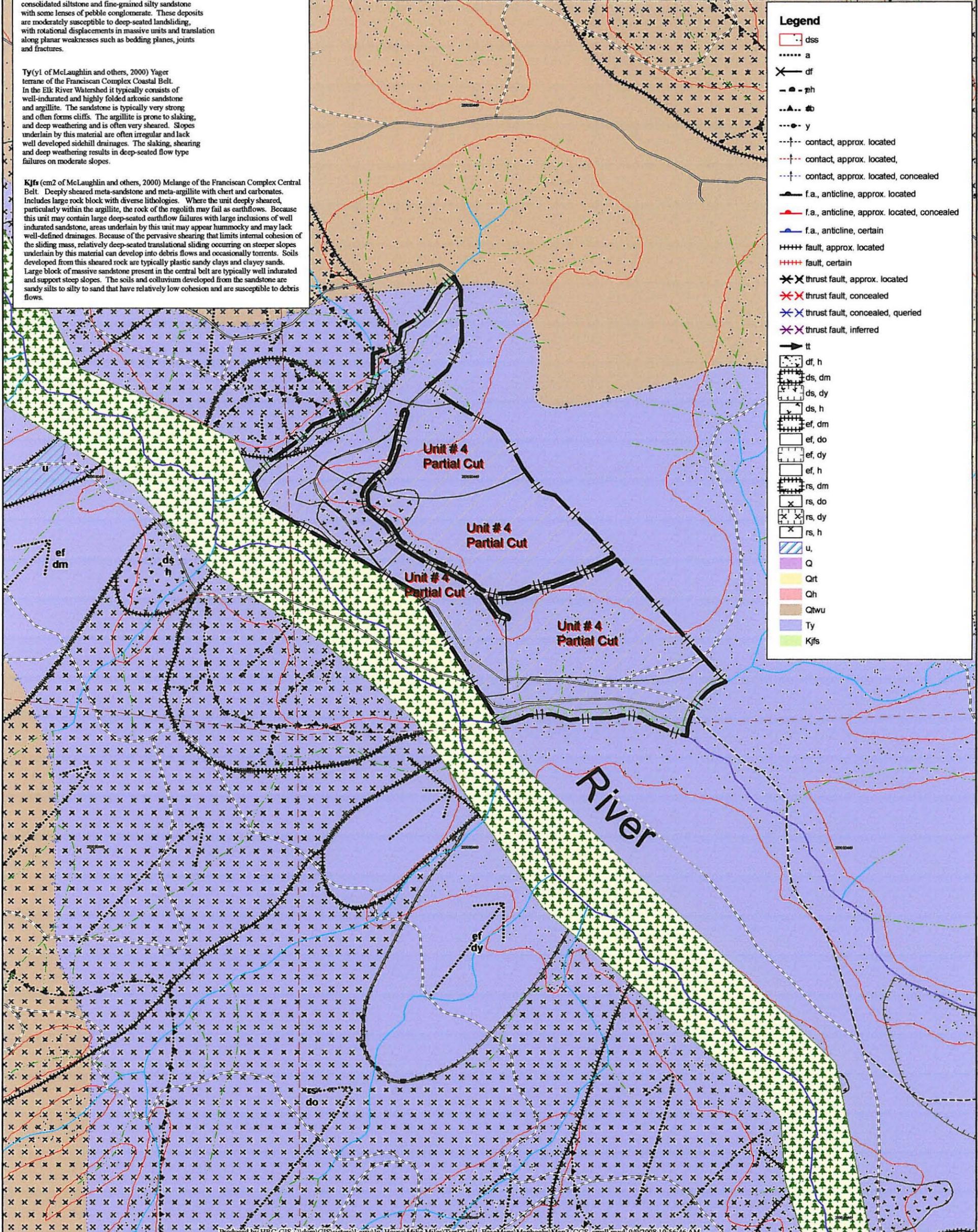
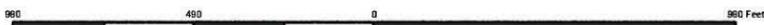


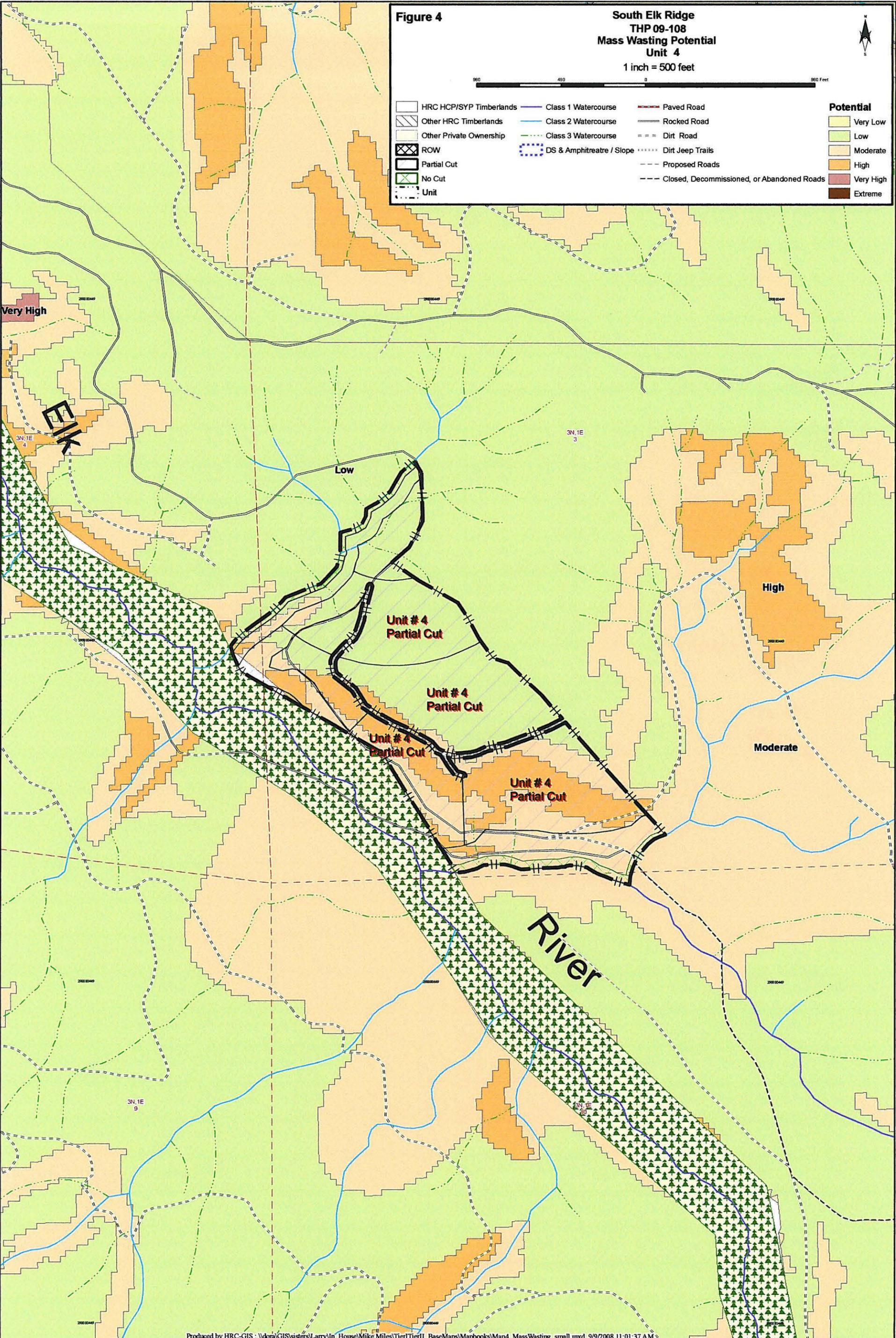
Figure 4

South Elk Ridge
THP 09-108
Mass Wasting Potential
Unit 4

1 inch = 500 feet



HRC HCP/SYP Timberlands	Class 1 Watercourse	Paved Road	Potential Very Low Low Moderate High Very High Extreme
Other HRC Timberlands	Class 2 Watercourse	Rocked Road	
Other Private Ownership	Class 3 Watercourse	Dirt Road	
ROW	DS & Amphitreatre / Slope	Dirt Jeep Trails	
Partial Cut		Proposed Roads	
No Cut		Closed, Decommissioned, or Abandoned Roads	
Unit			



Very High

ELK

Low

Unit # 4
Partial Cut

Unit # 4
Partial Cut

Unit # 4
Partial Cut

Unit # 4
Partial Cut

High

Moderate

River

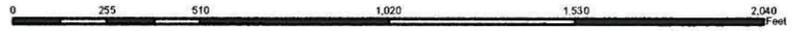
3N, 1E
9

3N, 1E
10

Figure 5

South Elk Ridge
THP 09-108
Aerial Photo Map - Unit 4

1 inch = 500 feet



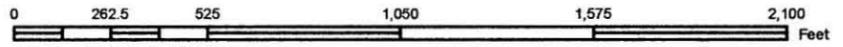
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|-------------------------|-------------|--|-------------|
| HRC HCP/SYP Timberlands | ROW | Class 1 Watercourse | Paved Road |
| Other HRC Timberlands | Partial Cut | Class 2 Watercourse | Rocked Road |
| Other Private Ownership | No Cut | Class 3 Watercourse | Dirt Road |
| Unit | | Dirt Jeep Trails | |
| | | Proposed Roads | |
| | | Closed, Decommissioned, or Abandoned Roads | |



Figure 6

South Elk Ridge THP 09-108 Watershed Analysis Deep-Seated Landslide Inventory Unit 2

1 inch = 500 feet



- | | | |
|-------------------------|--|----------------|
| HRC HCP/SYP Timberlands | Class 1 Watercourse | Paved Road |
| Other HRC Timberlands | Class 2 Watercourse | Rocked Road |
| Other Private Ownership | Class 3 Watercourse | Dirt Road |
| ROW | Dirt Jeep Trails | Proposed Roads |
| Partial Cut | Closed, Decommissioned, or Abandoned Roads | |
| No Cut | | |

- Legend**
- Scarp
 - Earthflow
 - Rotational/ Translational/ Earthflow
 - Rotational/ Translational

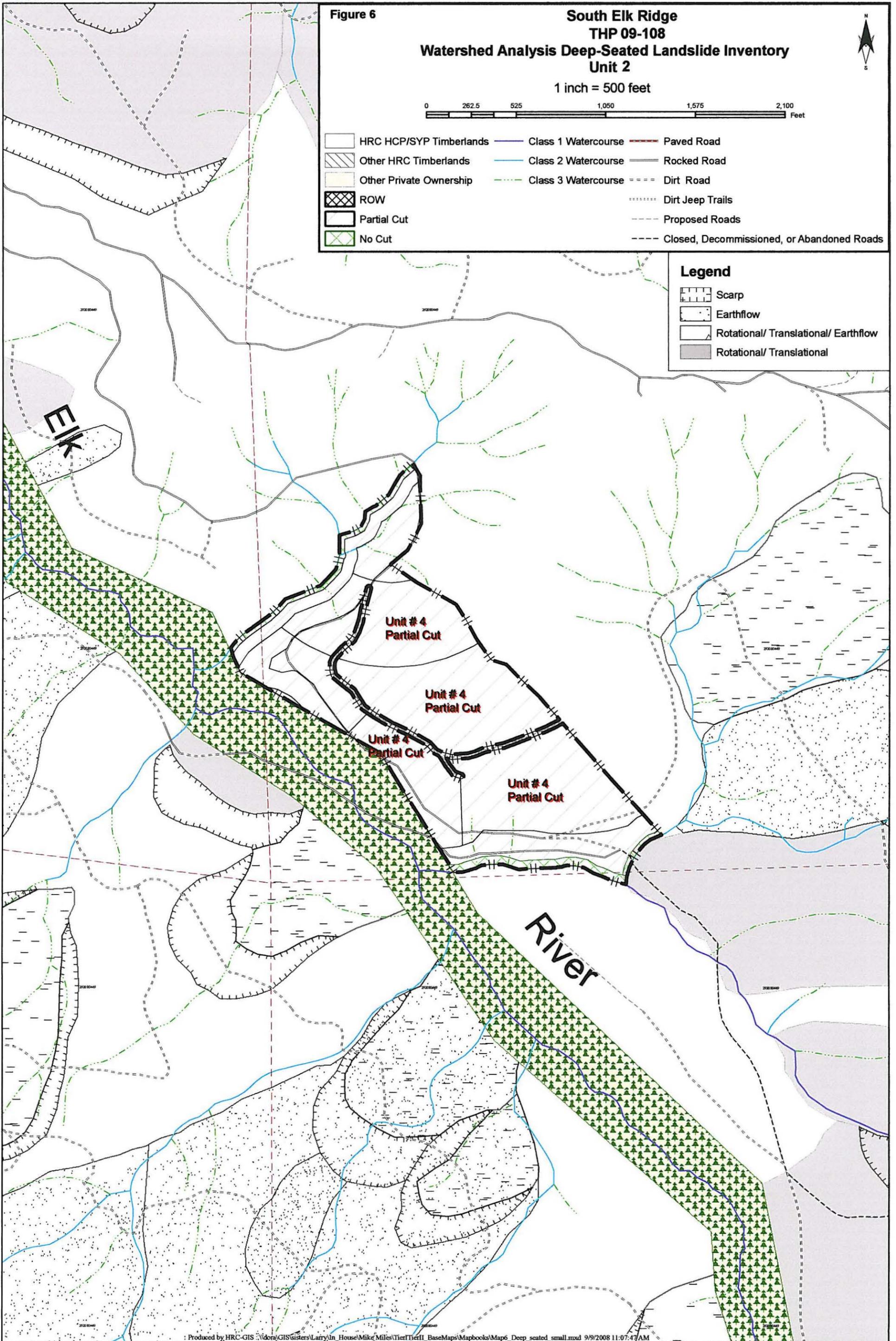
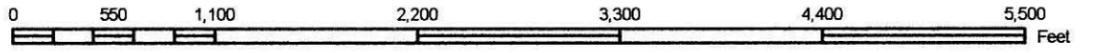


Figure 7

South Elk Ridge THP 09-108 Road Map

1 inch = 1,000 feet



- | | | | |
|-------------------------|--|----------------|----------------|
| HRC HCP/SYP Timberlands | Class 1 Watercourse | Paved Road | Stormproofed |
| Other HRC Timberlands | Class 2 Watercourse | Rocked Road | Upgraded |
| Other Private Ownership | Class 3 Watercourse | Dirt Road | Decommissioned |
| ROW | Dirt Jeep Trails | Proposed Roads | |
| Partial Cut | Closed, Decommissioned, or Abandoned Roads | | |
| No Cut | | | |

