

# Appendix B

## Activity Cards

# Appendix B

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# Introduction to Appendix B

Activity cards are used to explain site-specific proposed activities and any resource concerns and responses. These activities include timber harvest units and proposed and existing roads needed for timber harvest. Both narratives and maps showing site-specific information are provided.

The introduction to Appendix B is followed by a narrative card and a map for each proposed harvest unit. These units are in numerical order. Not every unit is in each alternative. The maps show all proposed adjacent units whether or not they are in the same alternatives. Figure B-1 shows all the units as they lie in the project area.

The last section of this Appendix lists existing and proposed NFS roads used for the alternatives. It describes the current conditions and management objectives, and proposed road management objective changes. The Introduction to the Road Cards explains the terminology used for the Road Management Objective narrative. A map is included that shows all the roads and their desired future management.

## Unit Card Header Information

Each unit card has a header block with information used to generally describe the stand's size, location, and volume proposed for harvest. Each header block contains the following information:

**Unit Number:** This is the number assigned to the unit block during the Logging Systems and Transportation Analysis development.

**Unit Acres:** This is an estimate of total acres within the unit using aerial photos and GIS information.

- **Alternatives:** This identifies the alternative(s) in which the unit is proposed.
- **Land Use Designation (LUD):** Land Use Designation is a defined area of land, identified by the Forest Plan, to which specific management direction is applied. All proposed units are in the Timber Production LUD.
- **Net Timber Volume:** This is an estimated volume (sawtimber only) in thousand board feet to be harvested. This was derived from field estimates and the stand exam program. A cruise will be done during implementation to determine an accurate volume before the timber is sold.

- **Existing Stand Condition:** This is the developmental stage of the physical and temporal distribution of trees and other plants in a forested area.
- **Silvicultural Prescription:** This provides information about the methods, techniques, timing, and monitoring of vegetative treatments. The detailed silvicultural prescription is in the planning record.
- **Logging Method/Transportation:** This identifies the method of logging in the unit and the transportation used. Helicopter yarding is specified for each unit where that method of yarding will be used. All other units will be yarded using ground based methods (cable or shovel).

## Harvest Treatments

Silvicultural prescriptions include these unit cards plus the sale layout and marking guidelines that would be completed for each of the timber harvest units that are included in the Central Kupreanof Timber Harvest Area. Minor changes can be expected during implementation to better meet on-site resource management and protection objectives. Minor adjustments to unit boundaries are also likely during final layout for the purpose of improving logging system efficiency or for site conditions.

### Even-aged Management, Clearcut

All merchantable trees will be harvested. The objectives of this system are to create a fast-growing stand of trees to maximize wood fiber production, favorable timber sale harvest economics and logging feasibility. These stands would regenerate into a mostly single-aged stand.

### Two-aged Management

This system regenerates and maintains a stand with two age classes by removing trees in clumps or as individual trees. Reserves or clumps would be distributed somewhat evenly across the harvest unit or stand, and away from the unit boundary. The resulting stand may be two-aged or trend toward the uneven-aged condition as a consequence of both an extended period of regeneration establishment and retention of reserve trees that may represent one or more age classes. Two-aged management regimes can produce stands of greater structural diversity than even-aged management. These stands would not be reentered for harvest until the next rotation in approximately 100 years.

### Uneven-aged Management

This system regenerates and maintains a multi-aged structure by removing some trees in all size classes either singly, in small groups, or in strips. Uneven-aged management maintains or creates a stand with trees of three or more distinct age (size) classes, either intimately mixed or in small groups. This remaining structure provides wildlife habitat and reduces visual impacts. The next entry into these stands would be in approximately 75 years, when approximately 25 percent

**Single Tree Selection**

of the stand's pre-harvest basal area would be removed in patches or in single trees.

Stands proposed for this prescription would have approximately 50 percent of the basal area of the trees remaining after harvest. This will regenerate and maintain a multi-aged structure by removing some trees in various size classes distributed across the stand. Trees to be harvested would be selected using a criterion such as species, diameter limits or spacing. A range of diameters, or everything above or below a certain diameter limit, may define the trees selected for harvest. Different diameters may be used for different species. The resulting stand may have small openings plus individual trees harvested throughout the stand. This will maintain or create a stand of three or more distinct size classes distributed throughout the stand, resulting in an uneven-aged stand.

## Resource Concerns and Responses

In the Central Kupreanof Timber Harvest Area, most of the economic, wildlife, and watershed concerns are mitigated with the silvicultural system. Other resource concerns, such as soils, scenery, and fisheries, are mitigated by unit design and adherence to Forest Plan standards and guidelines and Best Management Practices (BMPs).

**Riparian Management Areas**

Forest Plan Standards and Guidelines and BMP 12.6 direct the design of Riparian Management Areas (RMAs) associated with each stream in the Project Area. The Standards and Guidelines prohibit programmed commercial timber harvest in RMAs associated with all Class I, Class II, and most Class III streams, except for right-of-way clearing for road construction.

RMAs vary in width from the edge of the stream channel according to process group (Table B-1) and stream value class (Table B-2). All Class I and Class II streams are protected from commercial timber harvest within a minimum horizontal distance of 100 feet from the bankfull margins. Depending on the channel type, RMA widths can be up to 140 feet wide on either side of some Class I, Class II, and Class III streams. RMAs adjacent to Class III streams are protected from commercial timber harvest, except along palustrine channel types. RMA widths on Class III streams are extended to the side-slope break (top of the V-notch).

Unit card maps show the location of all streams within the unit, numbered for reference, and the associated RMAs. RMA widths for each Class I, Class II, and Class III stream are described in the unit card narratives. Streams were only mapped inside the unit and just outside the unit. The rest of the stream was mapped using aerial photos

and contour lines to estimate the placement of the stream from the units to known streams. These sections are labeled as unknown connectors and are not shown as buffered.

Log yarding practices are based on slope stability, soil disturbance, channel type, and stream class. Additional measures are taken to protect RMAs from possible disturbance associated with tree felling and yarding. Harvest activities near Class I, Class II, and Class III streams require that trees be felled away from the stream and that trees yarded across or along stream courses be fully suspended to minimize the exposure of mineral soil. Trees near Class IV streams are felled away from the stream whenever feasible and logging debris introduced into Class IV streams is removed. Class IV streams are treated as part of the hillside, under slope stability standards and guidelines. The objective is to minimize soil erosion, mass movement, and formation of new channels.

## Stream Protection Categories

The following stream protection measures are required in all units with streams. See individual unit cards for stream categories.

### **Category A**

Class I streams and Class II streams are marked with blue and white striped flagging, and will be protected by no-cut buffers designated by process group in Forest Plan Riparian Standards and Guidelines. No commercial timber will be removed from these buffers. Trees identified for harvest will be felled to avoid no-cut buffers. Prior to any operations within a buffer, a Stream course Protection Plan will be developed for that buffer (BMP 13.16).

### **Category B**

Class III streams are marked with orange and white striped flagging. These stream courses will be protected by no-cut buffers within the v-notch. Class IV streams with unstable side-slopes may also be assigned Category B protection without buffers. The following are Category B protections:

Split yard and directionally fall trees away from Class III and IV streams without buffers (RIP2-II). Felled trees that inadvertently enter or cross stream courses shall not be bucked or limbed until clear of stream courses, unless limbing or bucking would reduce damage to the riparian vegetation or stream banks. Debris in Stream courses resulting from falling or yarding shall be removed immediately to a stable location above high water mark. Existing natural stable debris will be left undisturbed. When ground skidding systems are employed, logs will be end-lined out of riparian areas. Fully suspend logs where yarding is to be done across streams or the full length of a stream or drainage (BMP 13.16, RIP2-II).

### **Category C**

Class IV streams and all other intermittent, ephemeral, and small perennial channels and V notches designated for soil and water quality protection are marked with green and white striped flagging and will be protected in the following manner:

Where practicable, trees will be felled and yarded away from stream courses. The trees that cannot be felled away from stream courses will be felled to bridge the stream providing these trees will be yarded during the same operating season. Trees felled to bridge stream courses will be bucked, limbed, and topped clear of stream course and its banks. Debris which restrict natural water flow, adversely affect water quality or have potential for debris flow will be removed to a stable location above high water mark before the yarder leaves the unit or upon completion of seasonal logging activities in the unit, whichever comes first (BMP 13.16).

## **Best Management Practices**

The following Best Management Practices (BMPs) would be applied in order to protect water quality in the project area as specified in the Forest Plan (pages C-1 to C-3). The BMPs are cited on the Unit Cards and Road Cards where appropriate. Not all BMPs apply to every situation.

### **BMP 12.5 (Wetland Identification, Evaluation and Protection)** –

To identify wetland functions and value, and provide appropriate protection measures designed to avoid adverse hydrologic impacts.

### **BMP 12.6 (Riparian Area Designation and Protection)** – To

identify riparian areas and their associated management activities.

**BMP 12.6a (Buffer Design and Layout)** – To design streamside buffers to meet objectives defined during the implementation of BMP 12.6.

**BMP 12.17 (Revegetation of Disturbed Areas)** – To provide ground cover to minimize soil erosion.

**BMP 13.5 (Identification and Avoidance of Unstable Areas)** – To avoid triggering mass movements and resultant erosion and sedimentation by excluding unstable areas from timber harvest.

**BMP 13.9 (Determining Guidelines for Yarding Operations)** – To select appropriate yarding systems and guidelines for protecting soil and water resources.

**BMP 13.16 (Stream Channel Protection – Implementation and Enforcement)** – To provide the site-specific stream protection prescriptions consistent with objectives identified under BMPs 12.6 and 12.6a. Objectives may include the following:

- Maintain the natural flow regime.
- Provide for unobstructed passage of storm flows.
- Maintain integrity of the riparian buffer to filter sediment and other pollutants.
- Restore the natural course of any stream that has been diverted as soon as practicable.
- Maintain natural channel integrity to protect aquatic habitat and other beneficial uses.
- Prevent adverse changes to the natural stream temperature regime.

**BMP 14.1 (Transportation Planning)** – To assure soil and water resources are considered in transportation planning activities.

**BMP 14.2 (Location of Transportation Facilities)** – To assure water resources protection measures are considered when locating roads and trails.

**BMP 14.3 (Design of Transportation Facilities)** – To incorporate site-specific soil and water resource protection measures into the design of roads and trails.

**BMP 14.5 (Road and Trail Erosion Control Plan)** – Develop erosion control plans for road or trail projects to minimize or mitigate erosion sedimentation and resulting water quality degradation prior to the initiation of construction and maintenance activities. Ensure compliance through effective contract administration and timely implementation of erosion control measures.

**BMP 14.6 (Timing Restrictions for Construction Activities)** – Minimize erosion potential by restricting the operating schedule and conducting operations during lower risk periods.

**BMP 14.7 (Measures to Minimize Mass Failures)** – Minimize the chance and extent of road-related mass failures, including landslides and embankment slumps.

**BMP 14.8 (Measures to Minimize Surface Erosion)** – Minimize the erosion from cutslopes, fillslopes, and the road surface, and consequently reduce the risk of sediment production.

**BMP 14.9 (Drainage Control to Minimize Erosion and Sedimentation)** – Minimize the erosive effects of concentrated water flows from transportation facilities and the resulting degradation of water quality through proper design and construction of drainage control systems.

**BMP 14.10 (Pioneer Road Construction)** – Minimize sediment production associated with pioneer road construction.

**BMP 14.11 (Timely Erosion Control Measures for Incomplete Projects)** – Minimize erosion of and sedimentation from disturbed ground on incomplete projects by completing erosion control work prior to seasonal or extended shutdowns.

**BMP 14.12 (Control of Excavation and Sidecast Material)** – Minimize sedimentation from unconsolidated excavated and sidecast material caused by road construction, reconstruction, or maintenance.

**BMP 14.14 (Control of In-channel Operations)** – Minimize stream channel disturbances and related sediment production.

**BMP 14.15 (Diversion of Flows Around Construction Sites)** – Identify and implement diversion and de-watering requirements at construction sites to protect water quality and downstream uses.

**BMP 14.17 (Bridge and Culvert Design and Installation)** – Minimize adverse impacts on water quality, stream courses, and fisheries resources from the installation of bridges, culverts, or other stream crossings.

**BMP 14.20 (Road Maintenance)** – Maintain all roads in a manner which provides for soil and water resources protection by minimizing rutting, road prism failures, sidecasting, and blockage of drainage facilities.

**BMP 14.22 (Access and Travel Management)** – Control access and manage road use to reduce the risk of erosion and sedimentation from

road surface disturbance especially during the higher risk periods associated with high runoff and spring thaw conditions.

## Process Groups and Channel Types

The Tongass National Forest defines stream channel types according to the Channel Type User Guide (USDA Forest Service 1992), the foundation upon which aquatic habitat management prescriptions are developed. Channel types are defined within the context of fluvial process groups that describe the interrelationship between watershed runoff, landform relief, geology, and glacial or tidal influences on fluvial erosion and deposition processes. Individual channel type classifications are defined by physical attributes such as channel gradient, channel width, channel pattern, stream bank incision and containment. Table B-1 shows the Forest Plan codes used on the unit card narratives. See the Forest Plan, Figure D-1 (page D-4) for a visual representation of the typical distribution of channel process groups. Each unit card summarizes the protection for a particular unit. Only the channel types found in proposed timber harvest units are listed.



**Table B-1. Channel Types in or adjacent to proposed harvest units**

<b>Process Group</b>	<b>Process Group Abbreviation</b>	<b>Description</b>
<b>Alluvial Fan</b>	AF	Channels occurring on alluvial fan landforms
<b>Floodplain</b>	FP	Low-gradient channels on broad flood plains
<b>High-gradient Contained</b>	HC	High-gradient channels contained by steep valley walls
<b>Moderate-gradient Contained</b>	MC	Moderate-gradient channels contained by steep valley walls
<b>Moderate-gradient, Mixed -control</b>	MM	Moderate-gradient channels with some flood plain development
<b>Large Contained</b>	LC	Low-gradient channels contained by steep valley walls
<b>Palustrine</b>	PA	Very low-gradient, placid channels draining wetlands

**Table B-2. Stream Value Classes**

<b>Stream Value Class</b>	<b>Criteria</b>
<b>Class I</b>	Streams and lakes with anadromous or adfluvial fish or fish habitat; or high quality resident fish waters, or habitat above fish migration barriers known to be reasonable enhancement opportunities for anadromous fish.
<b>Class II</b>	Streams and lakes with resident fish or fish habitat and generally steep (6-25 percent or higher) gradient (can also include streams with a 0-6 percent gradient) where no anadromous fish occur, and otherwise not meeting Class I criteria.
<b>Class III</b>	Streams are perennial and intermittent streams that have no fish populations or fish habitat, but have sufficient flow or sediment and debris transport to directly influence downstream water quality or fish habitat capability. For streams less than 30 percent gradient, special care is needed to determine if resident fish are present.
<b>Class IV</b>	Other intermittent, ephemeral, and small perennial channels with insufficient flow or sediment transport capabilities to have immediate influence on downstream water quality or fish habitat capability. Class IV streams do not have the characteristics of Class I, II or III streams and have a bankfull width of at least 0.3 meter (1 foot).

# Unit Cards

### Central Kupreanof Unit Card Narrative

**Unit # 201**

**Unit Size (acres): 44**

**Alternatives: 2, 3**

**Aerial Photo:** 1098\_91

**VCU:** 4260

**Volume (mbf):** Alt. 2-318,  
Alt. 3-831

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Alt. 2: uneven-aged management, single tree selection (44 acres);  
Alt. 3: even-aged management, clearcut (44 acres).

**Logging Method/Transportation:** Alt. 2: Helicopter / existing NFS road; Alt. 3: cable / new  
NFS road construction.

### Resource Concerns & Responses

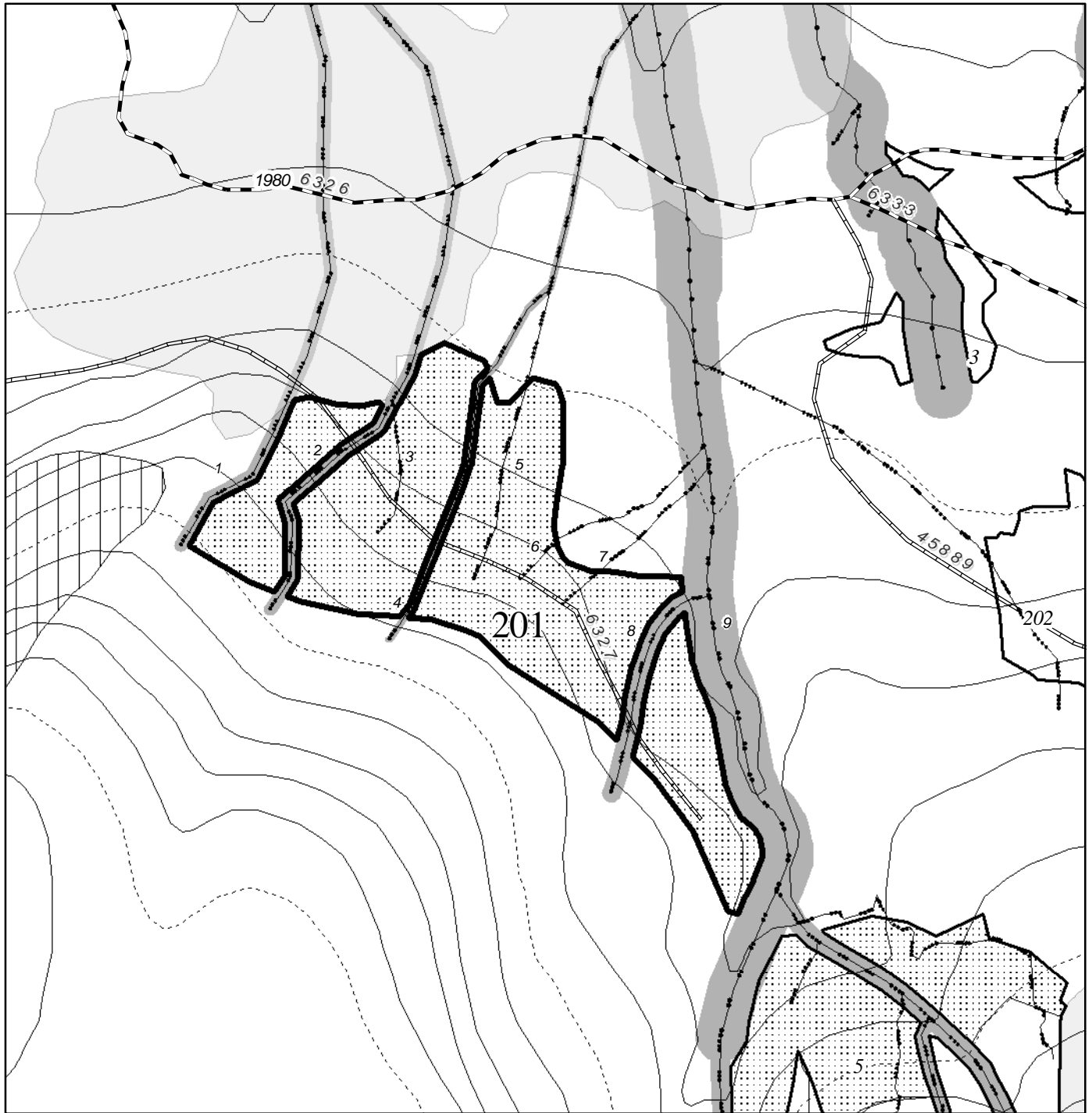
**Resource Fisheries/Watershed**

**Concern:** Streams 1 and 2 are Class III, Channel Type HC5.  
Stream 3 is Class IV, Channel Type HC5  
Stream 4 is Class III, Channel Type HC0.  
Streams 5, 6, and 7 are Class IV, Channel Type HC0.  
Stream 8 is Class III, Channel Type HC6.  
Stream 9 is Class II, Channel Type HC3.

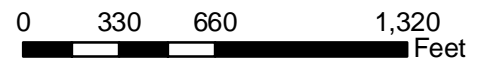
**Response:** Streams 1, 2, 4, and 8: "B" protection. No harvest within the v-notch,  
directional felling, full suspension, immediate removal of logging debris. (BMP  
13.9, 13.16).  
Streams 3 and 5-7: "C" protection. Directional felling if feasible. Full  
suspension or split yard away from streams if feasible, a minimum of partial  
suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 9: No timber harvest within 100 feet of the stream or the top of the v-  
notch, whichever is greater. (BMP 12.6, 13.9, 13.16).

**No Concerns:** Scenery, Soils, Karst, Wetlands, Recreation, Sensitive/Rare Plants, Heritage,  
Vegetation, Wildlife

# Central Kupreanof Alternative 2,3 Unit 201



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 202**

**Unit Size (acres): 29**

**Alternatives: 2, 3**

**Aerial Photo:** 1098\_186

**VCU:** 4260

**Volume (mbf): 486**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / New NFS road construction

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class IV, Channel Type HC0.

Stream 2 is Class III, Channel Type HC2/HC5.

**Response:** Stream 1: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream (BMP 13.9, 13.16).  
Stream 2: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

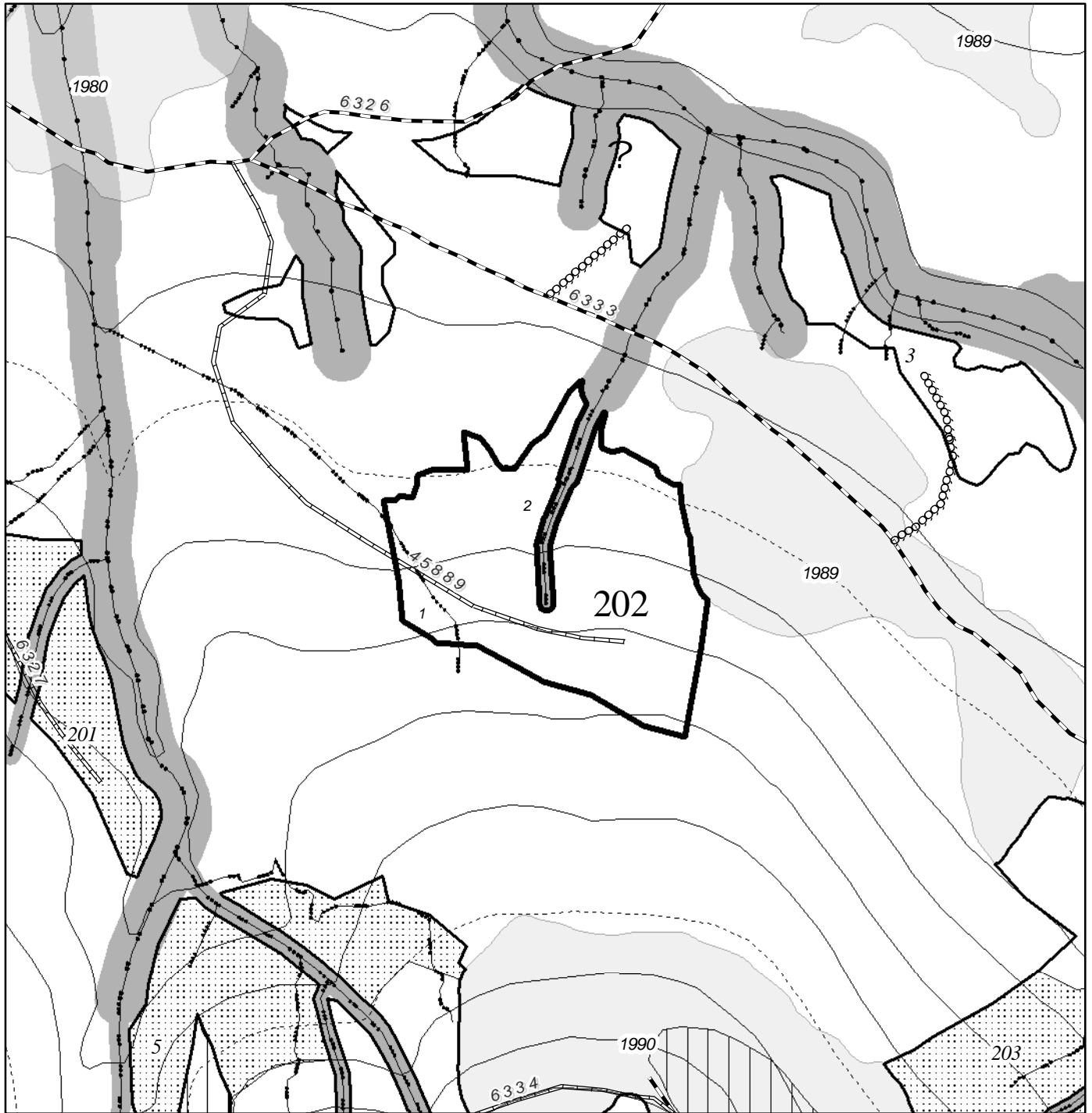
**Resource Wetlands**

**Concern:** The entire unit is on forested wetland (BMP 12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

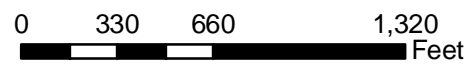
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 12.5, 13.2).

**No Concerns:** Scenery, Soils, Karst, Recreation, Sensitive/Rare Plants, Heritage, Wildlife and Vegetation

# Central Kupreanof Alternative 2,3 Unit 202



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 203**

**Unit Size (acres): 68**

**Alternatives: 2, 3**

**Aerial Photo: 1098-185**

**VCU: 4260**

**Volume (mbf): 883**

**Land Use Designation: Timber Production**

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management clearcut and uneven-aged management, single tree selection.

**Logging Method/Transportation:** Shovel and cable (43 acres); helicopter (25 acres) / existing NFS road

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Streams 1 and 9 are Class II, Channel Type HC2 and HC5.  
Streams 2, 4, and 8 are Class III, Channel Type HC5.  
Streams 3, 5, 6, and 7 are Class IV, Channel Type HC0.  
Stream 10 is Class I, Channel Type MM2.

**Response:** Streams 1 and 9: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMP 12.6, 13.9, 13.16).  
Streams 2, 4, and 8: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Streams 3, 5, 6, and 7: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream (BMP 13.9, 13.16).  
Stream 10: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

**Resource Sensitive/Rare Plants**

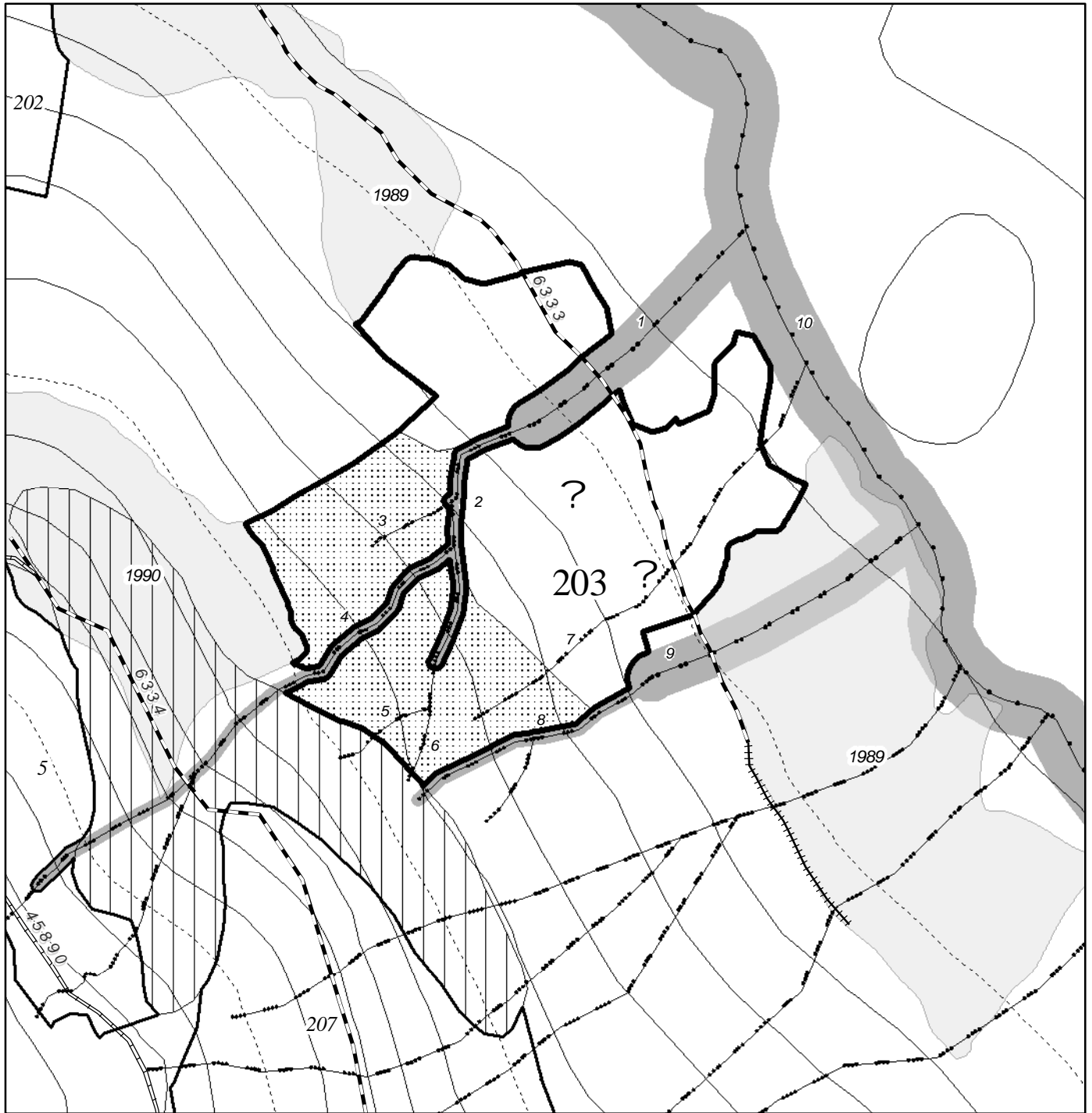
**Concern:** Sensitive plant, Wright filmy fern (*Hymenophyllum wrightii*), found in two places in unit.

**Response:** One population may be partially protected by falling timber away from the Class IV stream.

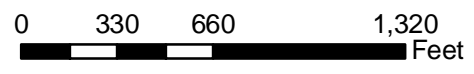
**No Concerns:** Scenery, Soils, Karst, Wetlands, Recreation, Heritage, Vegetation, Wildlife



# Central Kupreanof Alternative 2,3 Unit 203



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 203**

**Unit Size (acres): 43**

**Alternative: 4**

**Aerial Photo:** 1098-185

**VCU:** 4260

**Volume (mbf): 784**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel and cable / existing NFS road

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Streams 1 and 4 are Class II, Channel Type HC2 and HC5.

Streams 2 and 5 are Class III, Channel Type HC5.

Stream 3 is Class IV, Channel Type HC0.

Stream 6 is Class I, Channel Type MM2.

**Response:** Streams 1 and 4: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMP 12.6, 13.9, 13.16).

Streams 2 and 5: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

Stream 3: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream (BMP 13.9, 13.16).

Stream 6: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

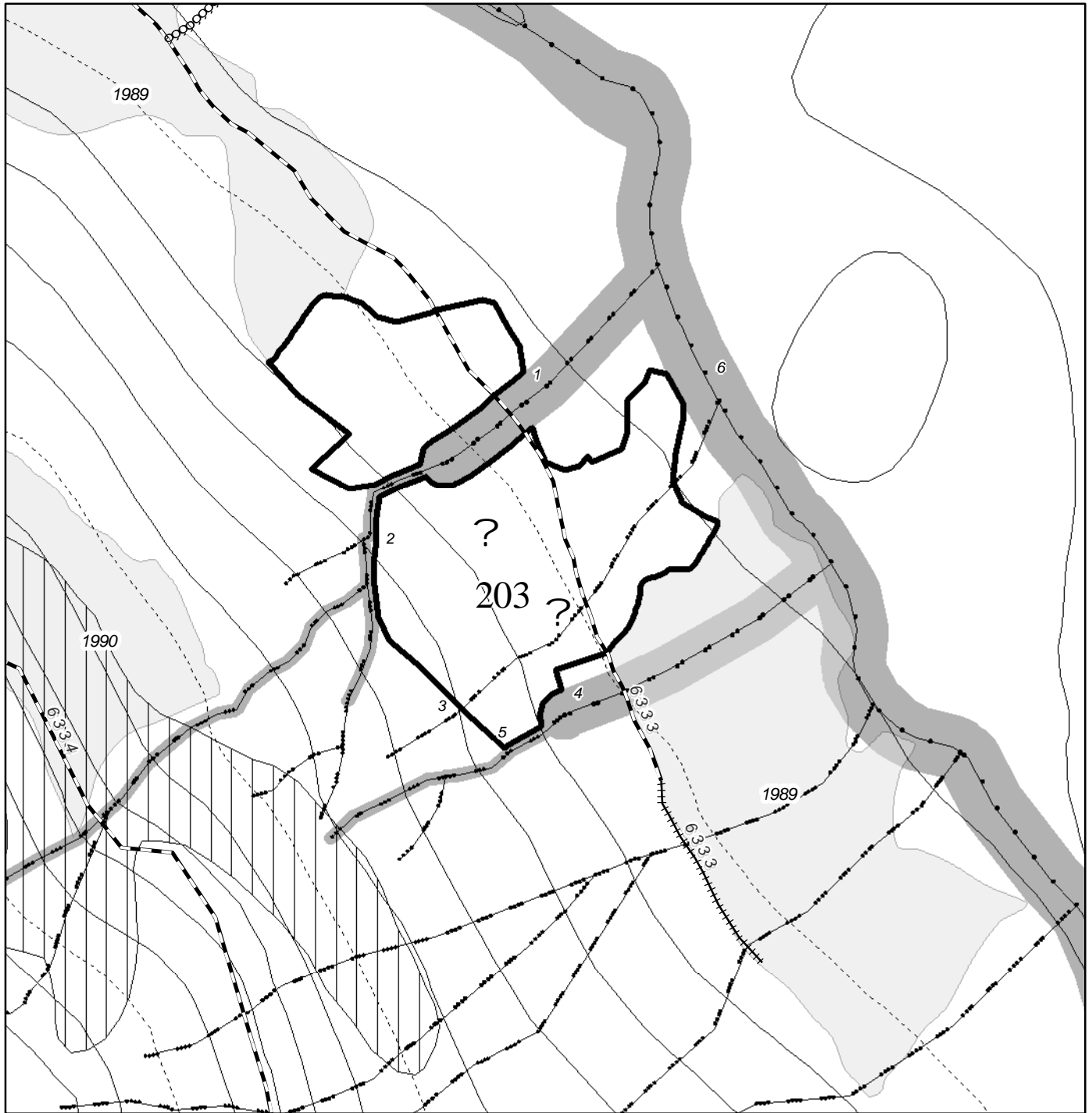
**Resource Sensitive/Rare Plants**

**Concern:** Sensitive plant, Wright filmy fern (*Hymenophyllum wrightii*), found in two places in unit.

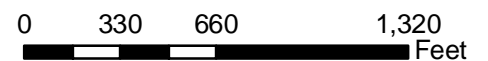
**Response:** One population may be partially protected by falling timber away from the Class IV stream.

**No Concerns:** Scenery, Soils, Karst, Wetlands, Recreation, Vegetation, Wildlife, Heritage

# Central Kupreanof Alternative 4 Unit 203



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 204**

**Unit Size (acres): 47**

**Alternatives: 2, 3, 4**

**Aerial Photo: 1598-51**

**VCU: 4260**

**Volume (mbf): 883**

**Land Use Designation: Timber Production**

**Existing Stand Condition:** Old-Growth

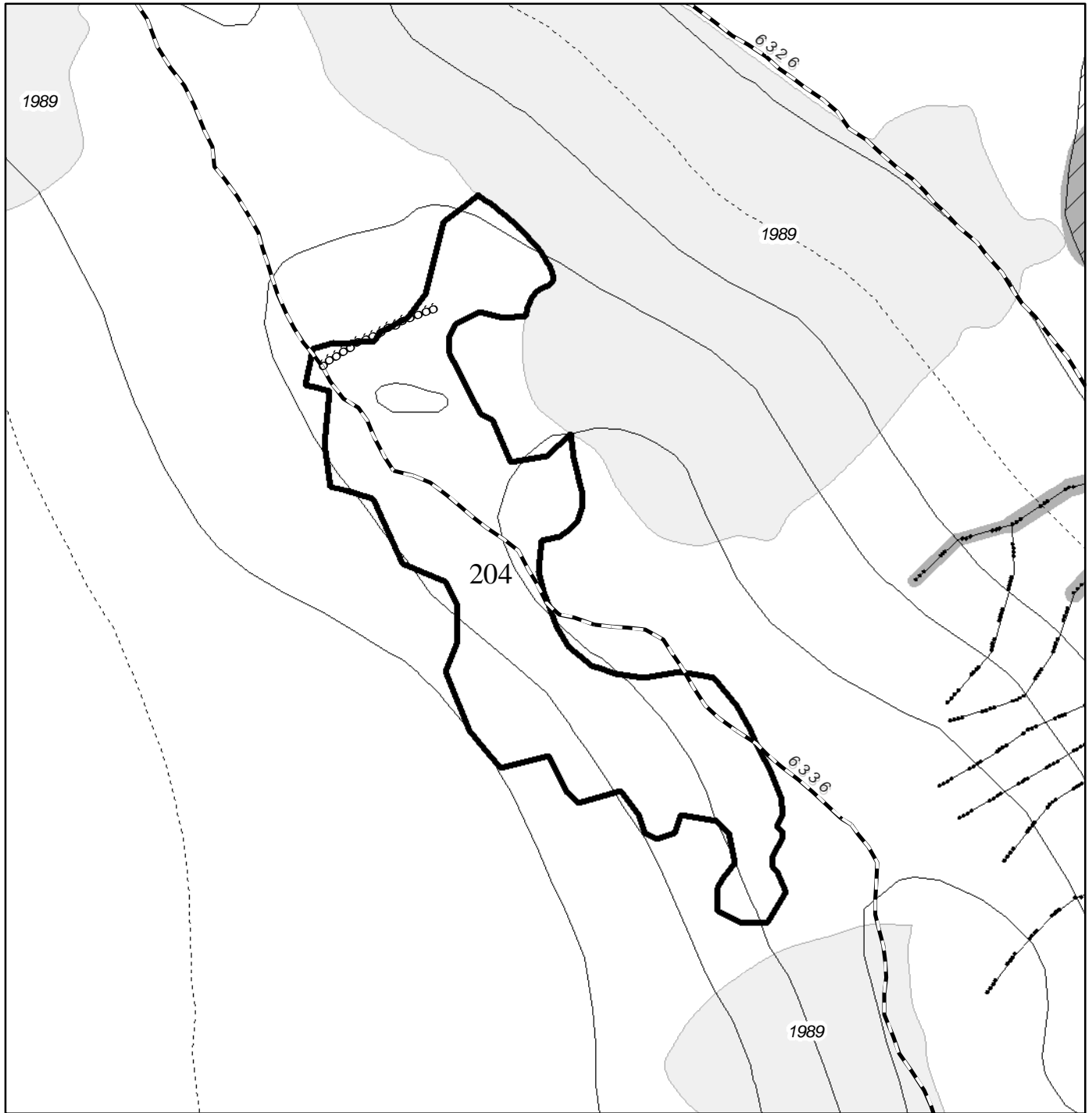
**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road, temporary road

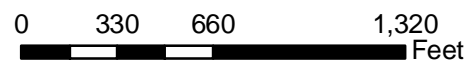
### Resource Concerns & Responses

**No Concerns:** Watershed, Fisheries, Scenery, Soils, Karst, Wetlands, Recreation,  
Sensitive/Rare Plants, Vegetation, Heritage

# Central Kupreanof Alternative 2,3,4 Unit 204



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



## Central Kupreanof Unit Card Narrative

**Unit # 205**

**Unit Size (acres): 78**

**Alternatives: 2, 3**

**Aerial Photo: 1598-51**

**VCU: 4260**

**Volume (mbf): 1,401**

**Land Use Designation: Timber Production**

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel and cable / existing NFS road, new NFS road construction, temporary road

### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class I, Channel Type FP3 and MM2.  
Stream 2 is Class III, MM1 in lower section, HC2 in middle section, and HC5 above the confluence with Stream 3.  
Streams 3, 10, and 11 are Class IV, Channel Type HC0.  
Streams 4 and 7 are Class II, Channel Type HC2.  
Streams 5 and 9 are Class III, Channel Type HC2.  
Streams 6, 13, and 14 are Class IV, Channel Type HC5.  
Stream 8 is Class IV, Channel Type HC2.  
Stream 12 is Class II, Channel Type MM1.

**Response:** Stream 1 (FP3): No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 130 feet of channel. (BMPs 12.6, 12.6a, 13.9, 13.16).  
Streams 1(MM2), 2 (MM1), and 12: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).  
Streams 2 (HC) 5, and 9: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Streams 4 and 7: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).  
Streams 3, 6, 8, 10, 11, 13, 14: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 12: No timber harvest within the greatest of the 100-year flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet of channel. (BMP 12.6, 12.6a, 13.9, 13.16).

**Resource Sensitive/Rare Plants**

**Concern:** Two populations of sensitive plant, Wright filmy fern (*Hymenophyllum wrightii*), found in unit.

**Response:** No protection measures proposed.

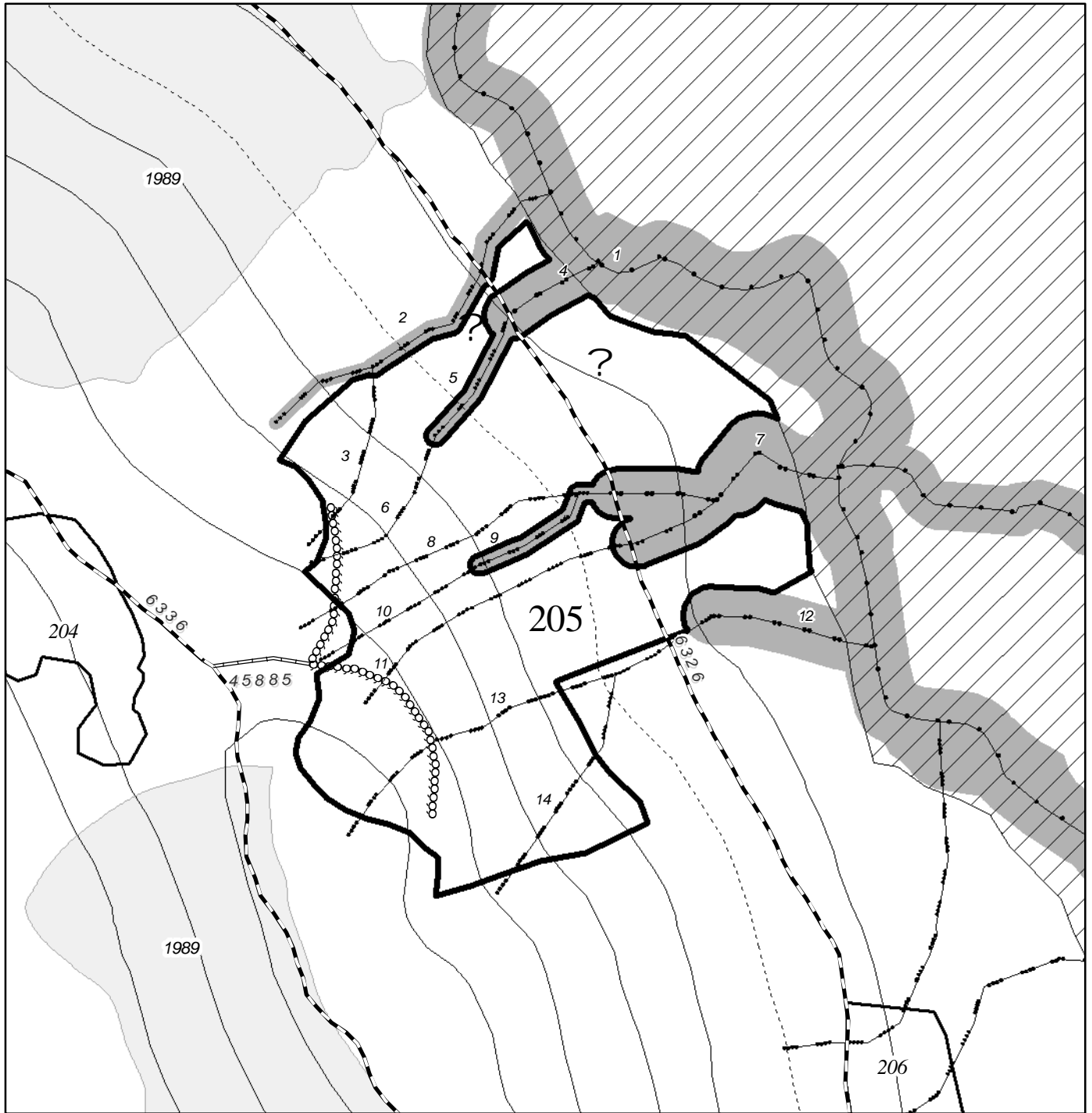
**Resource Wetlands**

**Concern:** Approximately 6 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

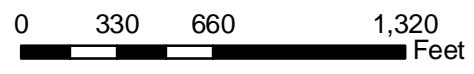
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit. (BMP 13.2, 13.9).

**No Concerns:** Scenery, Soils, Karst, Recreation, Heritage, Vegetation, Wildlife

# Central Kupreanof Alternative 2,3 Unit 205



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



## Central Kupreanof Unit Card Narrative

**Unit # 205**

**Unit Size (acres): 34**

**Alternative: 4**

**Aerial Photo:** 1598-51

**VCU:** 4260

**Volume (mbf): 608**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel and cable / existing NFS road

### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:**

Stream 1 is Class I, Channel Type FP3 and MM2.  
 Stream 2 is Class III, MM1 in lower section, HC2 in middle section.  
 Streams 3 and 5 are Class II, Channel Type HC2.  
 Stream 6 is Class IV, Channel Type HC2.  
 Streams 4 and 7 are Class III, Channel Type HC2.  
 Stream 8 Class IV, Channel Type HC0.  
 Stream 9 is Class II, Channel Type MM1.  
 Stream 10 is Class IV, Channel Type HC5.

**Response:**

Stream 1 (FP3): No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 130 feet of channel. (BMPs 12.6, 12.6a, 13.9, 13.16).  
 Streams 1(MM2), 2 (MM1), and 12: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).  
 Streams 2 (HC) 5, and 9: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
 Streams 4 and 7: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).  
 Streams 3, 6, 8, 10, 11, 13, 14: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
 Stream 12: No timber harvest within the greatest of the 100-year flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet of channel. (BMP 12.6, 12.6a, 13.9, 13.16).

**Resource Sensitive/Rare Plants**

**Concern:**

Sensitive plant, Wright filmy fern (*Hymenophyllum wrightii*), found in unit.

**Response:**

No protection measures proposed.

**Resource Wetlands**

**Concern:**

Approximately 6 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

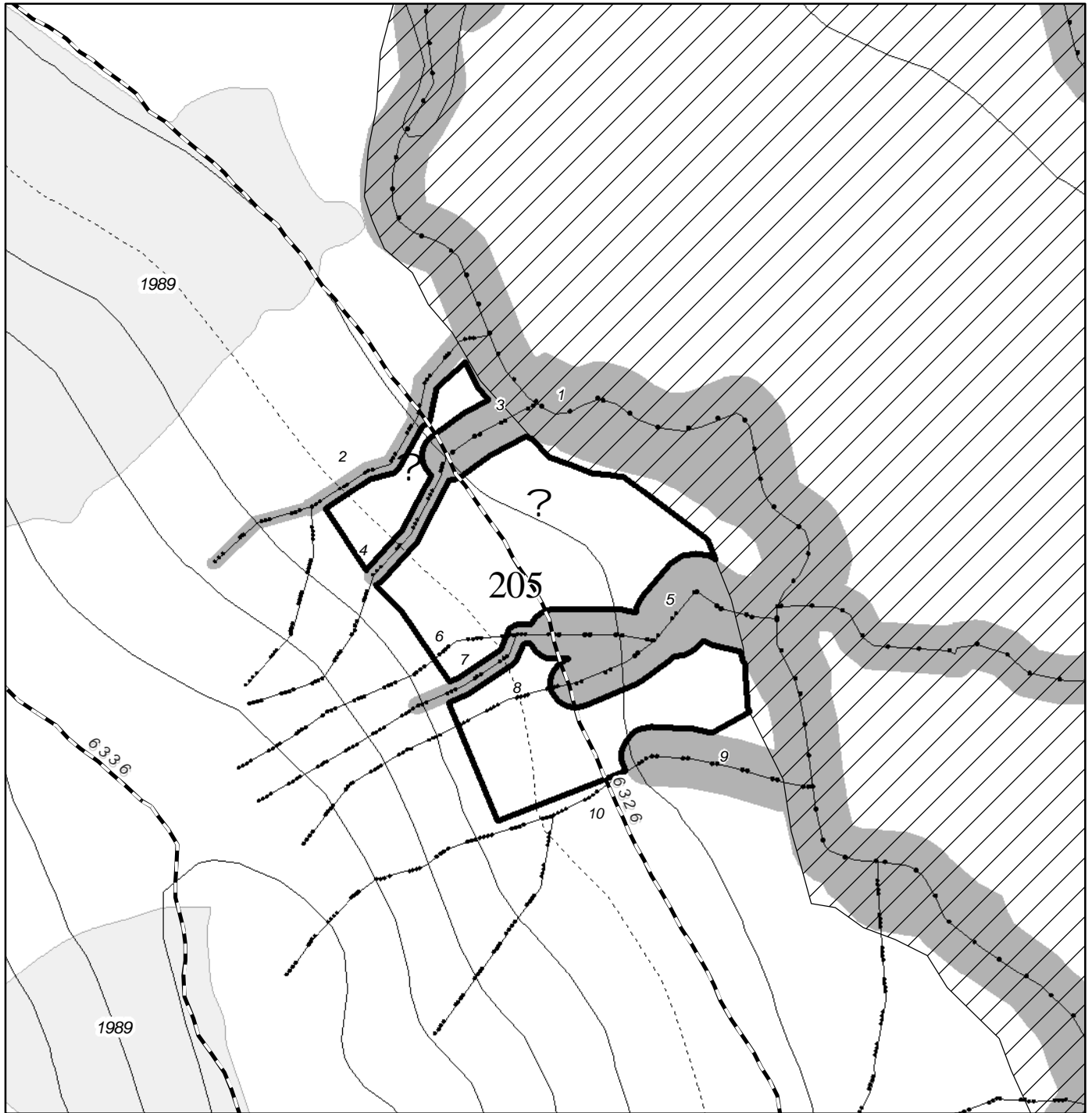
**Response:**

Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit. (BMP 13.2, 13.9).

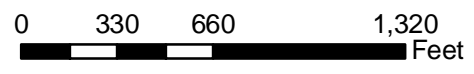
**No Concerns:** Scenery, Soils, Karst, Recreation, Heritage, Vegetation, Wildlife



# Central Kupreanof Alternative 4 Unit 205



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

<b>Unit # 206</b>	<b>Unit Size (acres): 84</b>	<b>Alternatives: 2, 3</b>
<b>Aerial Photo:</b> 1198-96, 1198-94	<b>VCU:</b> 4260	<b>Volume (mbf): 1,446</b>
<b>Land Use Designation:</b> Timber Production		

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel and cable / existing NFS road and new NFS road construction

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Streams 1-6 are Class IV HC0.  
Stream 7 is Class IV HC5.  
Stream 8 is Class I MM2/MC2.

**Response:** Streams 1-7: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 8: (MM2) No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel; (MC2) No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a, 13.9, 13.16).

**Resource Sensitive/Rare Plants**

**Concern:** Sensitive plant, Wright filmy fern (*Hymenophyllum wrightii*), found in unit.  
Two populations were found.

**Response:** No protection measures proposed.

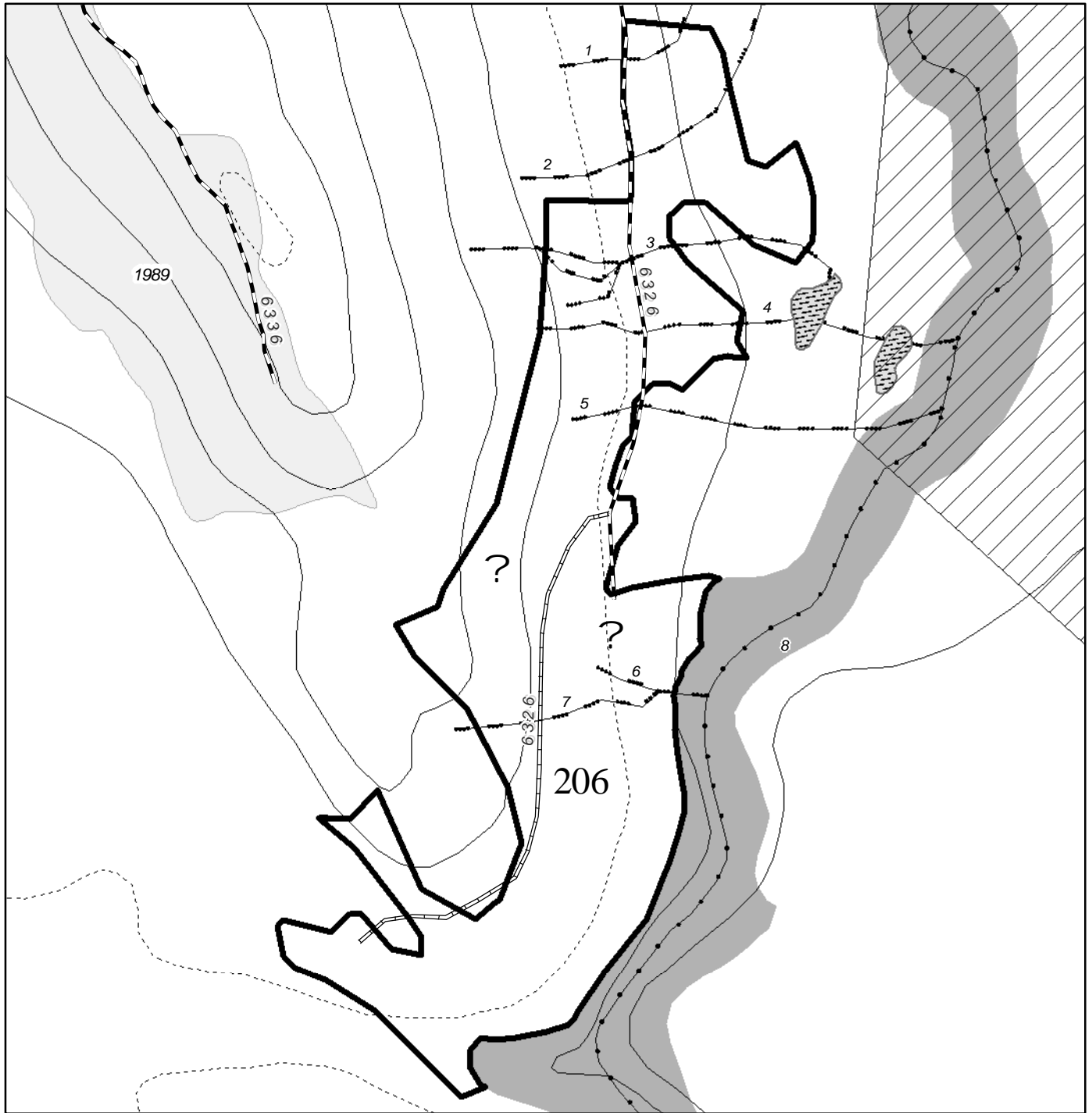
**Resource Wetlands**

**Concern:** Approximately 2 acres of harvest is proposed on forested wetland (BMP12.5).  
Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

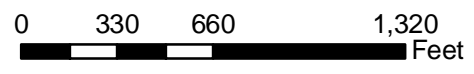
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit. (BMP 13.2, 13.9).

**No Concerns:** Scenery, Soils, Karst, Recreation, Heritage, Vegetation, Wildlife

# Central Kupreanof Alternative 2,3 Unit 206



- |                          |                                |                         |                         |
|--------------------------|--------------------------------|-------------------------|-------------------------|
| Proposed Unit            | Adjacent Proposed Unit         | Proposed NFS Roads      | Reconstructed Roads     |
| Helicopter Yarding       | Very High Hazard Soils (MMI-4) | Stream Value Class I    | Stream Value Class II   |
| Old-growth Reserve       | Managed Stands                 | Stream Value Class III  | Stream Value Class IV   |
| Riparian Management Area | Lakes                          | 100-ft Contour Interval | 500-ft Contour Interval |
| Open NFS Roads           | Sensitive Plants               | Project Area Boundary   | Rare Plants             |
| Closed Roads             |                                |                         |                         |
| Proposed Temporary Roads |                                |                         |                         |



### Central Kupreanof Unit Card Narrative

**Unit # 206**

**Unit Size (acres): 64**

**Alternative: 4**

**Aerial Photo:** 1198-96, 1198-94

**VCU:** 4260

**Volume (mbf): 1,101**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel and cable / existing NFS road

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Streams 1-6 are Class IV HC0.

Stream 7 is Class IV HC5.

Stream 8 is Class I MM2/MC2.

**Response:** Streams 1-7: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 8: (MM2) No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel; (MC2) No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a, 13.9, 13.16).

**Resource Sensitive/Rare Plants**

**Concern:** Two populations of sensitive plant, Wright filmy fern (*Hymenophyllum wrightii*), found in unit.

**Response:** No protection measures proposed.

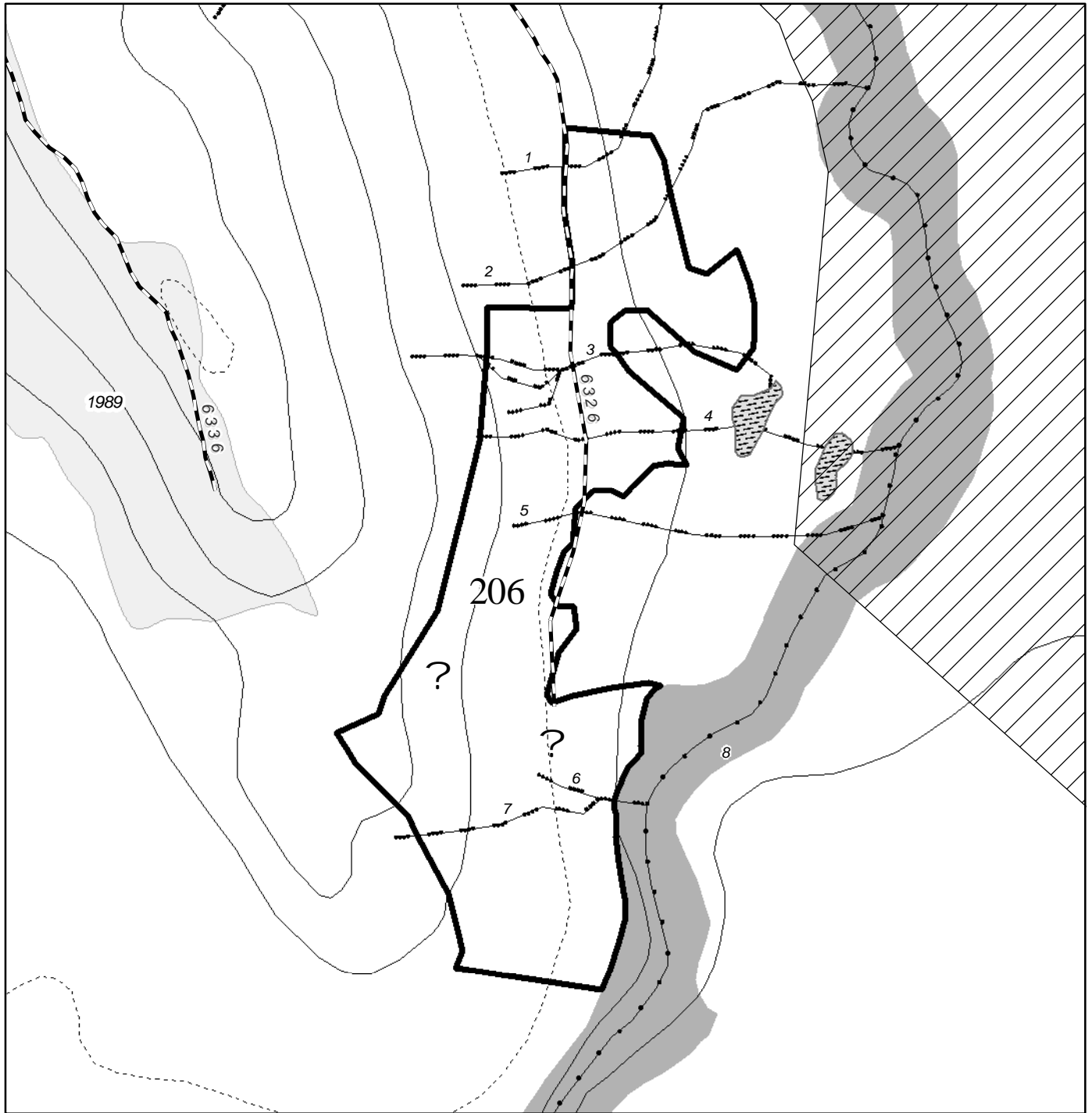
**Resource Wetlands**

**Concern:** Approximately 2 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

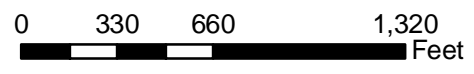
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit. Do not operate shovel in non-forested areas (BMP 13.2, 13.9)

**No Concerns:** Scenery, Soils, Karst, Recreation, Wildlife, Heritage, Vegetation

# Central Kupreanof Alternative 4 Unit 206



- |               |                        |                    |                                |                    |                |                          |       |                |              |                          |                    |                     |                      |                       |                        |                       |                         |                         |                       |                  |             |
|---------------|------------------------|--------------------|--------------------------------|--------------------|----------------|--------------------------|-------|----------------|--------------|--------------------------|--------------------|---------------------|----------------------|-----------------------|------------------------|-----------------------|-------------------------|-------------------------|-----------------------|------------------|-------------|
| Proposed Unit | Adjacent Proposed Unit | Helicopter Yarding | Very High Hazard Soils (MMI-4) | Old-growth Reserve | Managed Stands | Riparian Management Area | Lakes | Open NFS Roads | Closed Roads | Proposed Temporary Roads | Proposed NFS Roads | Reconstructed Roads | Stream Value Class I | Stream Value Class II | Stream Value Class III | Stream Value Class IV | 100-ft Contour Interval | 500-ft Contour Interval | Project Area Boundary | Sensitive Plants | Rare Plants |
|---------------|------------------------|--------------------|--------------------------------|--------------------|----------------|--------------------------|-------|----------------|--------------|--------------------------|--------------------|---------------------|----------------------|-----------------------|------------------------|-----------------------|-------------------------|-------------------------|-----------------------|------------------|-------------|



### Central Kupreanof Unit Card Narrative

**Unit # 207**

**Unit Size (acres):** 100

**Alternatives:** 2, 3

**Aerial Photo:** 1098-185

**VCU:** 4260

**Volume (mbf):** 1,857

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel and cable / existing NFS road and new NFS road construction

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** All Streams are Class IV HCO.

**Response:** "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**Resource Soils**

**Concern:** In the area surveyed slopes were between 65% and 75%.

**Response:** Partial suspension for area east of road to meet soil quality standards (BMP 14.8). Use timing restrictions during harvest to protect soils in this area (BMP 14.6).

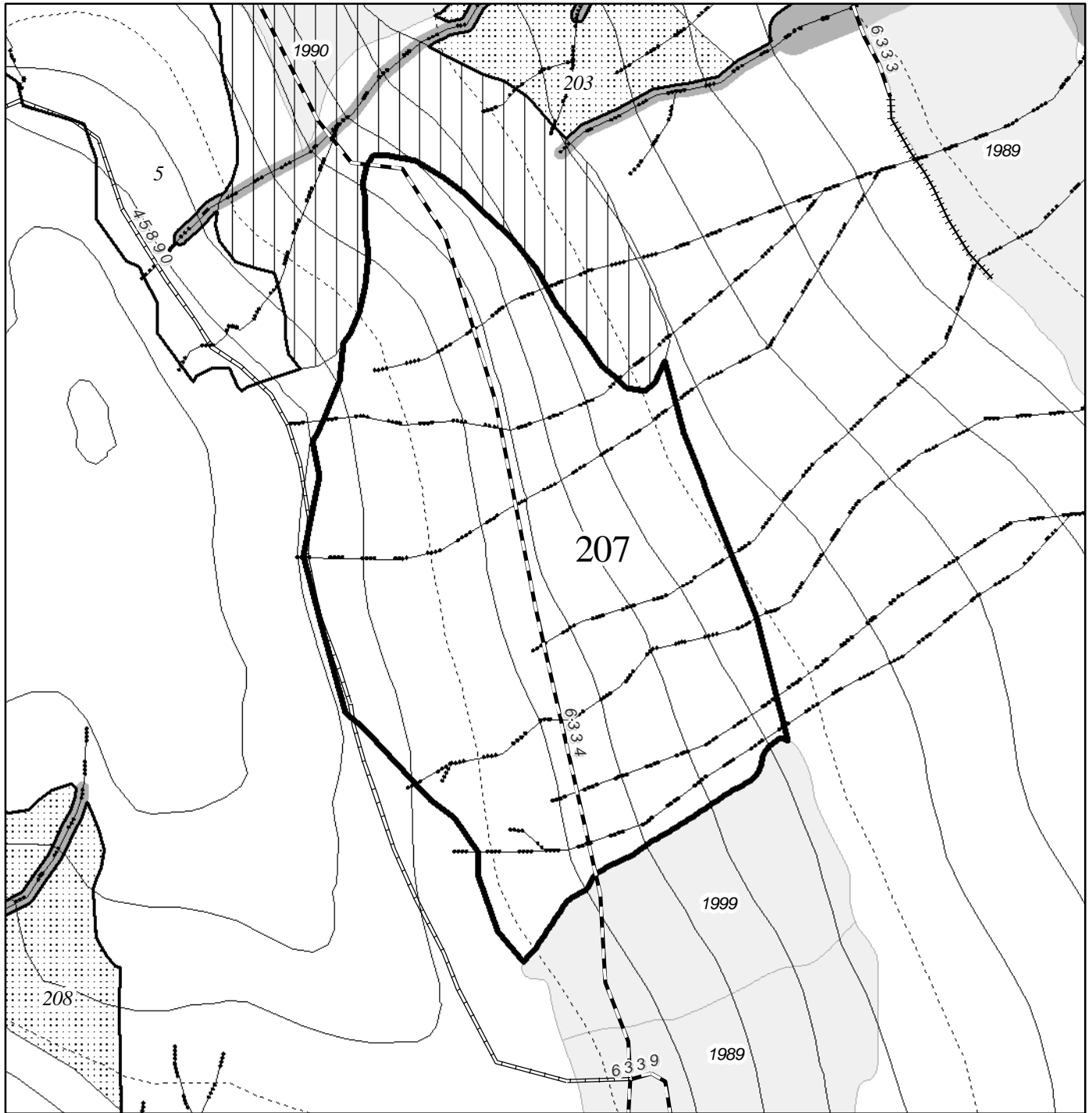
**Resource Wetlands**

**Concern:** Approximately 11 acres of harvest is proposed on forested and non-forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

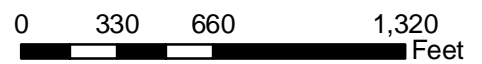
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit. Do not operate shovel in non-forested areas (BMP 13.2, 13.9).

**No Concerns:** Scenery, Recreation, Karst, Sensitive/Rare Plants, Vegetation, Wildlife, Heritage

# Central Kupreanof Alternative 2,3 Unit 207



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 207**

**Unit Size (acres): 75**

**Alternatives: 4**

**Aerial Photo:** 1098-185

**VCU:** 4260

**Volume (mbf): 1,429**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel and cable / existing NFS road

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** All Streams are Class IV HC0.

**Response:** "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**Resource Soils**

**Concern:** In the area surveyed slopes were between 65% and 75%.

**Response:** Partial suspension using timing restrictions during harvest for area east of road to meet soil quality standards (BMPs 14.6, 14.8).

**Resource Wetlands**

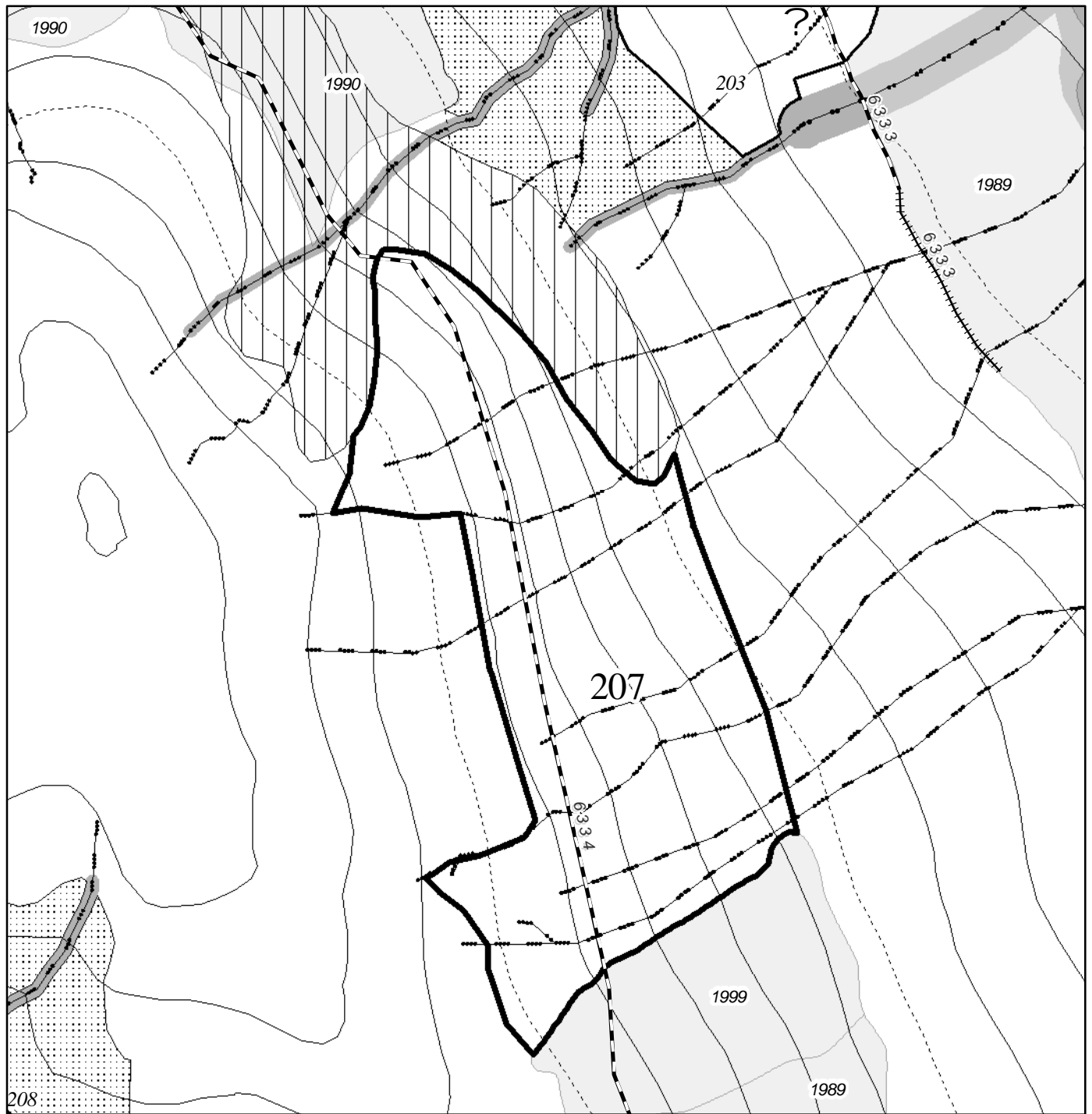
**Concern:** Approximately 6 acres of harvest is proposed on forested and non-forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit. Do not operate shovel in non-forested areas (BMP 13.2, 13.9).

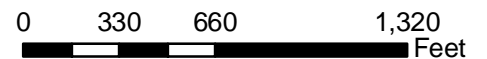
**No Concerns:** Scenery, Recreation, Karst, Sensitive/Rare Plants, Vegetation, Heritage, Wildlife



# Central Kupreanof Alternative 4 Unit 207



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Road      |
| Helicopter Yarding             | Stream Value Class I    |
| Old-growth Reserve             | Stream Value Class II   |
| Riparian Management Area       | Stream Value Class III  |
| Very High Hazard Soils (MMI-4) | Stream Value Class IV   |
| Lakes                          | 100-ft Contour Interval |
| Managed Stands                 | 500-ft Contour Interval |
| Closed Roads                   | Project Area Boundary   |
| Proposed Temporary Roads       | Sensitive Plants        |
| Open NFS Roads                 | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 208**

**Unit Size (acres): 67**

**Alternatives: 2, 3**

**Aerial Photo:** 1098-183, 1098-184, 1098-185  
**VCU:** 4271

**Volume (mbf): 960**

**Land Use Designation:** Modified Landscape

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut and uneven-aged management, single tree selection

**Logging Method/Transportation:** Shovel and cable (43 acres), helicopter (24 acres) /existing NFS road

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class III HC6.  
Stream 2 is Class II HC1.  
Streams 3, 4, and 7 are Class IV HC0.  
Stream 5 is Class III HC5.  
Stream 6 is Class II HC2.

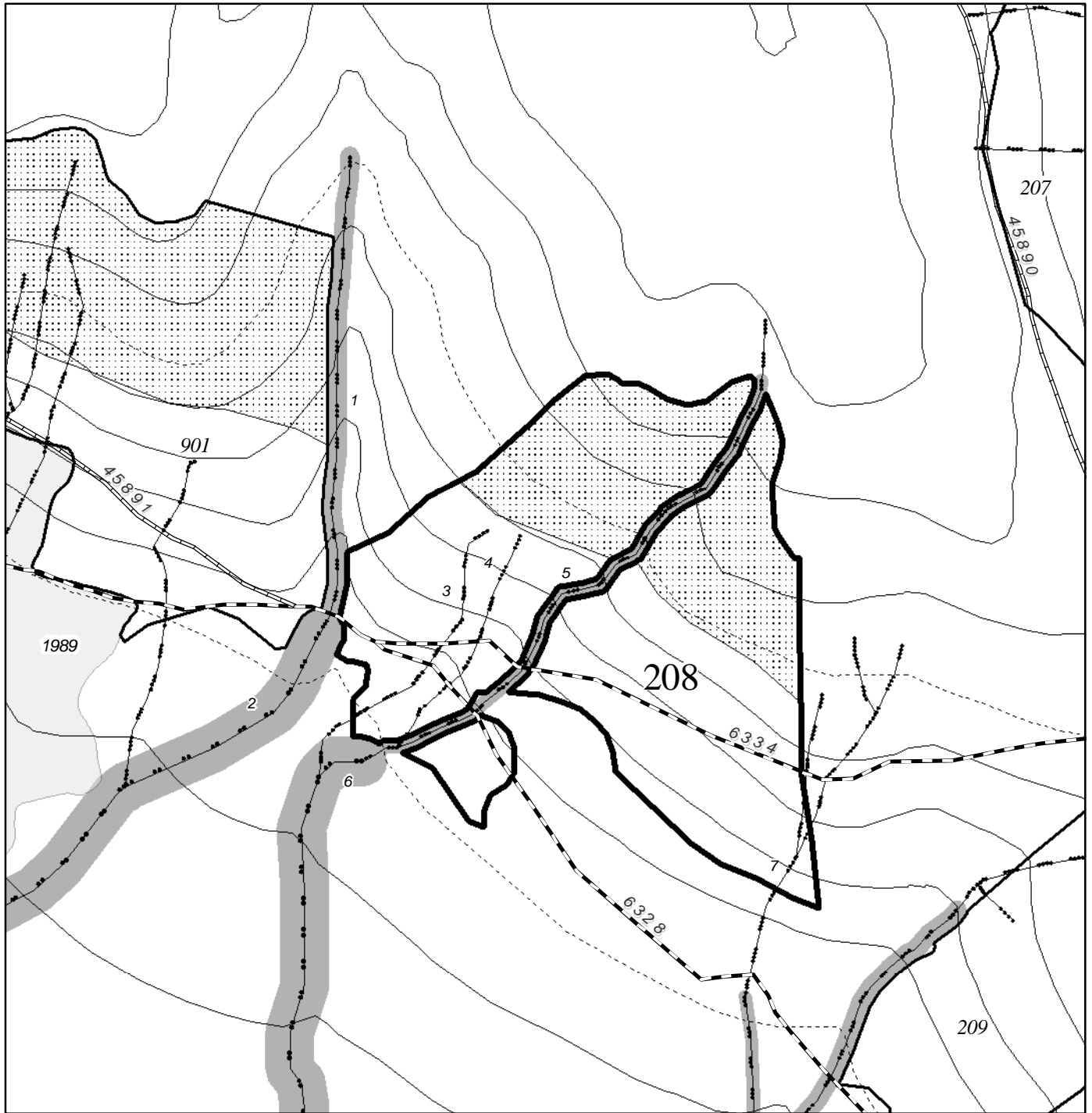
**Response:** Streams 1 and 5: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Streams 2 and 6: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMP 12.6, 12.6a).  
Streams 3, 4, and 7: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**Resource Scenery**

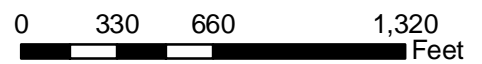
**Concern:** Unit visible in the middleground distance from Big John Bay.  
**Response:** Unit meets the Low Scenic Integrity Objective.

**No Concerns:** Soils, Recreation, Karst, Wetlands, Sensitive/Rare Plants, Vegetation, Heritage, Wildlife

# Central Kupreanof Alternative 2,3 Unit 208



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 208**

**Unit Size (acres): 43**

**Alternative: 4**

**Aerial Photo:** 1098-183, 1098-184, 1098-185  
**VCU:** 4271

**Volume (mbf): 788**

**Land Use Designation:** Modified Landscape

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel, cable / existing NFS road

**Resource Concerns & Responses**

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class III HC6.  
Stream 2 is Class II HC1.  
Streams 3, 4, and 7 are Class IV HC0.  
Stream 5 is Class III HC5.  
Stream 6 is Class II HC2.

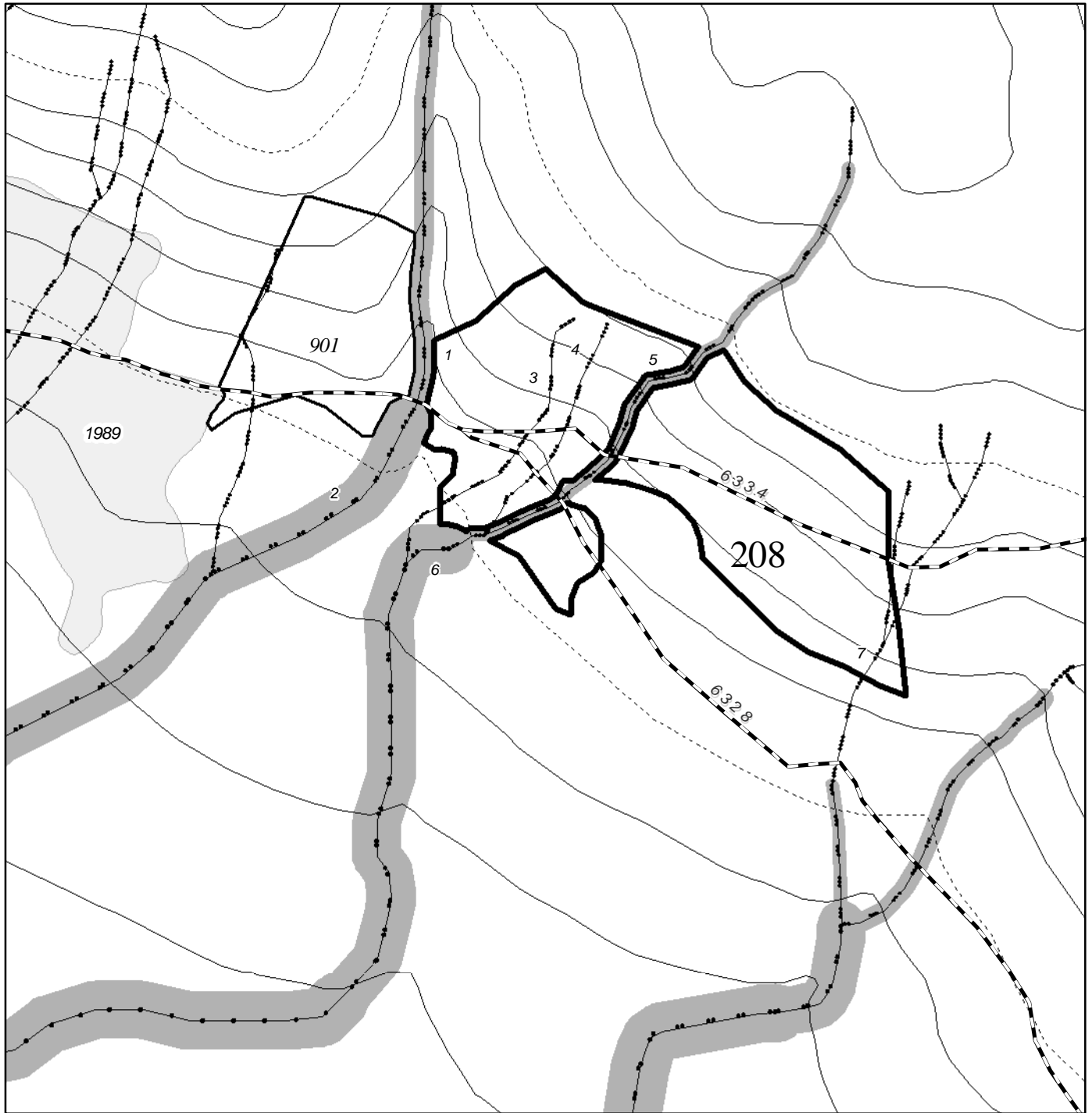
**Response:** Streams 1 and 5: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Streams 2 and 6: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMP 12.6, 12.6a).  
Streams 3, 4, and 7: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**Resource Scenery**

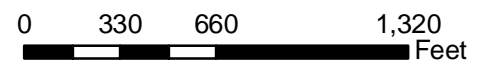
**Concern:** Unit visible in the middleground distance from Big John Bay.  
**Response:** Unit meets the Low Scenic Integrity Objective.

**No Concerns:** Soils, Recreation, Karst, Wetlands, Sensitive/Rare Plants, Vegetation, Wildlife, Heritage

# Central Kupreanof Alternative 4 Unit 208



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 209**

**Unit Size (acres): 39**

**Alternatives: 2, 3, 4**

**Aerial Photo:** 1098-183

**VCU:** 4271

**Volume (mbf): 635**

**Land Use Designation:** Modified Landscape

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut with reserves (10% area retention)

**Logging Method/Transportation:** Shovel and cable / existing NFS road and temporary road construction

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class III HC6.  
Streams 2, 3, and 4 are Class IV HC0.

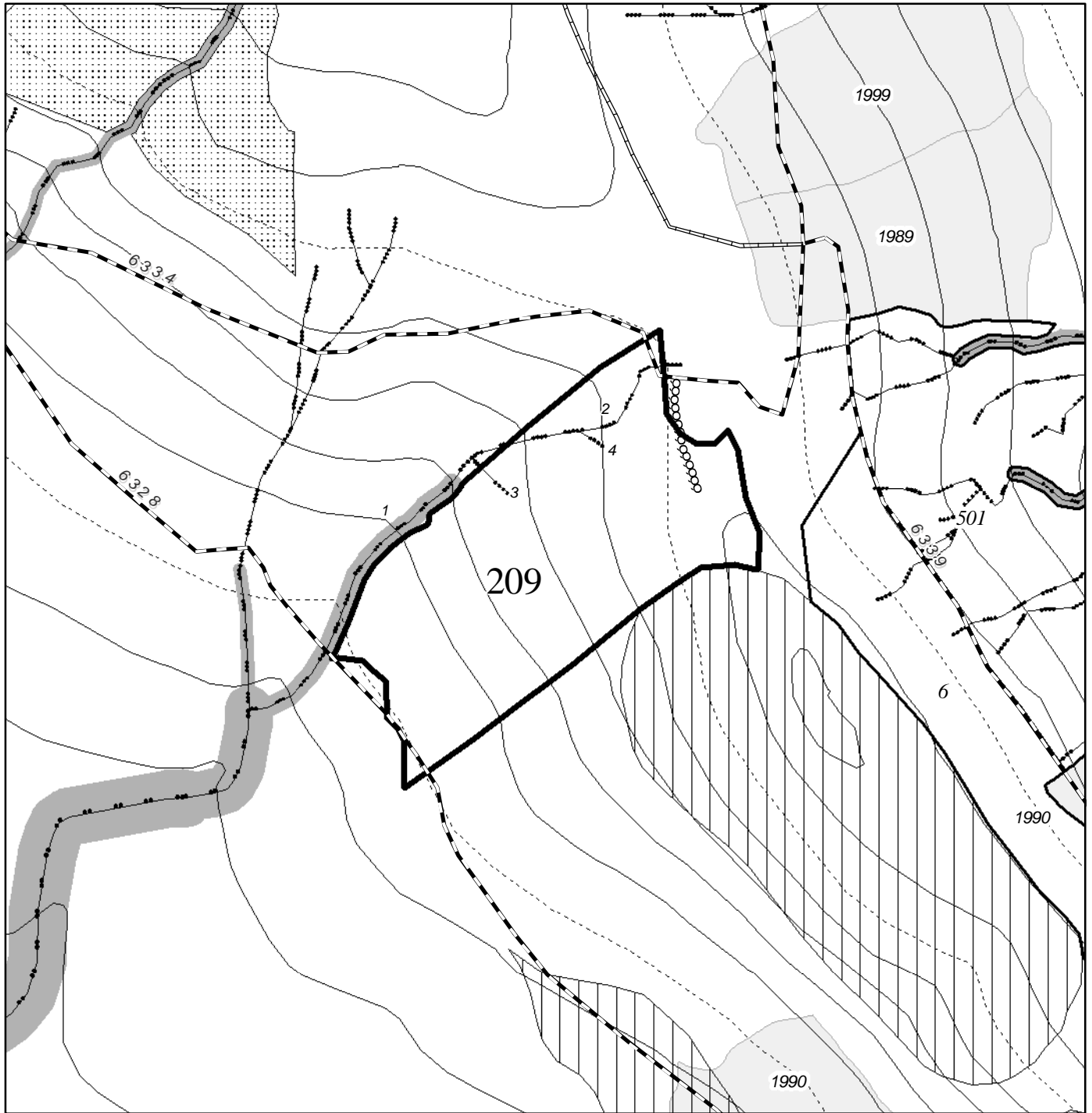
**Response:** Stream 1: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Streams 2, 3, and 4: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**Resource Scenery**

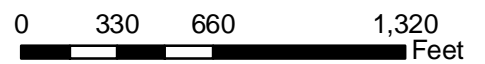
**Concern:** Unit visible in the middleground distance from Big John Bay.  
**Response:** With 10 percent area retention unit meets the Low Scenic Integrity Objective.

**No Concerns:** Soils, Recreation, Karst, Wetlands, Sensitive/Rare Plants, Wildlife, Heritage, Vegetation

# Central Kupreanof Alternative 2,3,4 Unit 209



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 214**

**Unit Size (acres): 9**

**Alternatives: 2, 3, 4**

**Aerial Photo:** 1598-45

**VCU:** 4290

**Volume (mbf):**129

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class II HC2.

Stream 2 is Class II HC2 and MM1.

Stream 3 is Class II HC2 and Class III HC2.

**Response:** Streams 1, 2, and 3 class II HC2 sections: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMP 12.6, 13.9, 13.16).

Stream 2 MM1 section: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

Stream 3 class III HC2 section: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

**Resource Wetlands**

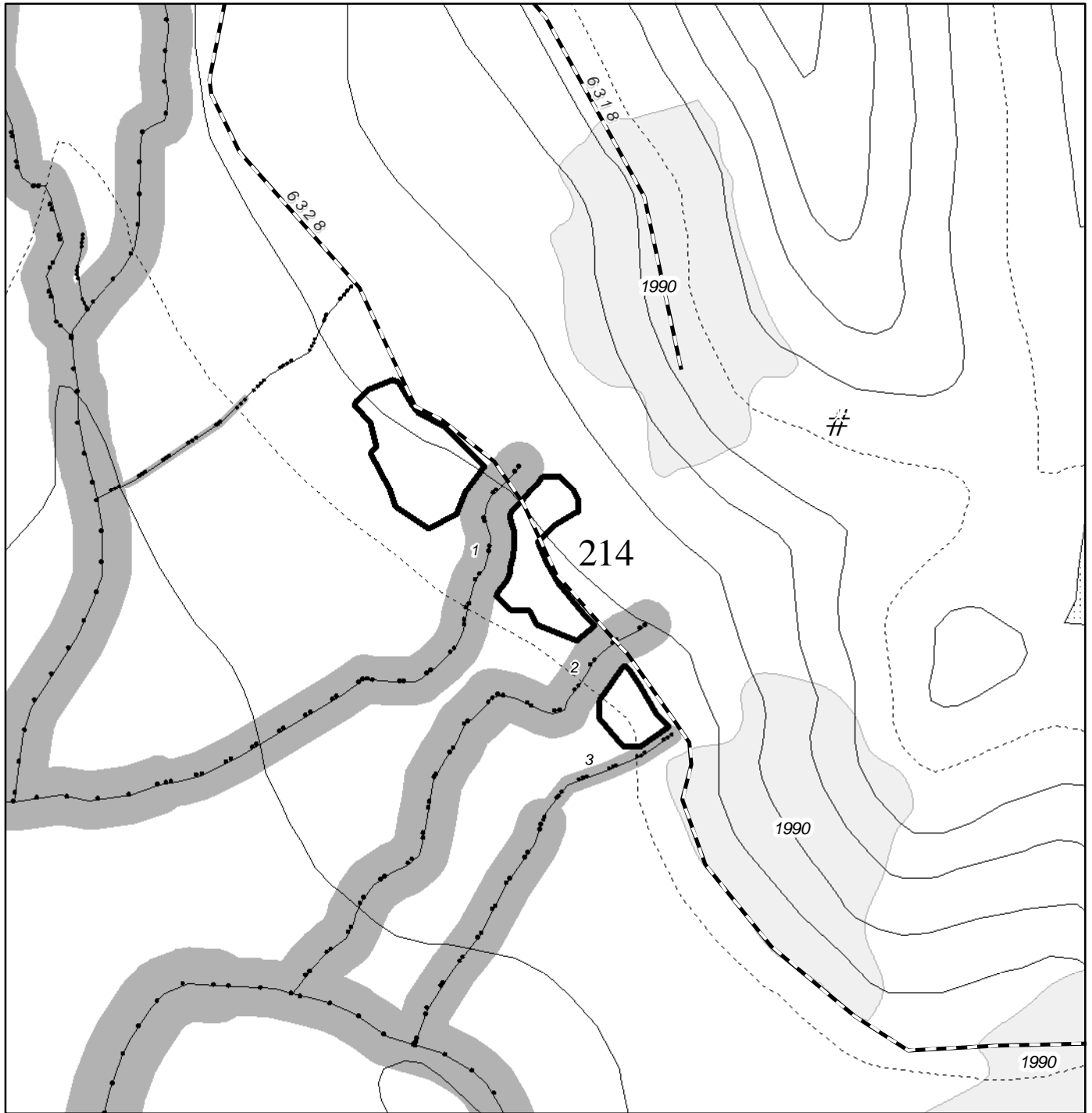
**Concern:** Approximately 9 acres of harvest is proposed on forested and non-forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit. Do not operate shovel in non-forested areas (BMP 13.2, 13.9).

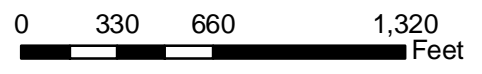
**No Concerns:** Scenery, Soils, Karst, Recreation, Sensitive/Rare Plants, Vegetation, Wildlife, Heritage



# Central Kupreanof Alternative 2,3,4 Unit 214



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 215**

**Unit Size (acres): 38**

**Alternatives: 2, 3**

**Aerial Photo:** 1598-46

**VCU:** 4290

**Volume (mbf): 734**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / new NFS road construction

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** All streams are Class IV HC0.

**Response:** "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream (BMP 13.9, 13.16).

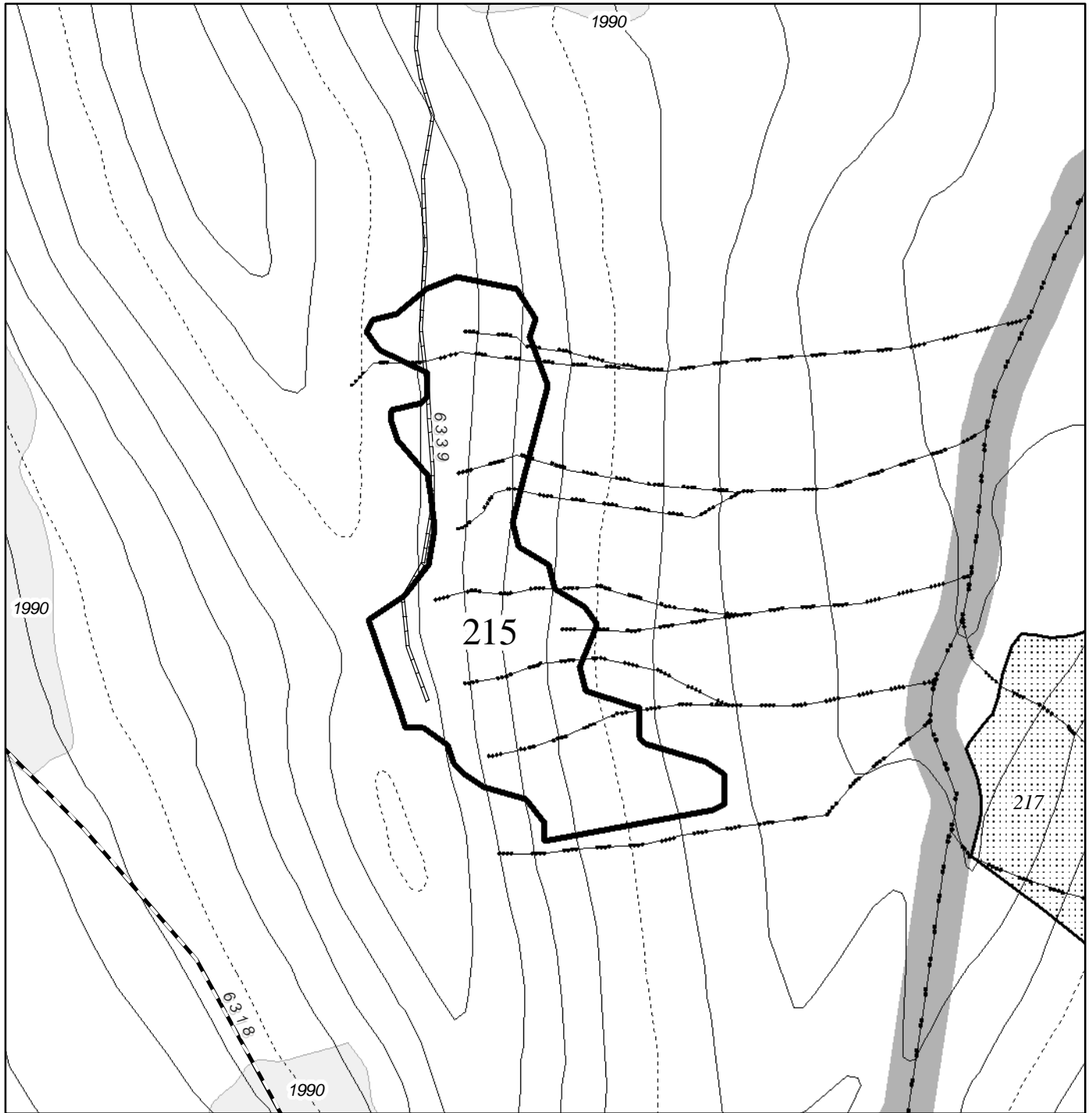
**Resource Wetlands**

**Concern:** Approximately 2 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

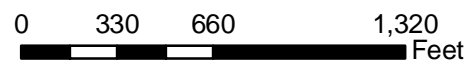
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

**No Concerns:** Scenery, Soils, Karst, Recreation, Sensitive/Rare Plants, Vegetation, Wildlife, Heritage

# Central Kupreanof Alternative 2,3 Unit 215



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 216**

**Unit Size (acres): 32**

**Alternatives: 2, 3**

**Aerial Photo:** 1598-46

**VCU:** 4260

**Volume (mbf): 256**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Uneven-aged management, single tree selection

**Logging Method/Transportation:** Helicopter / existing NFS Road 6328

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class II HC3.  
Stream 2 Class IV HC5.  
Streams 3 and 4 are Class III HC5.  
Stream 5 is Class IV HC0.

**Response:** Stream 1: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMP 12.6, 12.6a).  
Streams 2 and 5: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Streams 3 and 4: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

**Resource Soils**

**Concern:** Steep slopes in northeast portion of unit.  
**Response:** No road construction. Unit will be helicopter yarded, using full suspension to meet soil quality standards (BMP 13.9).

**Resource Sensitive/Rare Plants**

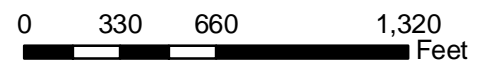
**Concern:** Rare plant, Broad-leaved twayblade (*Listera convallarioides*), found in proposed road corridor to unit.  
**Response:** No road construction; unit will be helicopter yarded, population protected.

**No Concerns:** Scenery, Recreation, Wetlands, Karst, Wildlife, Heritage, Vegetation

# Central Kupreanof Alternative 2,3 Unit 216



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 217**

**Unit Size (acres): 62**

**Alternative: 3**

**Aerial Photo:** 1598-46

**VCU:** 4260

**Volume (mbf): 403**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Uneven-aged management, single tree selection

**Logging Method/Transportation:** Helicopter / new NFS road (Unit 215)

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class II HC3.

Streams 2-6 are Class IV HC0.

**Response:** Stream 1: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMP 12.6, 12.6a).

Stream 2-6: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**Resource Soils**

**Concern:** Identified new slides in unit between 800 and 1000 feet elevation in SW section of unit.

**Response:** No road construction. Unit will be helicopter yarded using full suspension to meet soil quality standards (13.9).

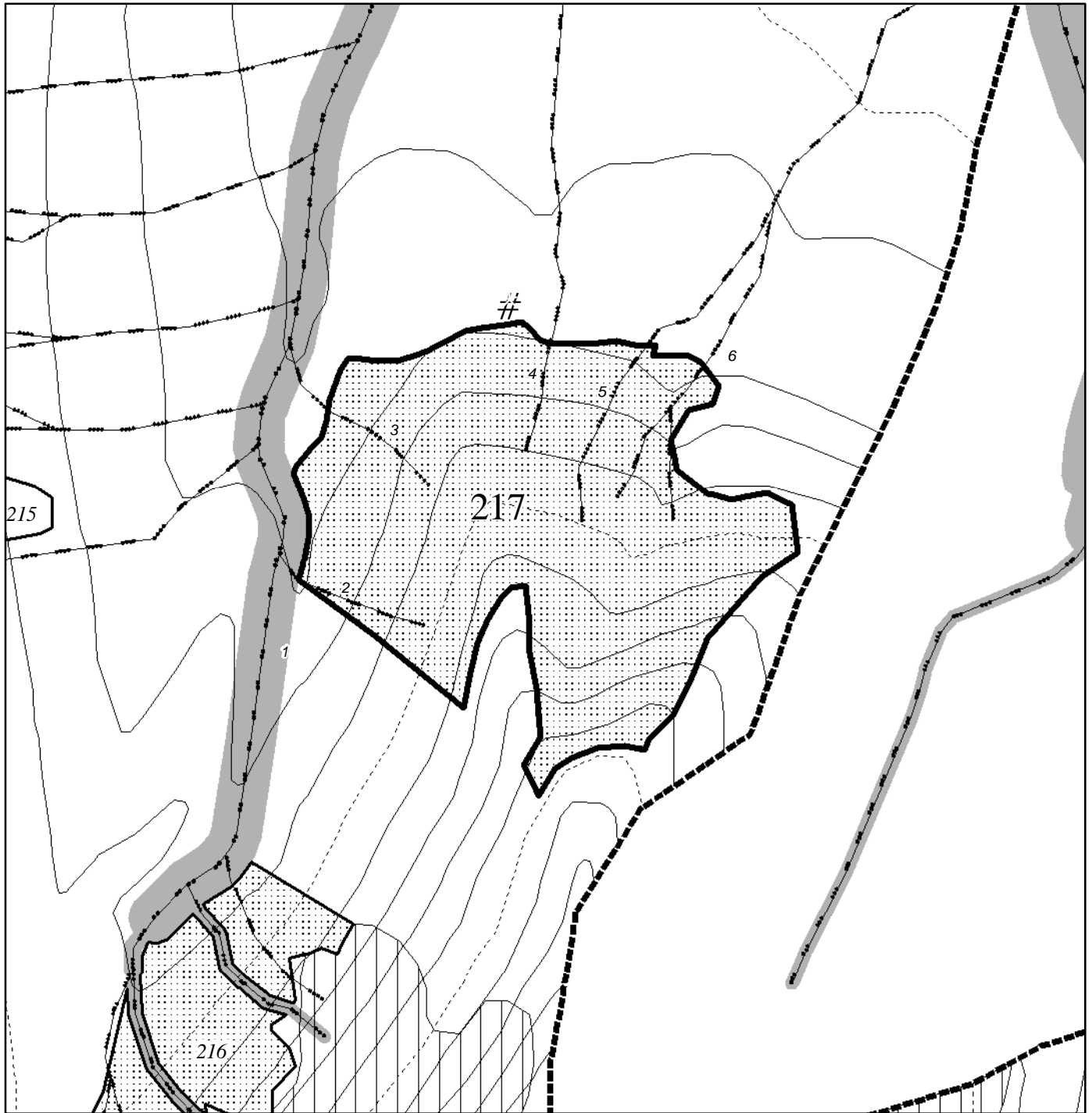
**Resource Sensitive/Rare Plants**

**Concern:** Rare plant, Broad-leaved twayblade (*Listera convallarioides*), found just north of unit.

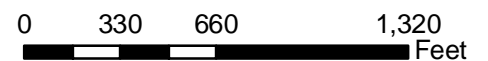
**Response:** Timber will be felled into unit away from the plant population.

**No Concerns:** Scenery, Recreation, Wetlands, Karst, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 3 Unit 217



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 218**

**Unit Size (acres): 26**

**Alternatives: 2, 3**

**Aerial Photo:** 1098-178

**VCU:** 4290

**Volume (mbf): 338**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut and uneven-aged management, single tree selection

**Logging Method/Transportation:** Shovel and cable (17 acres), helicopter (9 acres)/reconstructed road and temporary road construction.

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class II HC2.  
Stream 2 is Class IV HC0.  
Stream 3 is Class IV HC3.  
Streams 4 and 5 are Class IV HC2.

**Response:** Stream 1: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMP 12.6, 12.6a).  
Streams 2-5: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

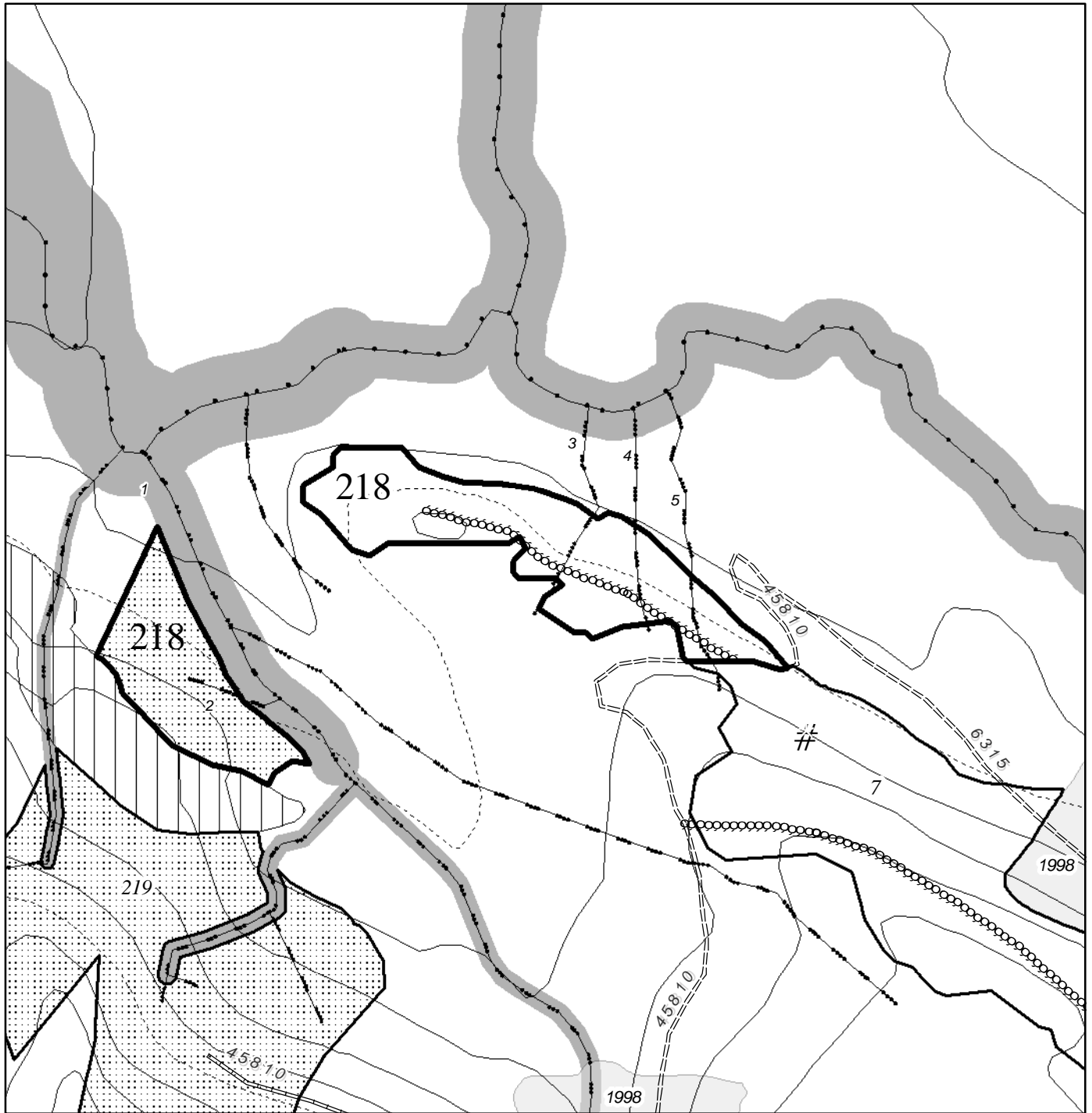
**Resource Soils**

**Concern:** In northern section of the unit there are 60 to 100 foot cliffs.  
**Response:** Construct road as far into the unit as possible. Seed area after road construction to minimize erosion BMP 14.8).

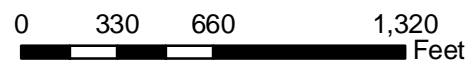
**No Concerns:** Scenery, Wetlands, Karst, Recreation, Sensitive/Rare Plants, Vegetation, Wildlife, Heritage



# Central Kupreanof Alternative 2,3 Unit 218



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 219**

**Unit Size (acres): 48**

**Alternatives: 2, 3**

**Aerial Photo: 1098-178**

**VCU: 4290**

**Volume (mbf): Alt. 2-362, Alt. 3-653**

**Land Use Designation: Timber Production**

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut and uneven-aged management, single tree selection.

**Logging Method/Transportation:** Cable (25 acres), helicopter (23 acres) / Alt. 2: reconstruct NFS road 6315; Alt. 3: new NFS road construction, reconstruct NFS road 6315 and road 45810.

### Resource Concerns & Responses

#### Resource Fisheries/Watershed

**Concern:** Stream 1 is Class III HC2.  
Streams 2 and 3 are Class IV HC5.  
Stream 4 is Class IV HC2.  
Stream 5 is Class III HC5.  
Stream 6 is Class IV MM0.

**Response:** Streams 1 and 5: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Streams 2-4 and 6: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

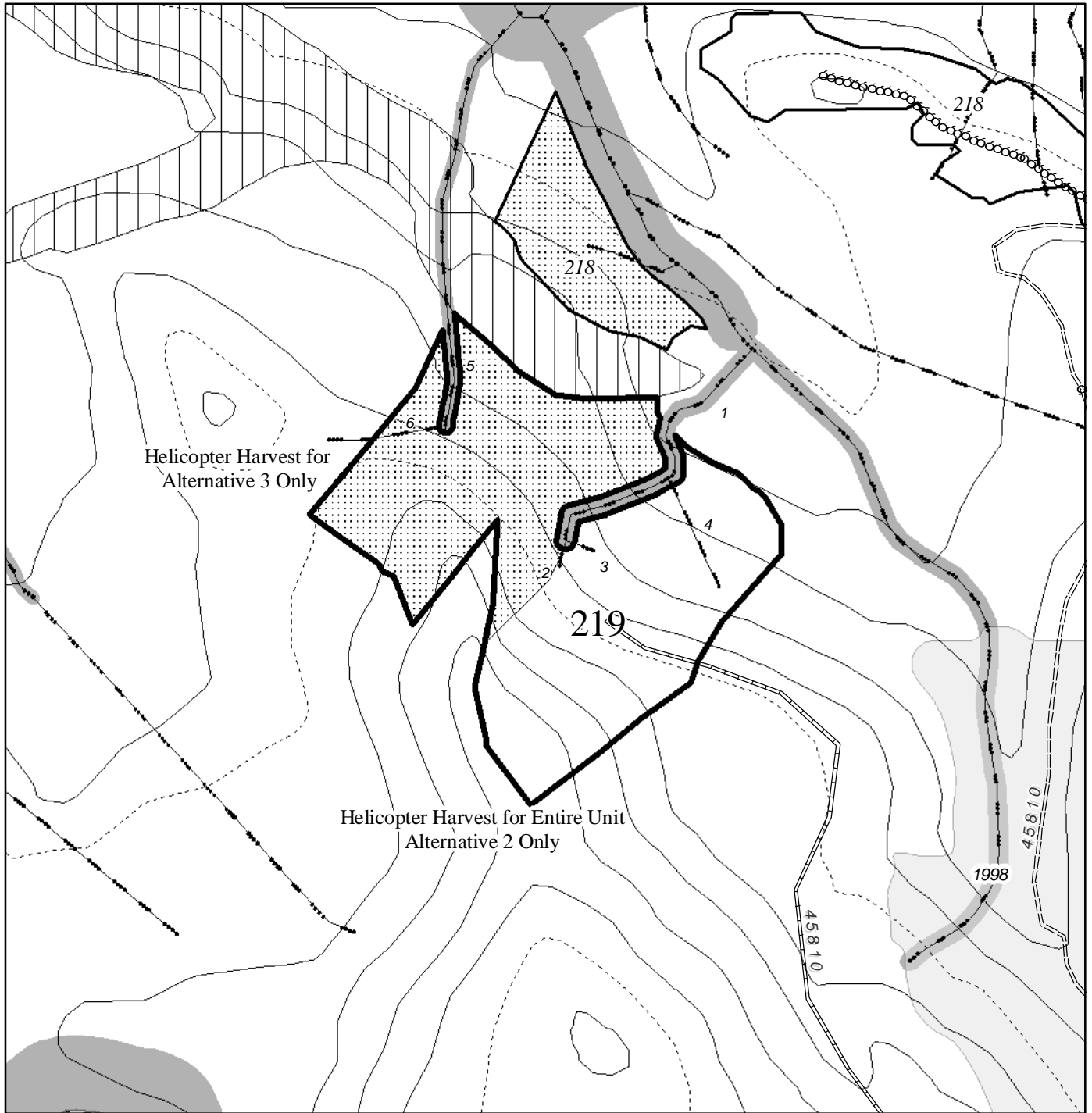
#### Resource Soils

**Concern:** Identified areas with 100 ft cliffs on southwest boundary of the unit and areas with slope gradients ranging from 76 to 105%.

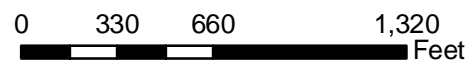
**Response:** Unit boundary was modified to avoid this area (BMP 13.5). No roads will be constructed in the western portion of the unit. Full suspension will be achieved by helicopter yarding in western portion and partial suspension will be achieved in the eastern portion to meet soil quality standards (BMP 13.9).

**No Concerns:** Scenery, Recreation, Wetlands, Karst, Sensitive/Rare Plants, Heritage, Wildlife, Vegetation

# Central Kupreanof Alternative 2,3 Unit 219



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 221**

**Unit Size (acres): 34**

**Alternative: 3**

**Aerial Photo:**

**VCU: 4271**

**Volume (mbf): 565**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel/new NFS road construction, temporary road.

#### Resource Concerns & Responses

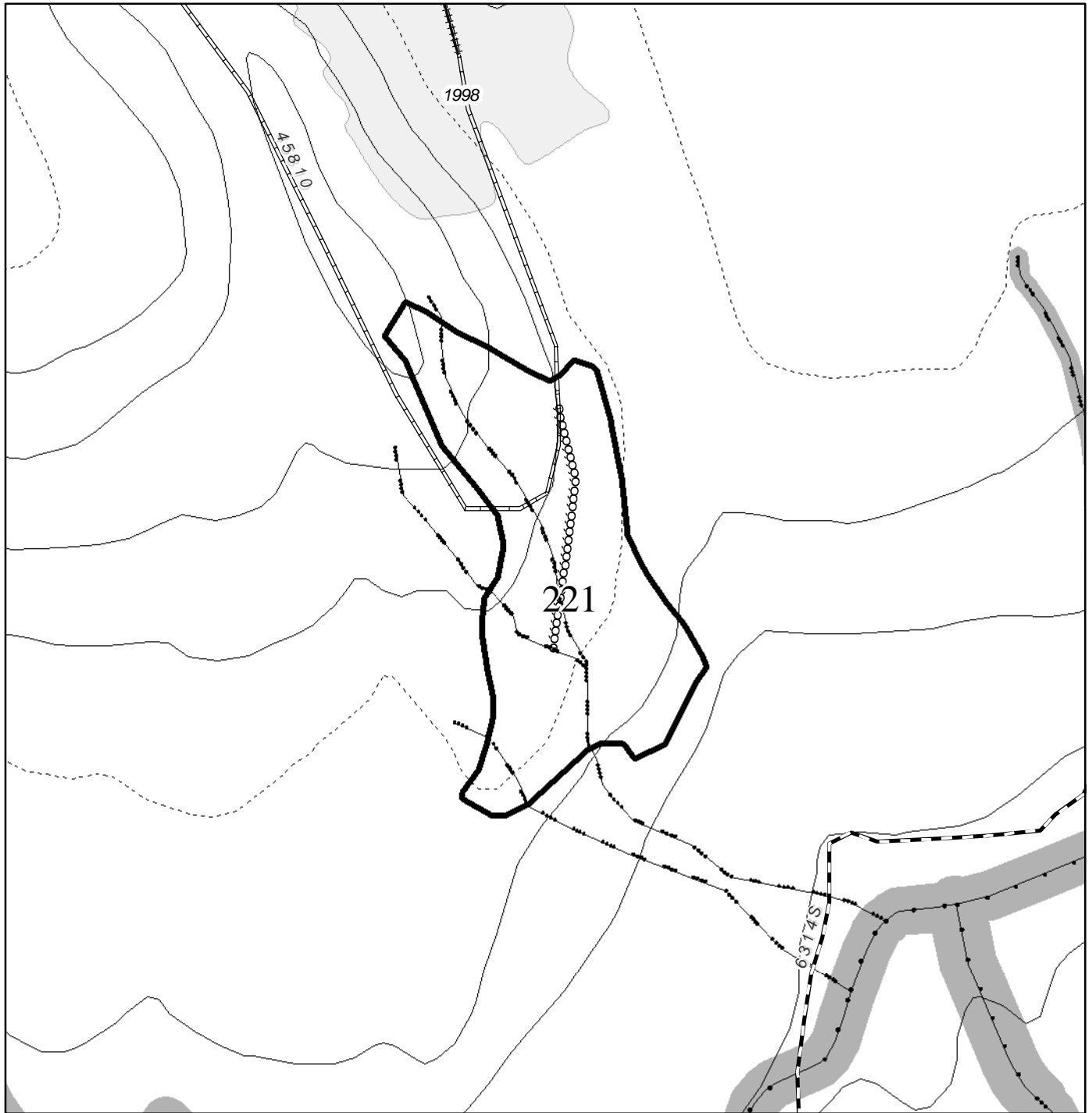
**Resource Fisheries/Watershed**

**Concern:** Streams are Class IV HCO.

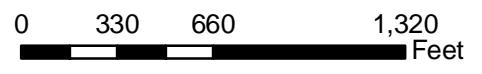
**Response:** "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**No Concerns:** Scenery, Recreation, Soils, Wetlands, Karst, Sensitive/Rare Plants, Heritage, Wildlife, Vegetation

# Central Kupreanof Alternative 3 Unit 221



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 222**

**Unit Size (acres): 19**

**Alternatives: 2, 3**

**Aerial Photo:**

**VCU: 4290**

**Volume (mbf): Alt. 2-122, Alt. 3-342**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Alt. 2: uneven-aged management, single tree selection, Alt 3: even-aged management, clearcut.

**Logging Method/Transportation:** Alt. 2: helicopter (19 acres) / existing NFS road. Alt. 3: shovel and cable (19 acres) / new NFS road construction and temporary road construction.

#### Resource Concerns & Responses

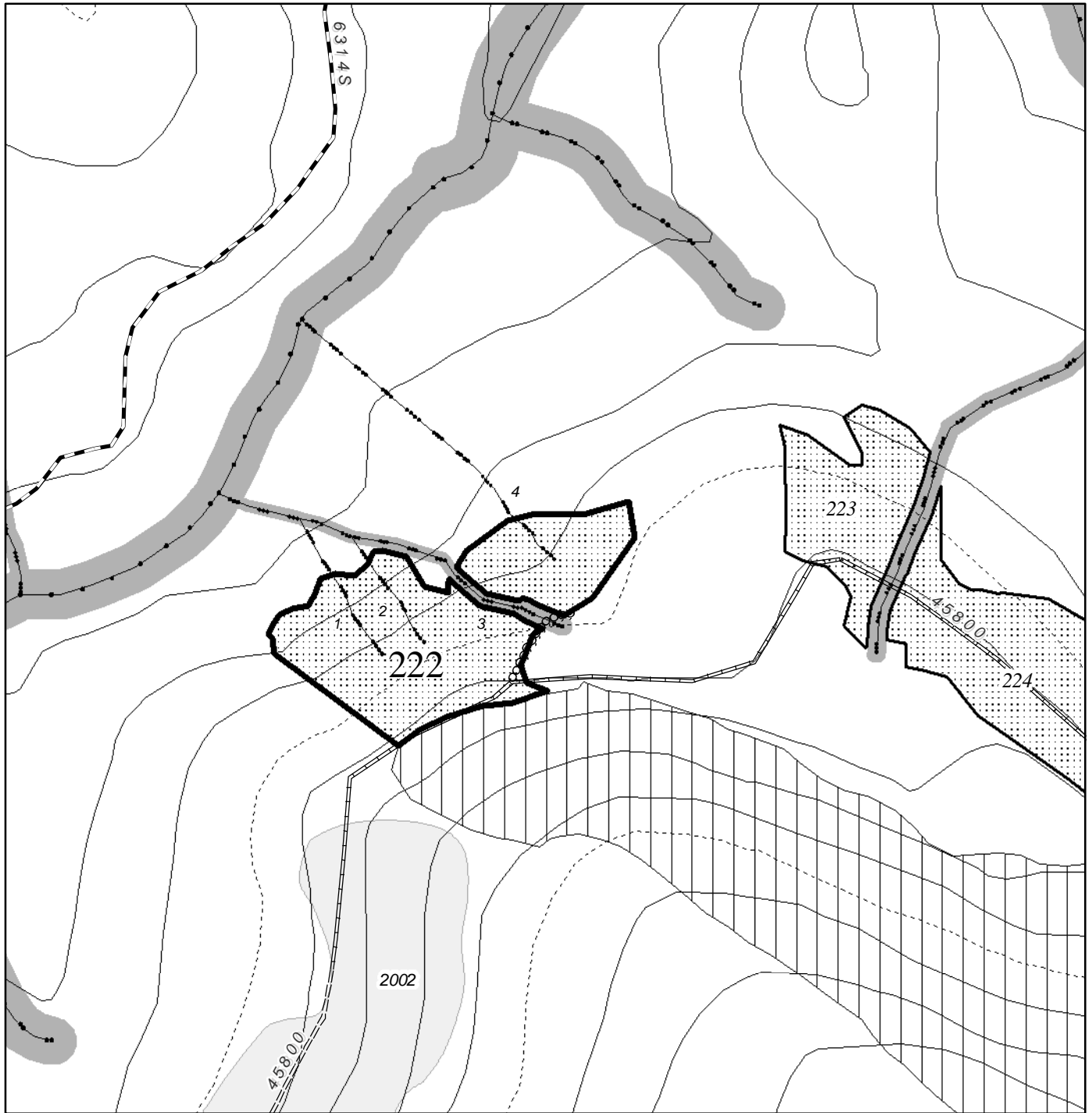
**Resource Fisheries/Watershed**

**Concern:** Streams 1, 2, and 4 are Class IV HC0. Stream 3 is Class III HC5 and HC6.

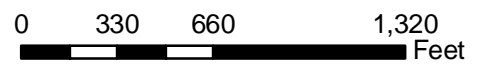
**Response:** Streams 1, 2, and 4: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16). Stream 3: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

**No Concerns:** Scenery, Soils, Wetlands, Karst, Recreation, Sensitive/Rare Plants, Vegetation, Wildlife, Heritage

# Central Kupreanof Alternative 2,3 Unit 222



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 223**

**Unit Size (acres):** 9

**Alternatives:** 2, 3

**Aerial Photo:**

**VCU:** 4290

**Volume (mbf):** Alt.2 - 48,  
Alt.3 - 144

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Alt. 2: uneven-aged management, single tree selection, Alt 3: even-aged management, clearcut.

**Logging Method/Transportation:** Alt. 2 helicopter (9 acres) / existing NFS road. Alt. 3: shovel and cable (9 acres) / new NFS road construction.

### Resource Concerns & Responses

**Resource Fisheries/Watershed**

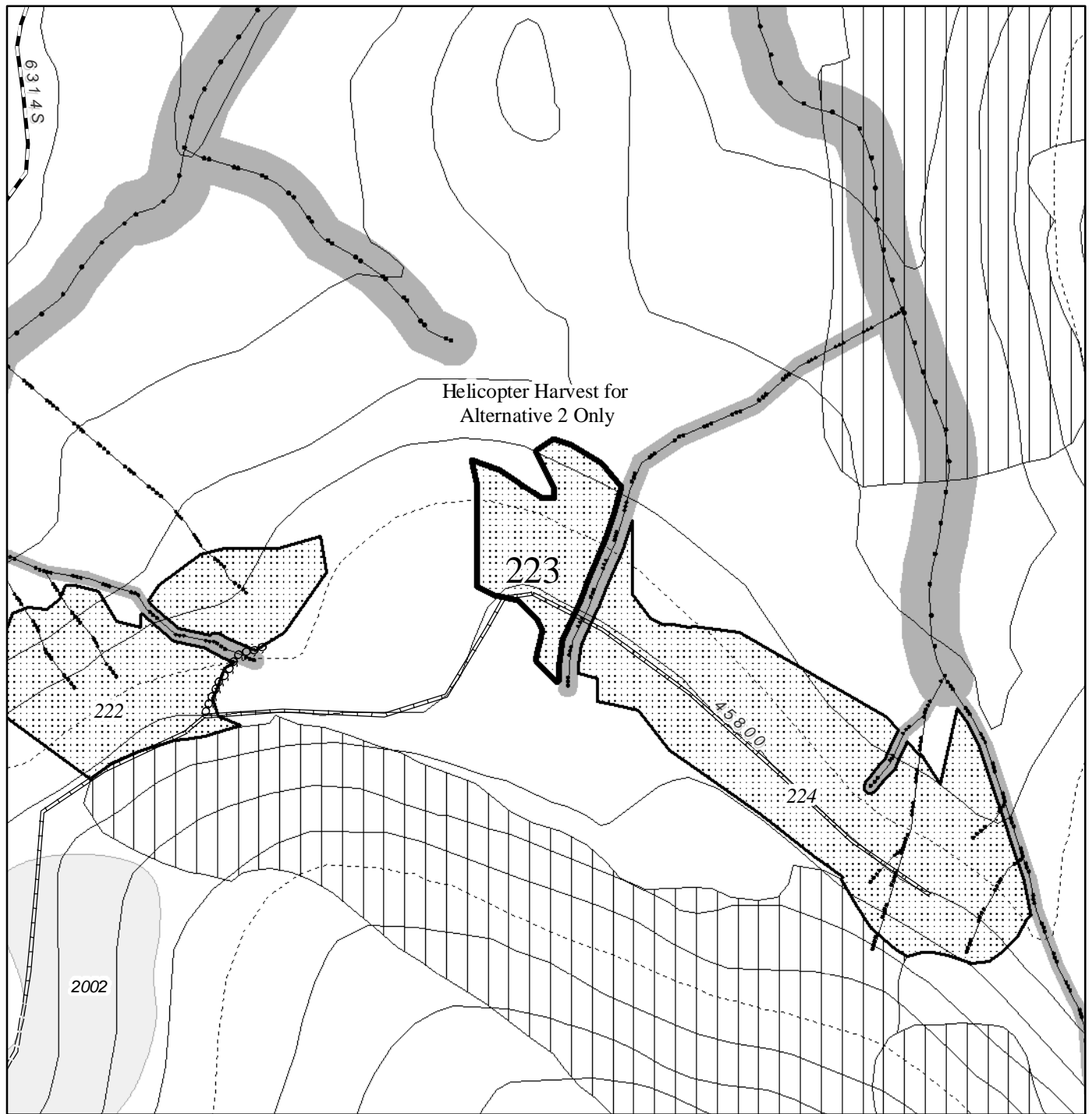
**Concern:** Stream is Class III HC6.

**Response:** "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

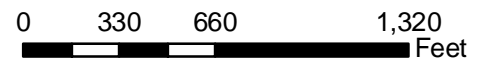
**No Concerns:** Scenery, Soils, Wetlands, Karst, Recreation, Sensitive/Rare Plants, Wildlife, Vegetation, Heritage



# Central Kupreanof Alternative 2,3 Unit 223



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

<b>Unit # 224</b>	<b>Unit Size (acres): 32</b>	<b>Alternatives: 2, 3</b>
<b>Aerial Photo:</b>	<b>VCU: 4290</b>	<b>Volume (mbf): Alt.2 - 197, Alt.3 - 565</b>
<b>Land Use Designation:</b> Timber Production		

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Alt. 2: uneven-aged management, single tree selection; Alt 3: even-aged management, clearcut.

**Logging Method/Transportation:** Alt. 2 helicopter (32 acres) / existing NFS road. Alt. 3: shovel and cable (32 acres) / new NFS road construction

### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class III HC6.  
Streams 2 and 6 are Class III HC5.  
Streams 3-5 are Class IV HC0.

**Response:** Streams 1, 2, and 6: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Streams 3-5: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

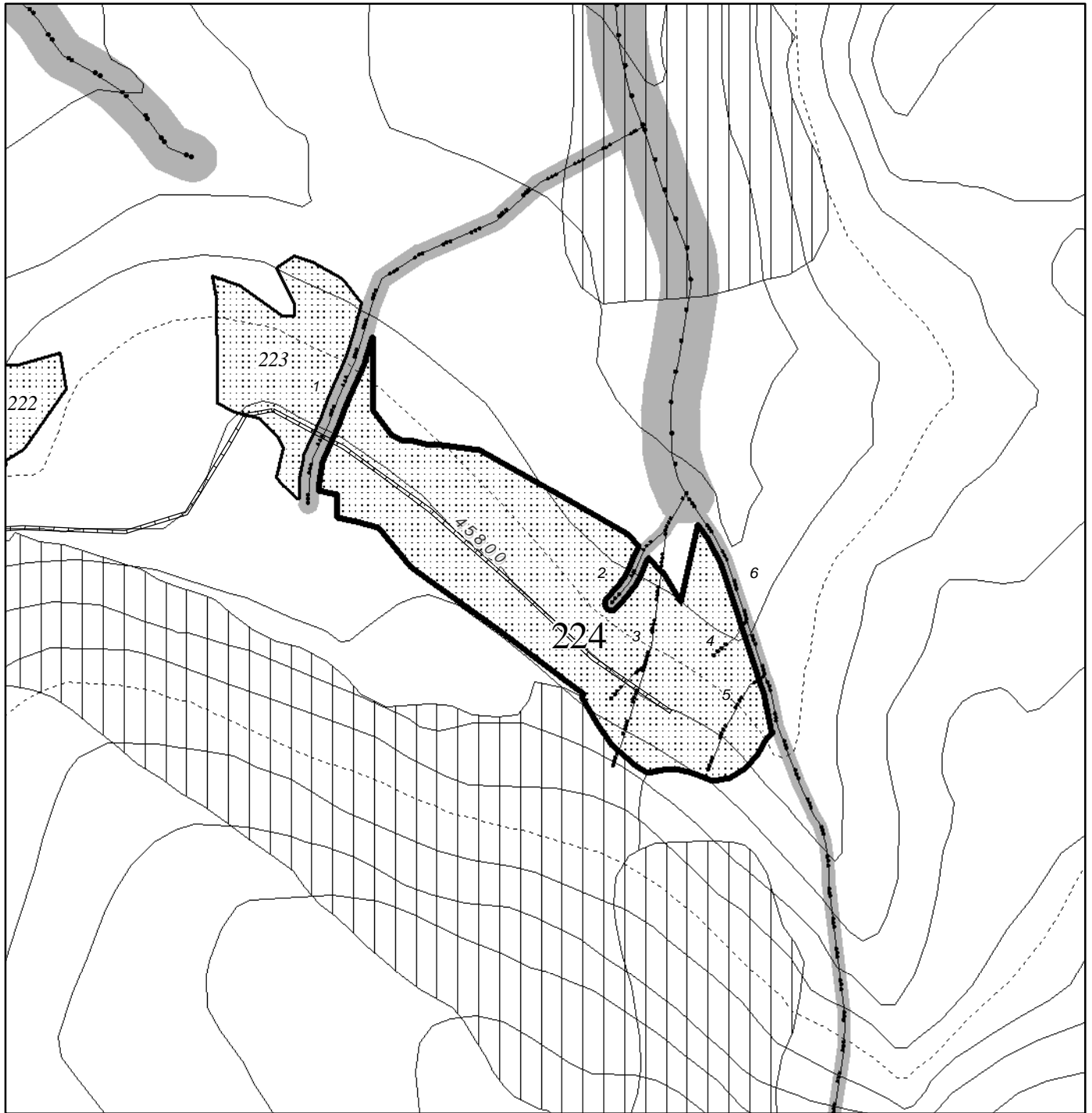
**Resource Wetlands**

**Concern:** Approximately 3 acres of harvest is proposed on forested and non-forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

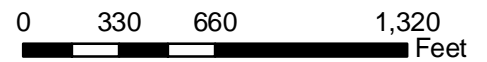
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit. Do not operate shovel in non-forested areas (BMP 13.2, 13.9).

**No Concerns:** Scenery, Soils, Karst, Recreation, Sensitive/Rare Plants, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 2,3 Unit 224



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 229**

**Unit Size (acres): 26**

**Alternatives: 2, 3, 4**

**Aerial Photo:**

**VCU: 4290**

**Volume (mbf): 451**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel and cable / existing NFS road

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** All streams within the unit are Class IV HC0.

**Response:** "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**Resource Soils**

**Concern:** Unstable soils located uphill of originally proposed unit.

**Response:** Unit boundary modified to avoid unstable soils (BMP 13.5).

**Resource Sensitive/Rare Plants**

**Concern:** Rare plant, Northern wild-licorice (*Galium kamtschaticum*), found in unit.

**Response:** No protection measures proposed.

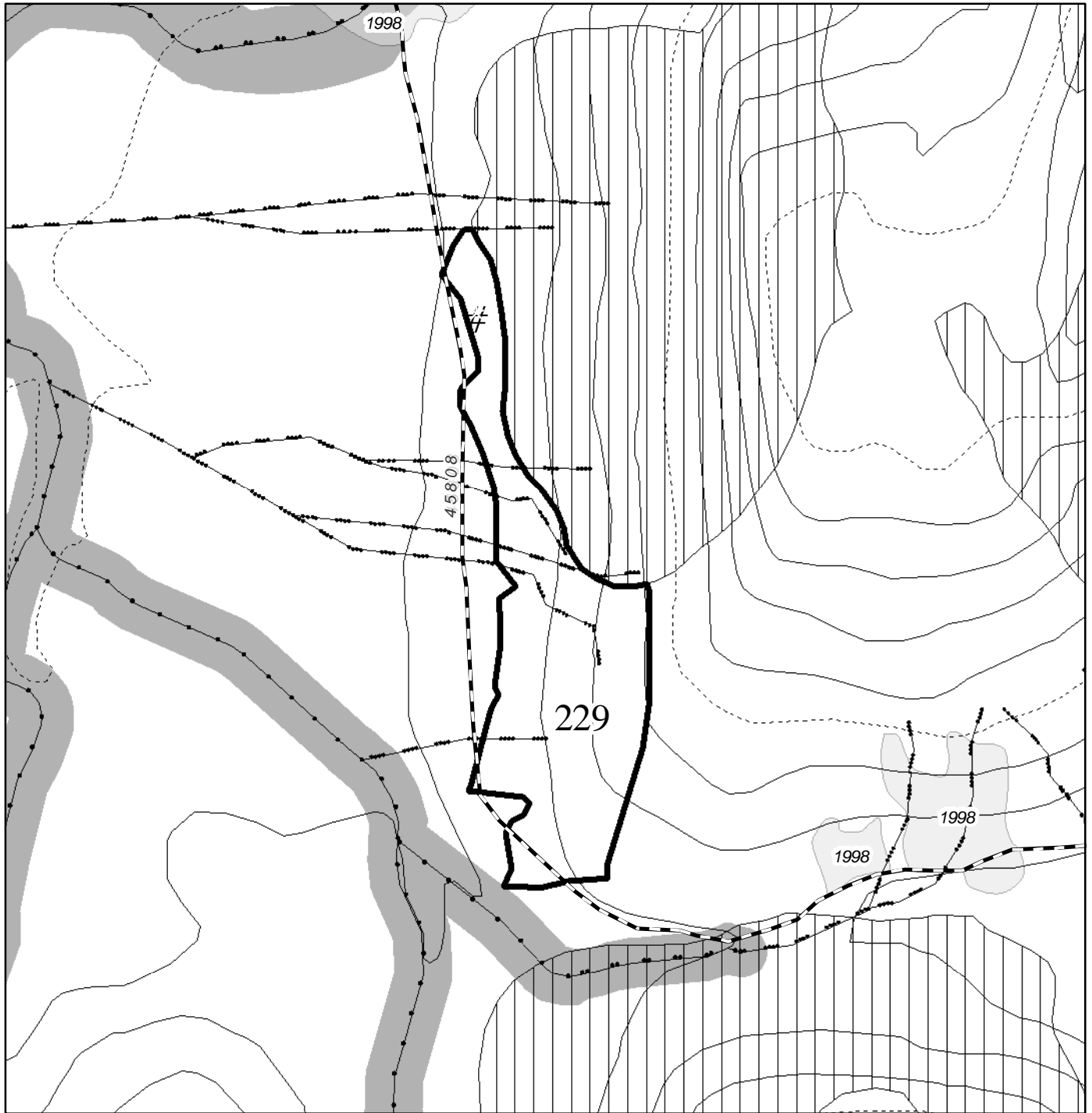
**Resource Wetlands**

**Concern:** Approximately 3 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

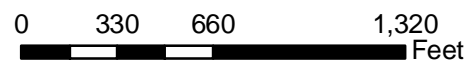
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

**No Concerns:** Scenery, Wetlands, Karst, Recreation, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 2,3,4 Unit 229



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 230**

**Unit Size (acres): 9**

**Alternatives: 2, 3, 4**

**Aerial Photo:**

**VCU: 4380**

**Volume (mbf): 109**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / existing NFS road

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class IV HC0

Stream 2 is Class III HC5

**Response:** Stream 1: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 2: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

**Resource Soils**

**Concern:** Slopes above 72 percent were identified uphill of proposed unit.

**Response:** Unit boundary modified to avoid this area (BMP 13.5).

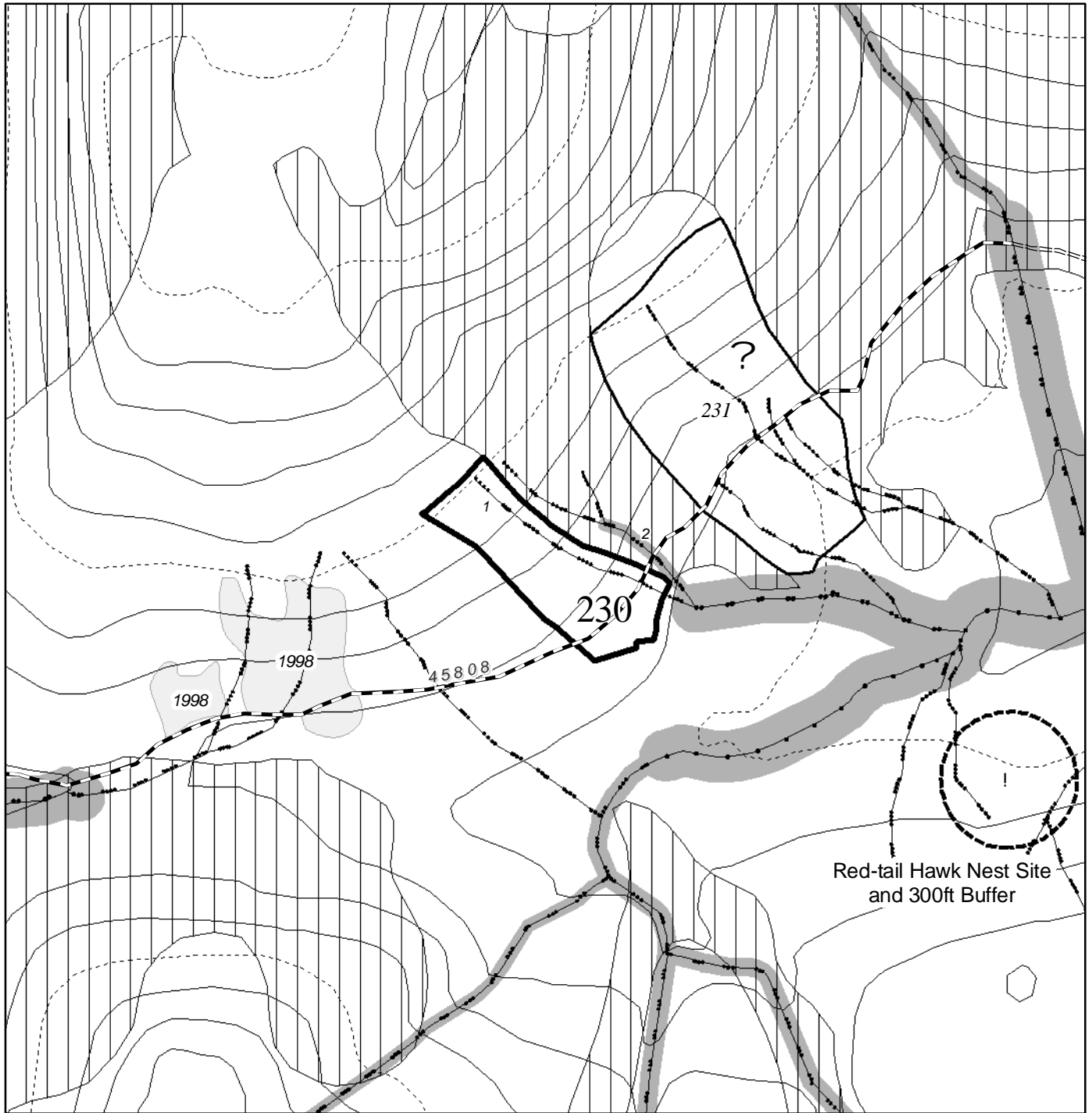
**Resource Wetlands**

**Concern:** Approximately 9 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

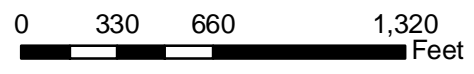
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

**No Concerns:** Scenery, Karst, Recreation, Sensitive/Rare Plants, Vegetation, Wildlife, Heritage

# Central Kupreanof Alternative 2,3,4 Unit 230



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



## Central Kupreanof Unit Card Narrative

**Unit # 231**

**Unit Size (acres): 23**

**Alternatives 2, 3, 4**

**Aerial Photo:** 1598-25

**VCU:** 4380

**Volume (mbf): 427**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / existing NFS road

### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class II MM1 and HC2.

**Response:** Streams 2 and 3 are Class IV HC0.

Stream 1 (MM1): No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

Stream 1 (HC2): No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).

Streams 2 and 3: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream (BMP 13.9, 13.16).

**Resource Soils**

**Concern:** Slopes near top of initial unit boundary exceed 72 percent.

**Response:** Unit boundary modified to avoid steep slopes at the top of the unit to address stability concerns (BMP 13.5). To meet soil quality standards, use partial suspension above the road (BMP 13.9), apply BMP 13.11 (avoid work during high precipitation) and BMP 13.12 (leave sufficient ground cover to maximize erosion).

**Resource Sensitive/Rare Plants**

**Concern:** Sensitive plant, Wright filmy fern (*Hymenophyllum wrightii*), found in unit.

**Response:** No protection measures proposed.

**Resource Wetlands**

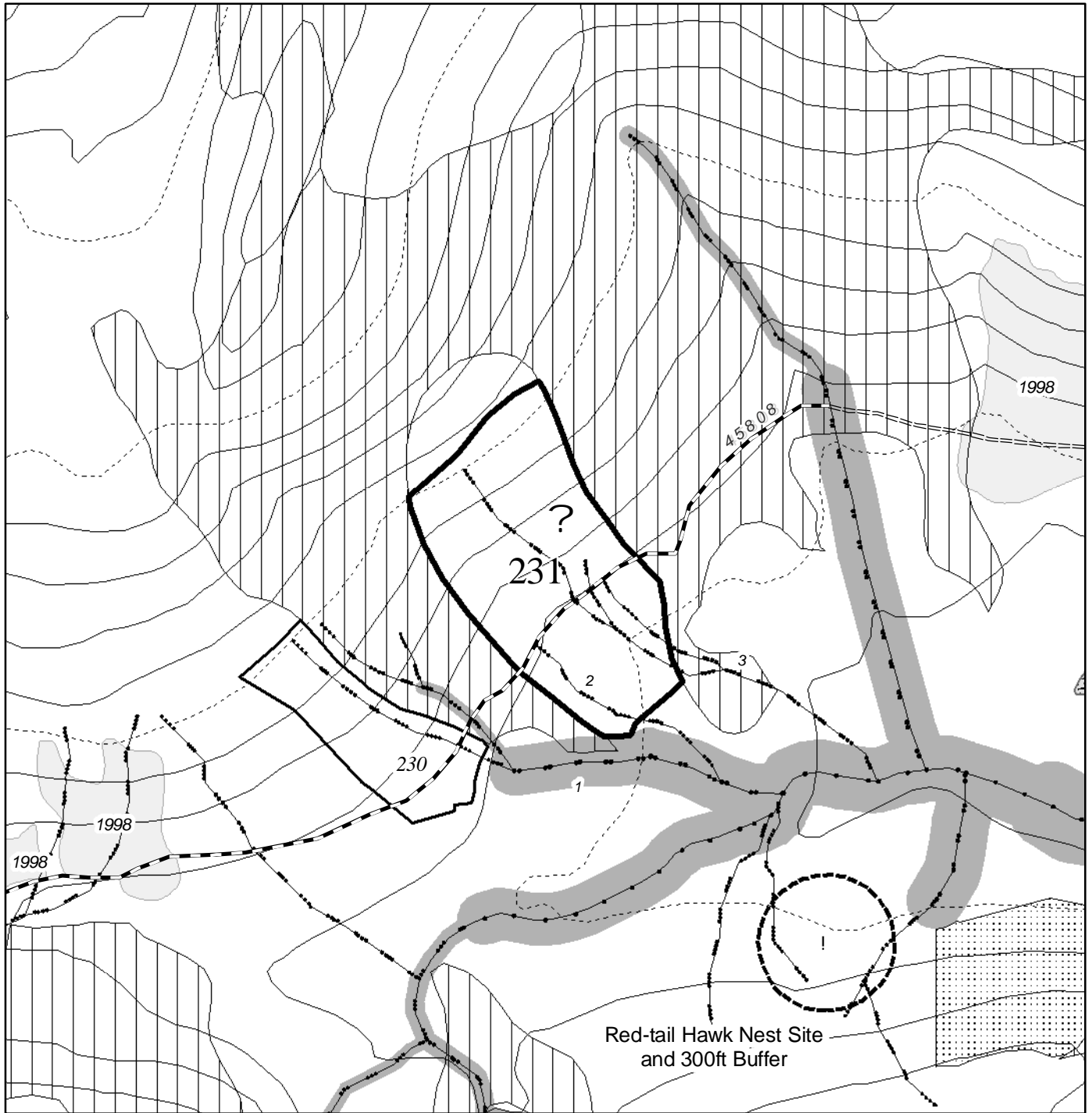
**Concern:** Approximately 23 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

**No Concerns:** Recreation, Karst, Vegetation, Heritage, Wildlife, Scenery

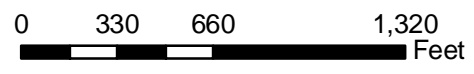


# Central Kupreanof Alternative 2,3,4 Unit 231



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |

Red-tail Hawk Nest Site  
and 300ft Buffer



### Central Kupreanof Unit Card Narrative

**Unit # 232**

**Unit Size (acres): 16**

**Alternatives: 2, 3**

**Aerial Photo: 1598-34**

**VCU: 4380**

**Volume (mbf): 96**

**Land Use Designation: Timber Production**

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Uneven-aged management, single tree selection

**Logging Method/Transportation:** Helicopter / existing NFS road

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class II MM1.

Stream 2 is Class I FP4.

Stream 3 is Class III HC5.

**Response:** Stream 1: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

Stream 2: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 130 feet of channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

Stream 3: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

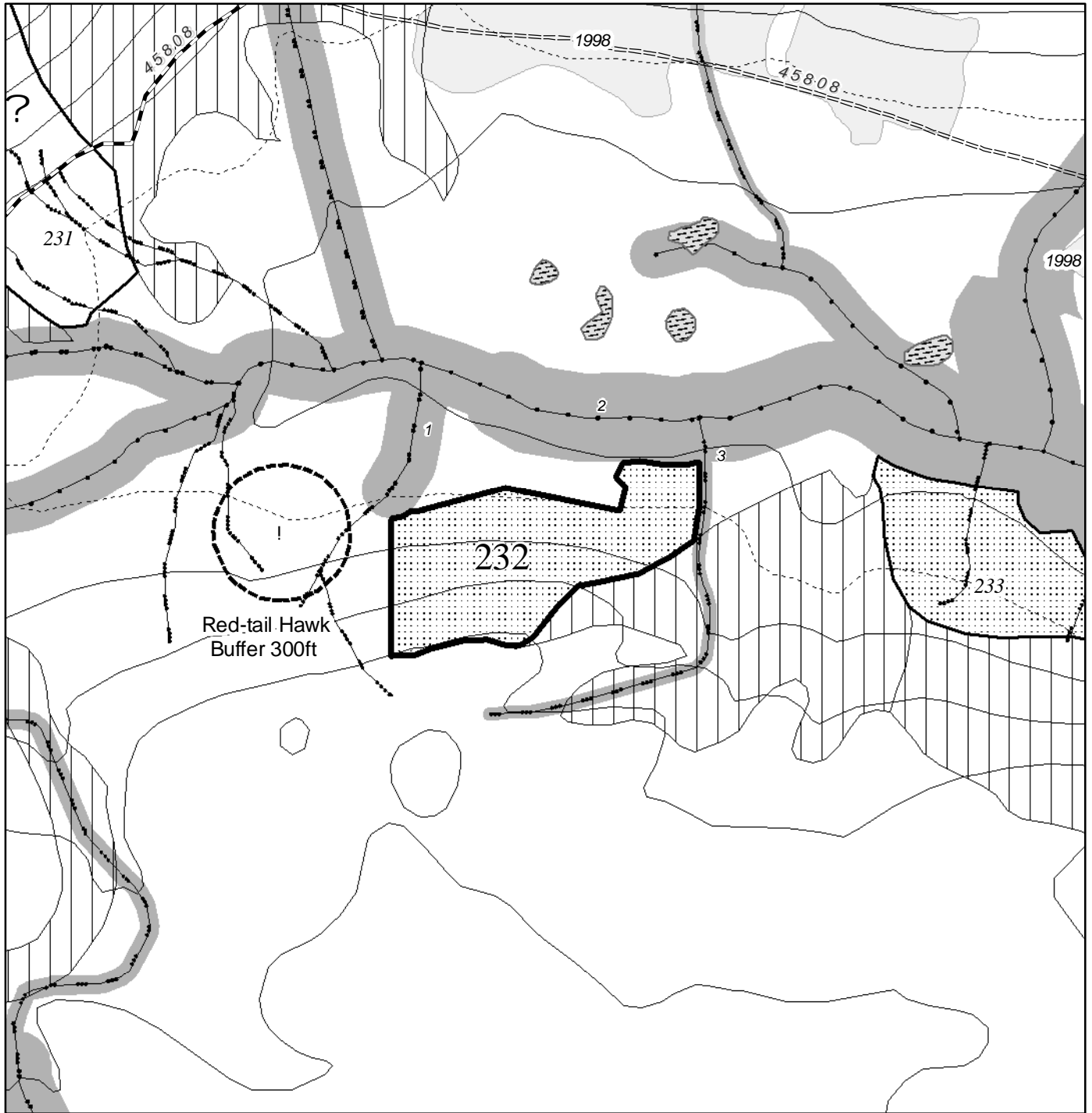
**Resource Wildlife**

**Concern:** IRI crew identified red tailed hawk nest at northern portion of unit.

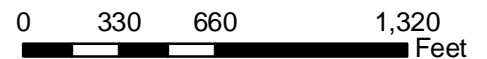
**Response:** Nest buffer applied. Nest activity being monitored.

**No Concerns:** Recreation, Sensitive/Rare Plants, Wetlands, Karst, Soils, Scenery, Heritage, Vegetation

# Central Kupreanof Alternative 2,3 Unit 232



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 233**

**Unit Size (acres): 16**

**Alternatives: 2, 3**

**Aerial Photo: 1598-34**

**VCU: 4380**

**Volume (mbf): 99**

**Land Use Designation: Timber Production**

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Uneven-aged management, single tree selection

**Logging Method/Transportation:** Helicopter / reconstructed NFS road

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class I FP4.

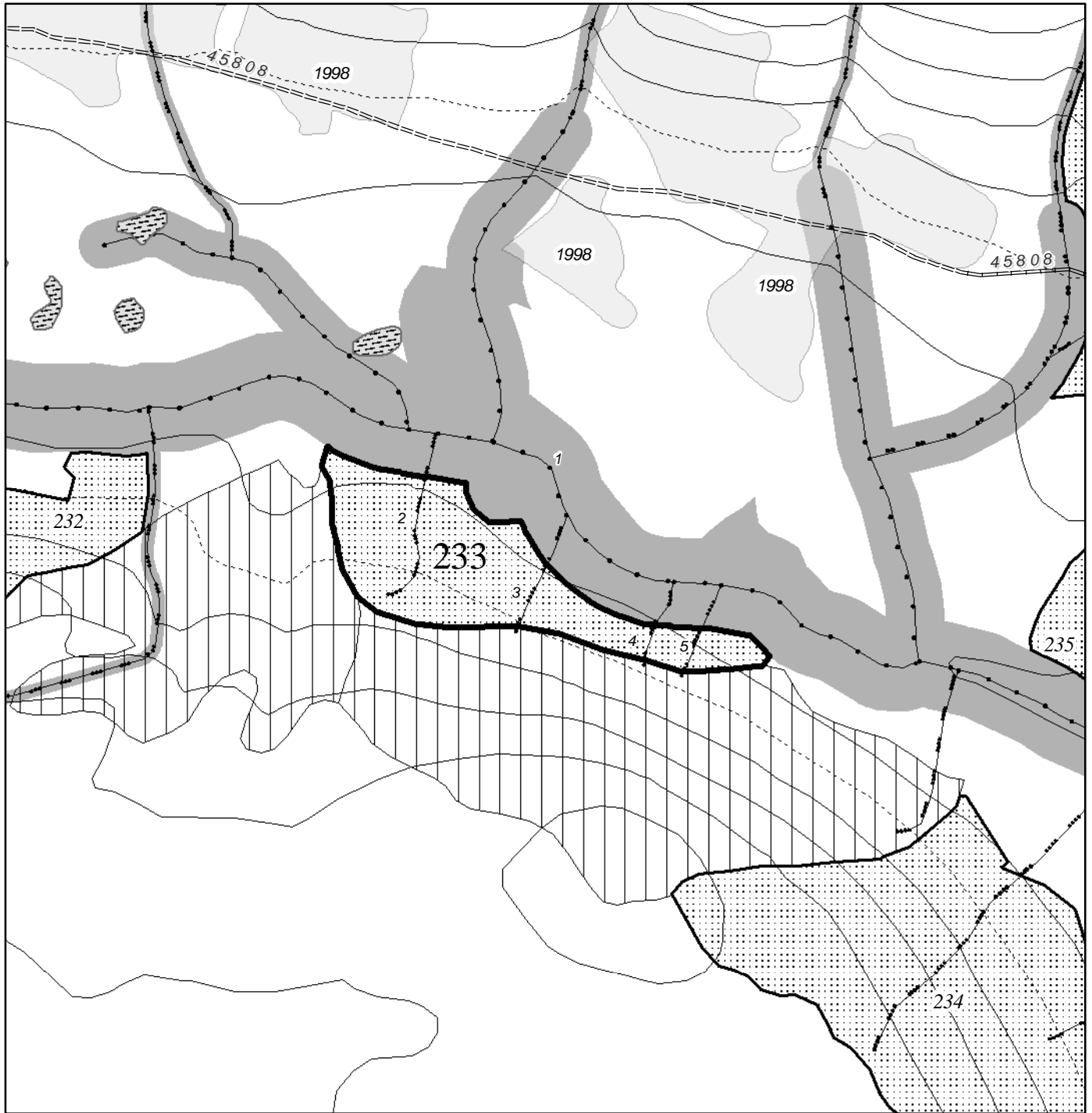
Streams 2-5 are Class IV HC0.

**Response:** Stream 1: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 130 feet of channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

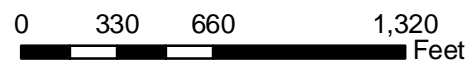
Stream 2-5: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**No Concerns:** Recreation, Sensitive/Rare Plants, Wetlands, Karst, Scenery, Wildlife, Vegetation, Heritage, Soils

# Central Kupreanof Alternative 2,3 Unit 233



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 234**

**Unit Size (acres): 56**

**Alternatives: 2, 3**

**Aerial Photo: 2398-15**

**VCU: 4380**

**Volume (mbf): 372**

**Land Use Designation: Timber Production**

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Uneven-aged management, single tree selection

**Logging Method/Transportation:** Helicopter / reconstructed NFS road

**Resource Concerns & Responses**

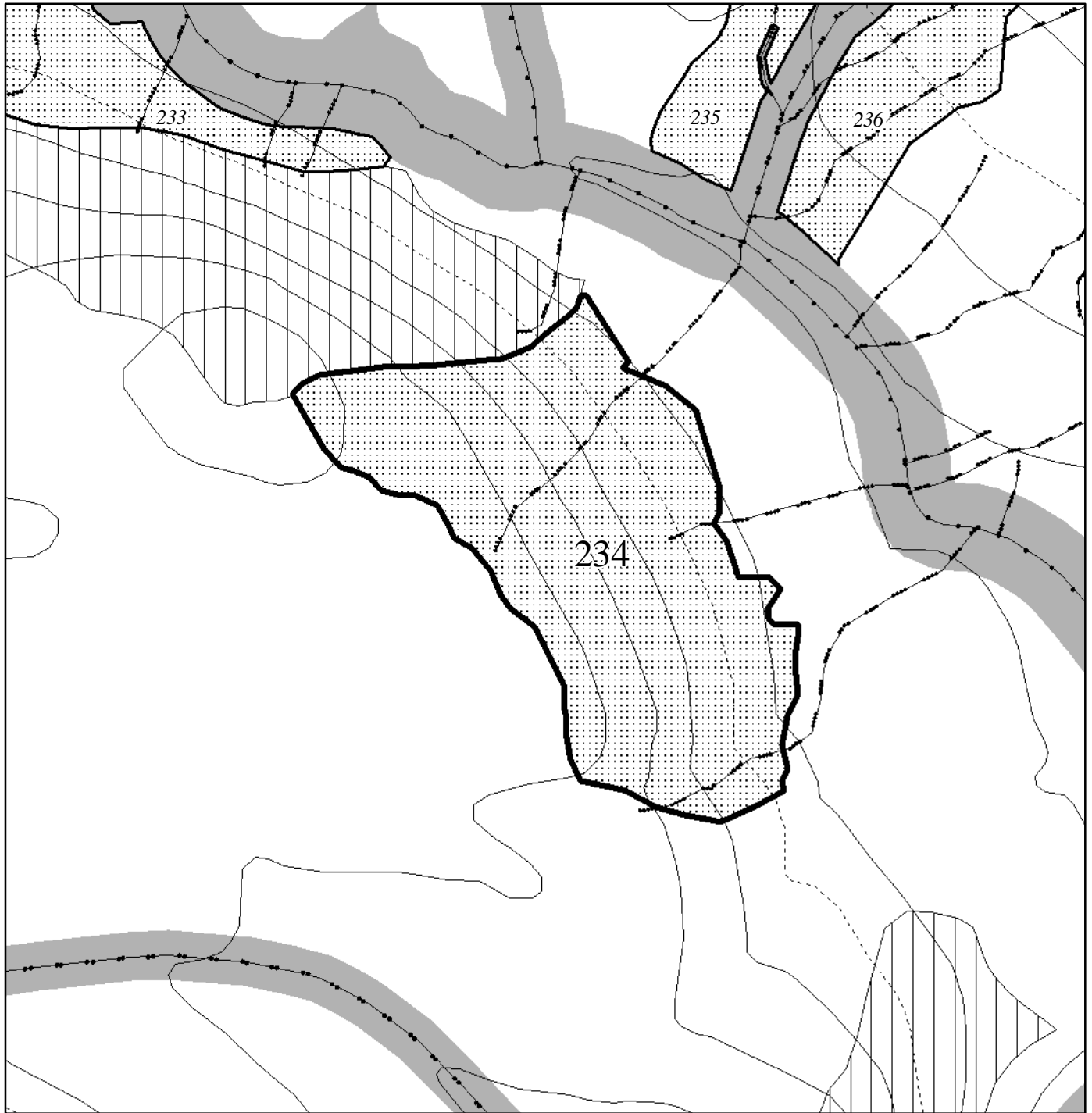
**Resource Fisheries/Watershed**

**Concern:** All streams in the unit are Class IV HC0.

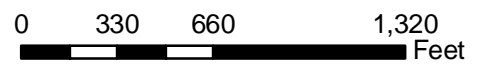
**Response:** "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**No Concerns:** Recreation, Sensitive/Rare Plants, Wetlands, Karst, Heritage, Wildlife, Vegetation, Soils

# Central Kupreanof Alternative 2,3 Unit 234



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



## Central Kupreanof Unit Card Narrative

**Unit # 235**

**Unit Size (acres): 37**

**Alternatives: 2, 3**

**Aerial Photo:** 2398-15

**VCU:** 4380

**Volume (mbf):** Alt.2 - 225, Alt.3 - 641

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Alt. 2: Uneven-aged management, single tree selection; Alt. 3: Even-aged management, clearcut.

**Logging Method/Transportation:** Alt. 2: Helicopter / reconstructed NFS road (37 acres), Alt. 3: cable (37 acres) / new NFS road construction

### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:**

Stream 1 is Class I FP4.  
Stream 2 is Class II HC3 and AF2.  
Stream 3 is Class III HC0.  
Streams 4 and 5 are Class IV HC0.  
Stream 6 is Class II HC2.  
Stream 7 is Class III HC5.

**Response:**

Stream 1: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 130 feet of channel. (BMPs 12.6, 12.6a, 13.9, 13.16).  
Streams 2 (HC3) and 6: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).  
Stream 2 (AF2): No timber harvest within the greater distance of the active portion of the alluvial fan or 140 feet from the current channels. No more than 10% of the fan harvested in 30-year period with the objective of leaving large trees within the stand for future recruitment.  
Streams 3 and 7: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Streams 4 and 5: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**Resource Soils**

**Concern:**

MMI-4 soils in eastern portion of unit.

**Response:**

Boundary modified to avoid MMI-4 soils (BMP 13.5) and partial suspension required above road to meet soil quality standards (BMP 13.9).

**Resource Wetlands**

**Concern:**

Approximately 18 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

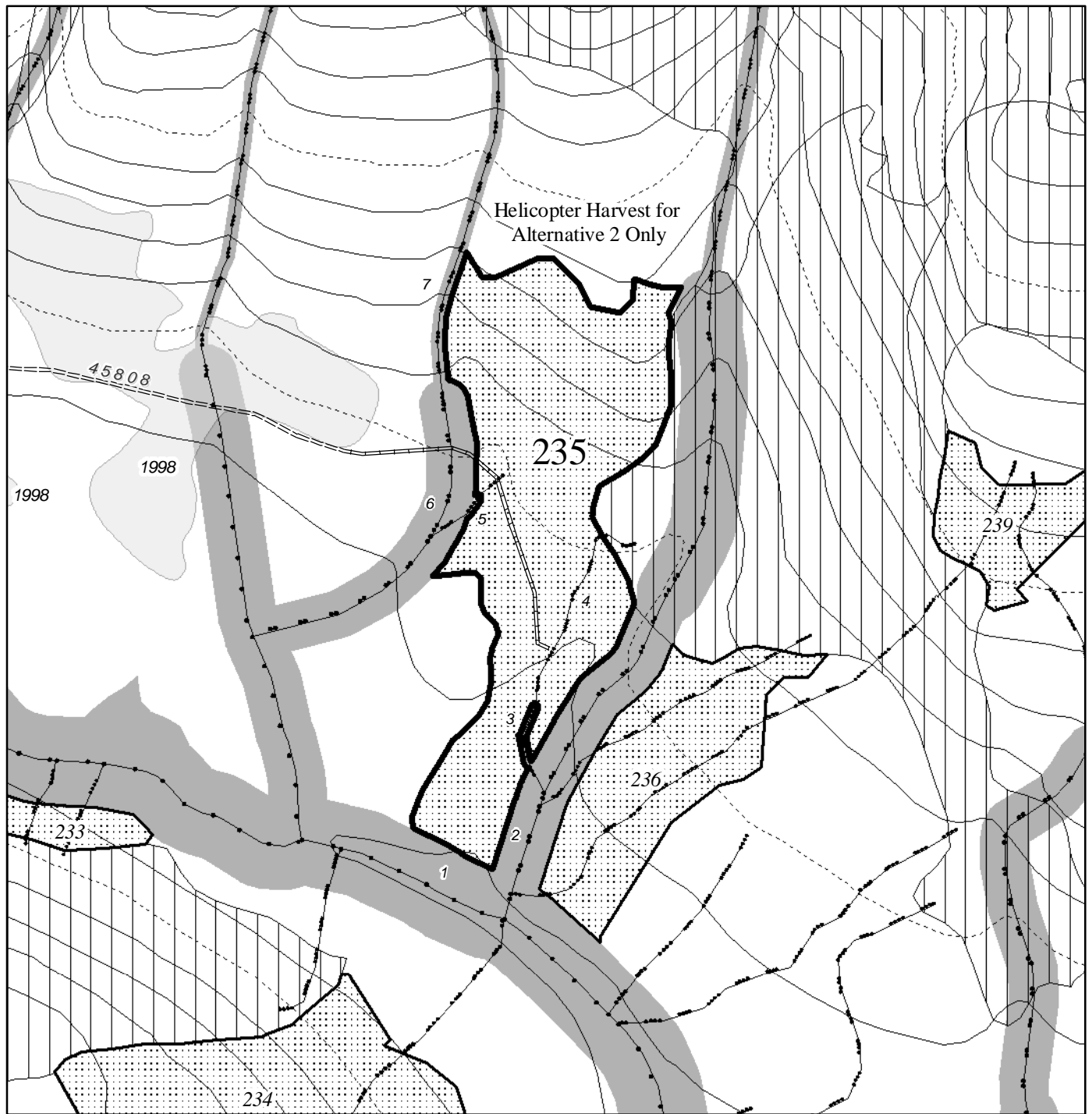
**Response:**

Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

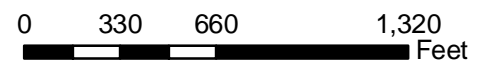
**No Concerns:** Recreation, Sensitive/Rare Plants, Karst, Vegetation, Wildlife, Heritage, Scenery



# Central Kupreanof Alternative 2,3 Unit 235



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 236**

**Unit Size (acres): 15**

**Alternative: 3**

**Aerial Photo:** 2398-15

**VCU:** 4380

**Volume (mbf): 44**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Uneven-aged management, single tree selection

**Logging Method/Transportation:** Helicopter / new NFS road construction in Unit 235

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class I FP4.  
Stream 2 is Class II HC3.  
Streams 3 and 4 are Class IV HC0.

**Response:** Stream 1: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 130 feet of channel. (BMPs 12.6, 12.6a, 13.9, 13.16).  
Stream 2: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).  
Streams 3-4: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

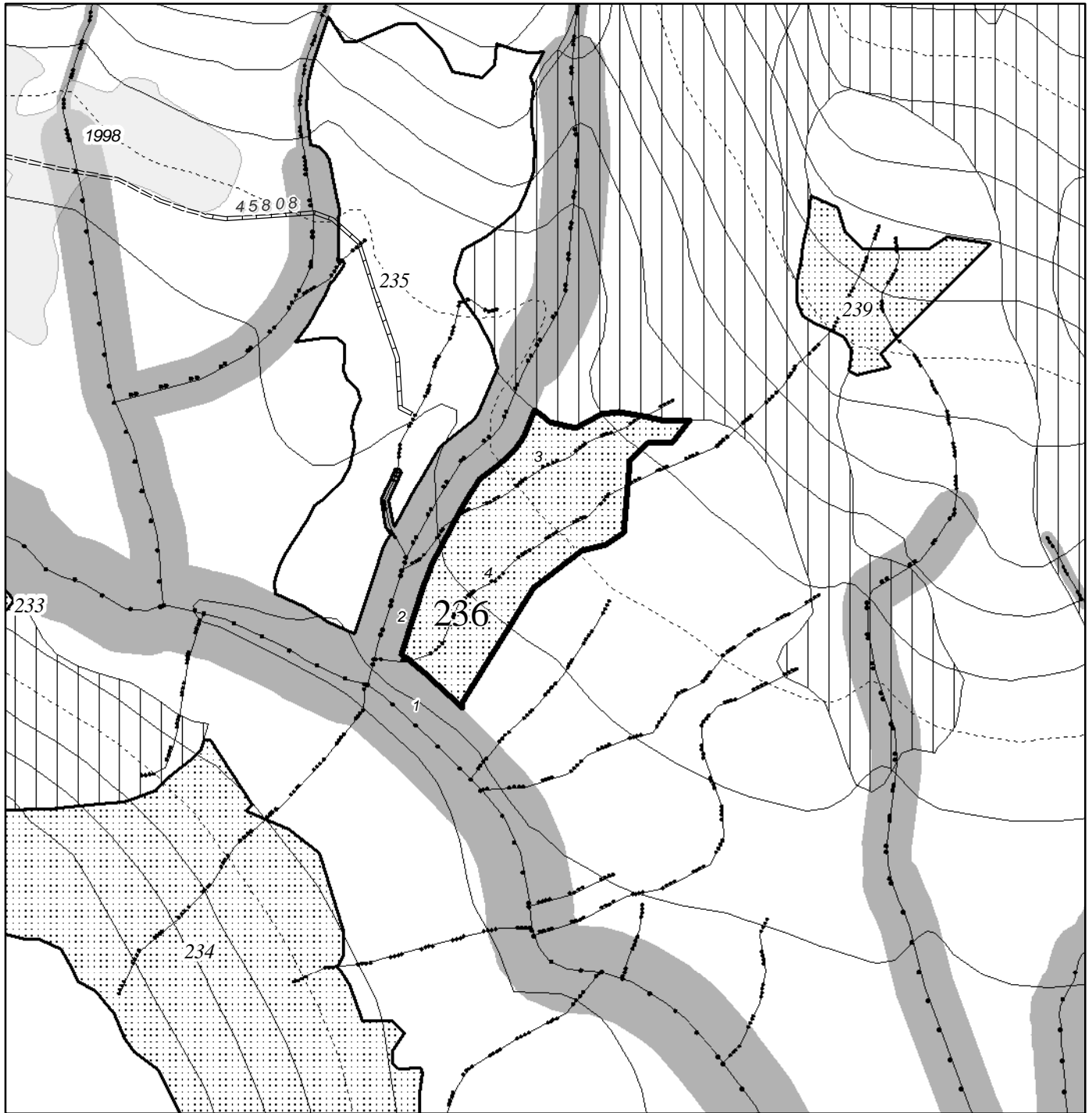
**Resource Wetlands**

**Concern:** Approximately 15 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

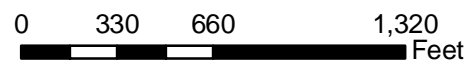
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

**No Concerns:** Soils, Recreation, Sensitive/Rare Plants, Karst, Heritage, Wildlife, Vegetation, Scenery

# Central Kupreanof Alternative 3 Unit 236



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 239**

**Unit Size (acres): 7**

**Alternative: 3**

**Aerial Photo:** 2398-15

**VCU:** 4380

**Volume (mbf): 40**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Uneven-aged management, single tree selection

**Logging Method/Transportation:** Helicopter / new NFS road construction in Unit 235

### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Both streams in the unit are Class IV HC0.

**Response:** "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

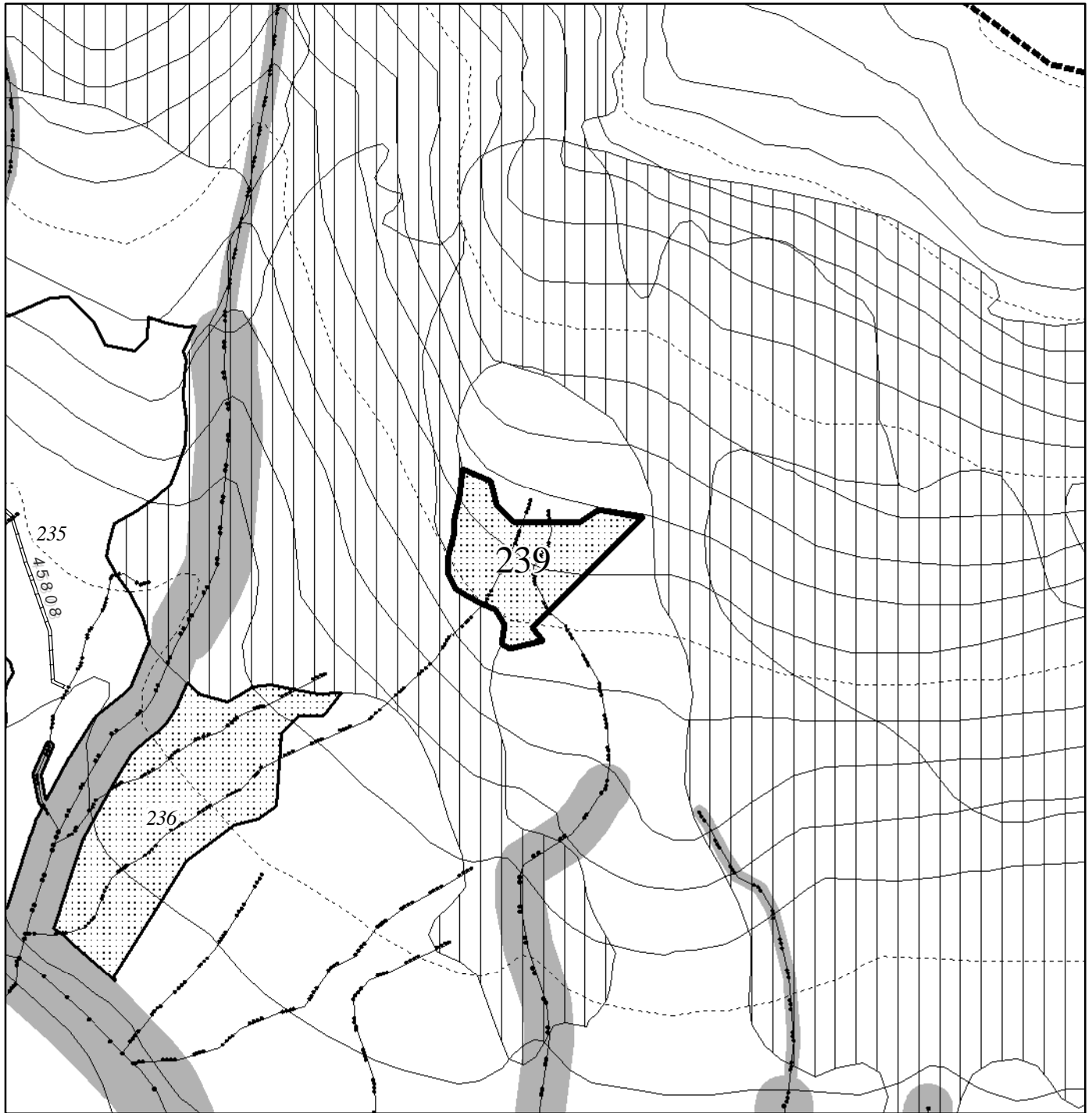
**Resource Wetlands**

**Concern:** Approximately 7 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

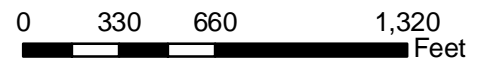
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

**No Concerns:** Soils, Recreation, Sensitive/Rare Plants, Karst, Wildlife, Heritage, Scenery, Vegetation

# Central Kupreanof Alternative 3 Unit 239



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 241**

**Unit Size (acres): 37**

**Alternative: 3**

**Aerial Photo:** 1598-36

**VCU:** 4380

**Volume (mbf): 602**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / new NFS road construction

#### Resource Concerns & Responses

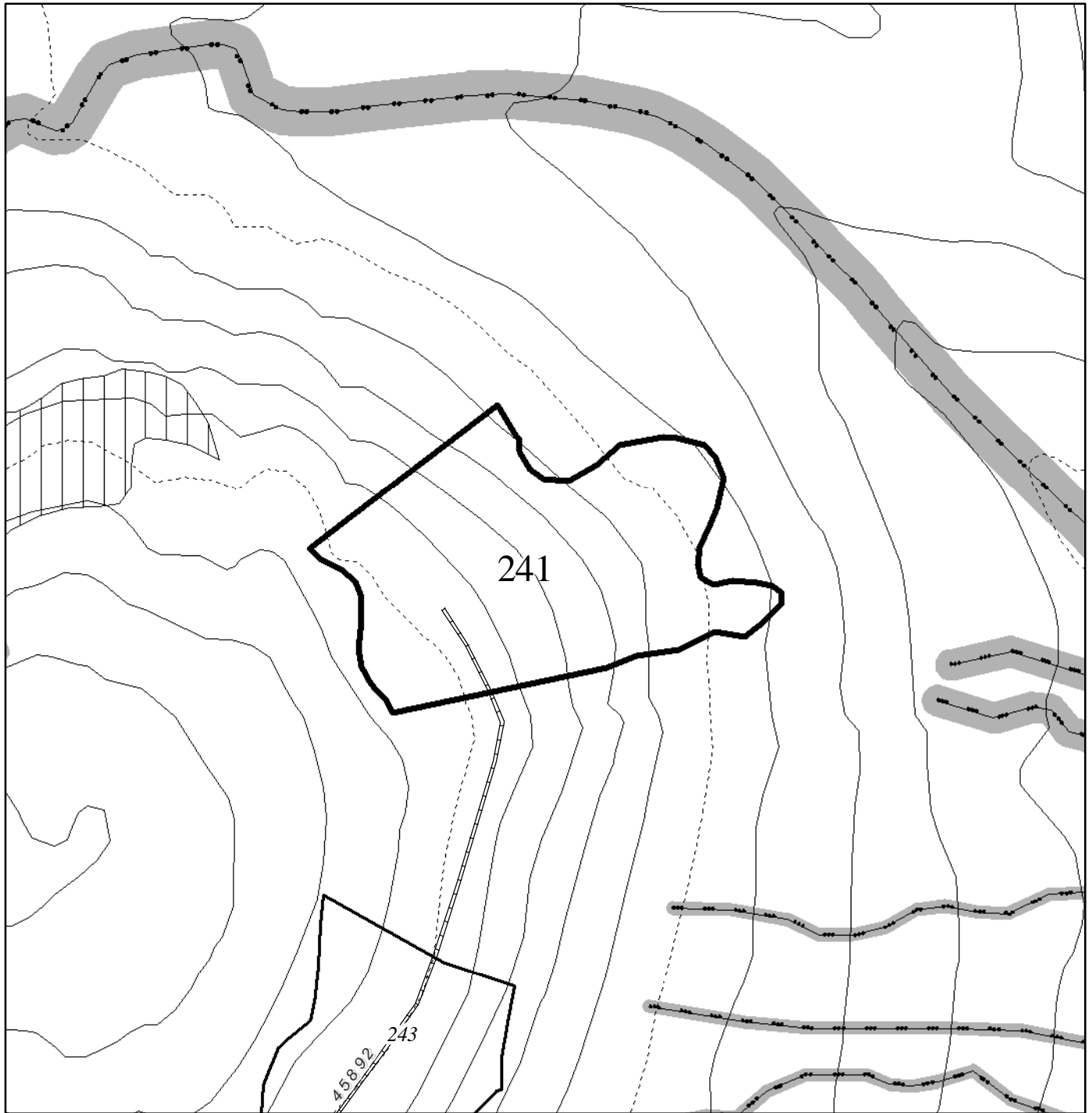
**Resource Wetlands**

**Concern:** Approximately 8 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

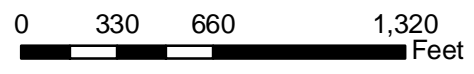
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

**No Concerns:** Scenery, Watershed, Fisheries, Soils, Recreation, Sensitive/Rare Plants, Soils, Karst, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 3 Unit 241



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 243**

**Unit Size (acres): 33**

**Alternative: 3**

**Aerial Photo:** 1598-17

**VCU:** 4380

**Volume (mbf): 602**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / new NFS road construction

**Resource Concerns & Responses**

**Resource Fisheries/Watershed**

**Concern:** Stream is Class IV HC0.

**Response:** "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**Resource Soils**

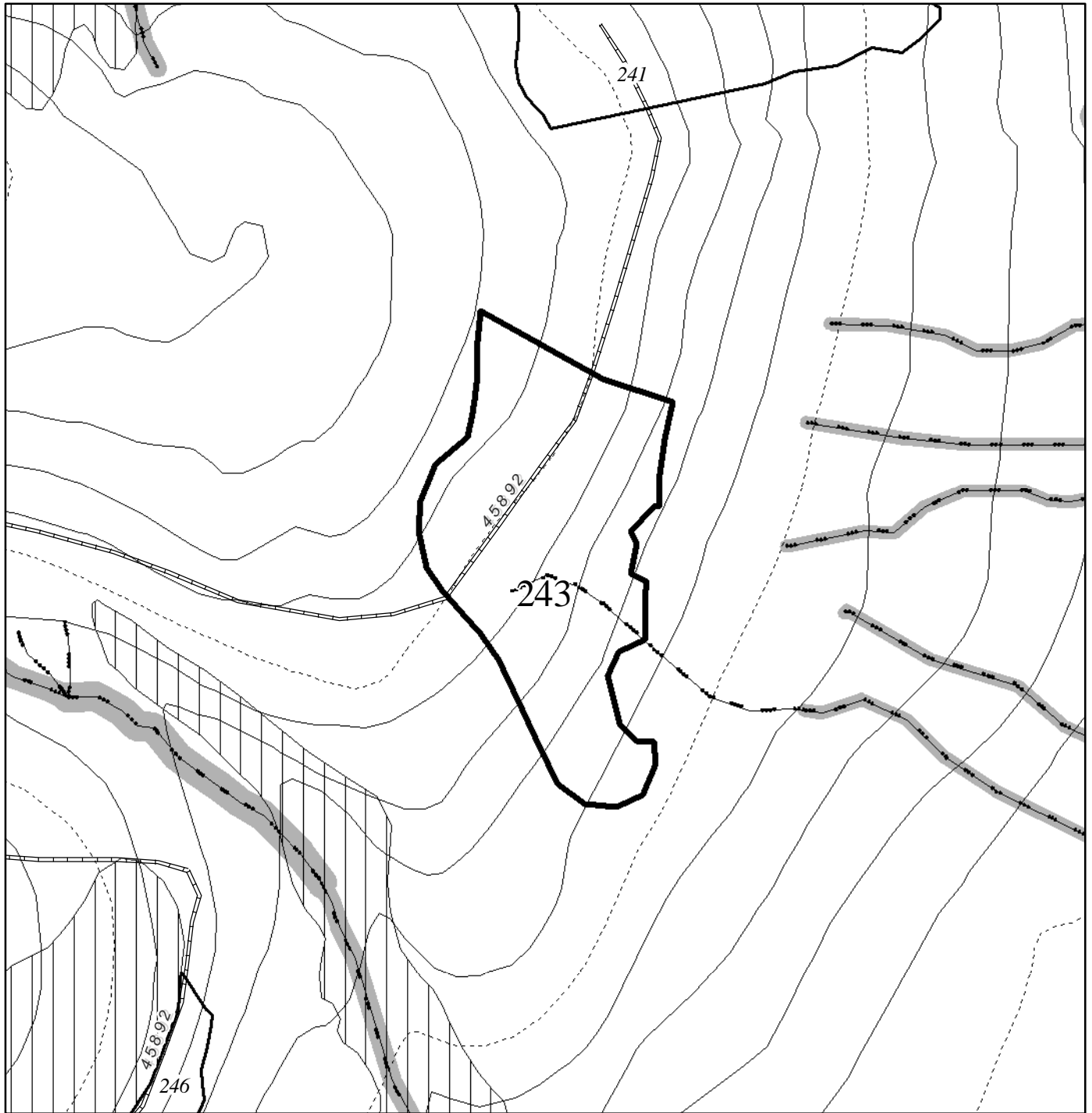
**Concern:** Originally proposed road crosses steep slopes.

**Response:** Road re-routed away from the steep slopes (BMP 14.2).

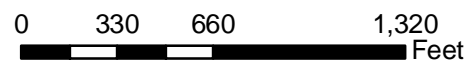
**No Concerns:** Scenery, Wetlands, Karst, Recreation, Sensitive/Rare Plants, Wildlife, Heritage, Vegetation



# Central Kupreanof Alternative 3 Unit 243



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 246**

**Unit Size (acres): 20**

**Alternative: 3**

**Aerial Photo:**

**VCU: 4380**

**Volume (mbf): 360**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / new NFS Road

**Resource Concerns & Responses**

**Resource**

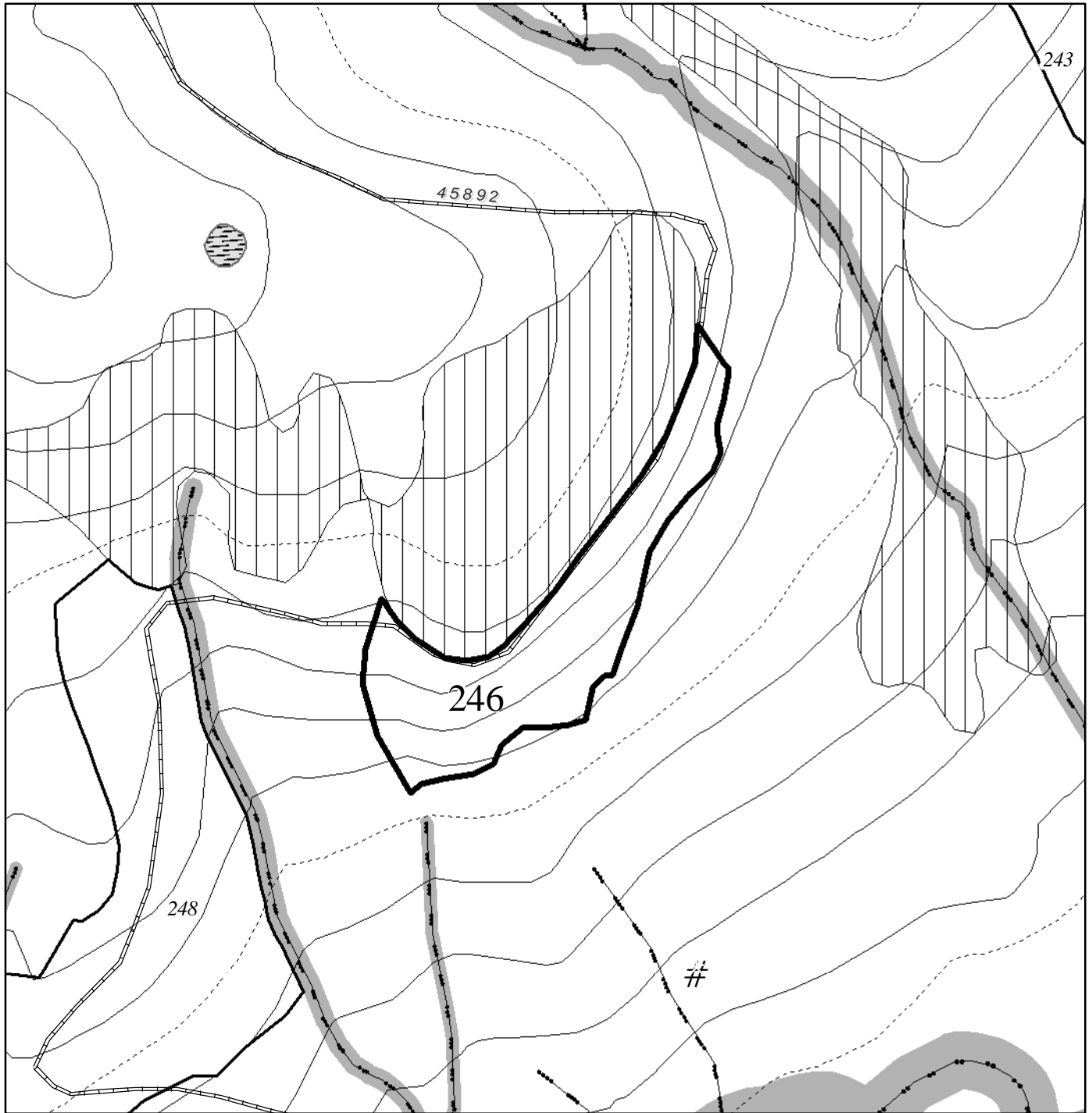
**Soils**

**Concern:** MMI-4 soils located along north edge of unit.

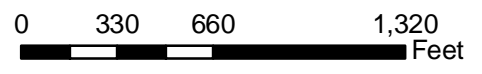
**Response:** Unit boundary and proposed road location modified to avoid MMI-4 soils (BMP 13.5).

**No Concerns:** Scenery, Watershed, Fisheries, Recreation, Sensitive/Rare Plants, Wetlands, Karst, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 3 Unit 246



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 248**

**Unit Size (acres): 45**

**Alternative: 3**

**Aerial Photo:**

**VCU: 4380**

**Volume (mbf): 820**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / new NFS road construction

**Resource Concerns & Responses**

**Resource Fisheries/Watershed**

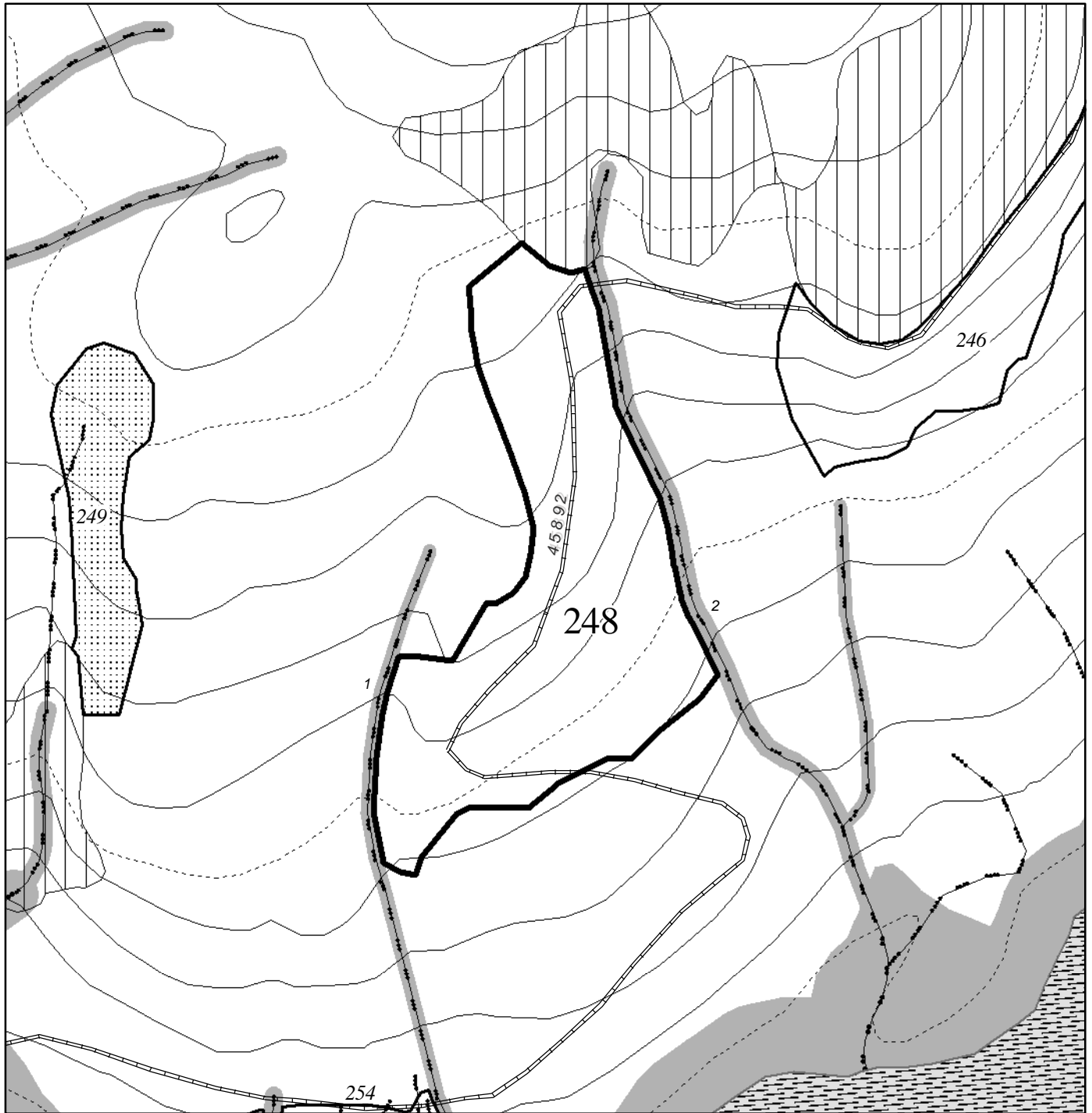
**Concern:** Stream 1 is Class III HC5.

Stream 2 is Class III HC6.

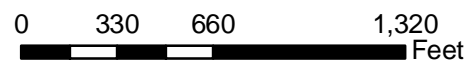
**Response:** Streams 1 and 2: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

**No Concerns:** Scenery, Soils, Recreation, Sensitive/Rare Plants, Wetlands, Karst, Heritage, Wildlife, Vegetation

# Central Kupreanof Alternative 3 Unit 248



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 249**

**Unit Size (acres): 11**

**Alternatives: 2, 3**

**Aerial Photo:** 1298-102

**VCU:** 4380

**Volume (mbf): 60**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Uneven-aged management, single tree selection

**Logging Method/Transportation:** Helicopter / new NFS road construction

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream is Class IV HC6.

**Response:** "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

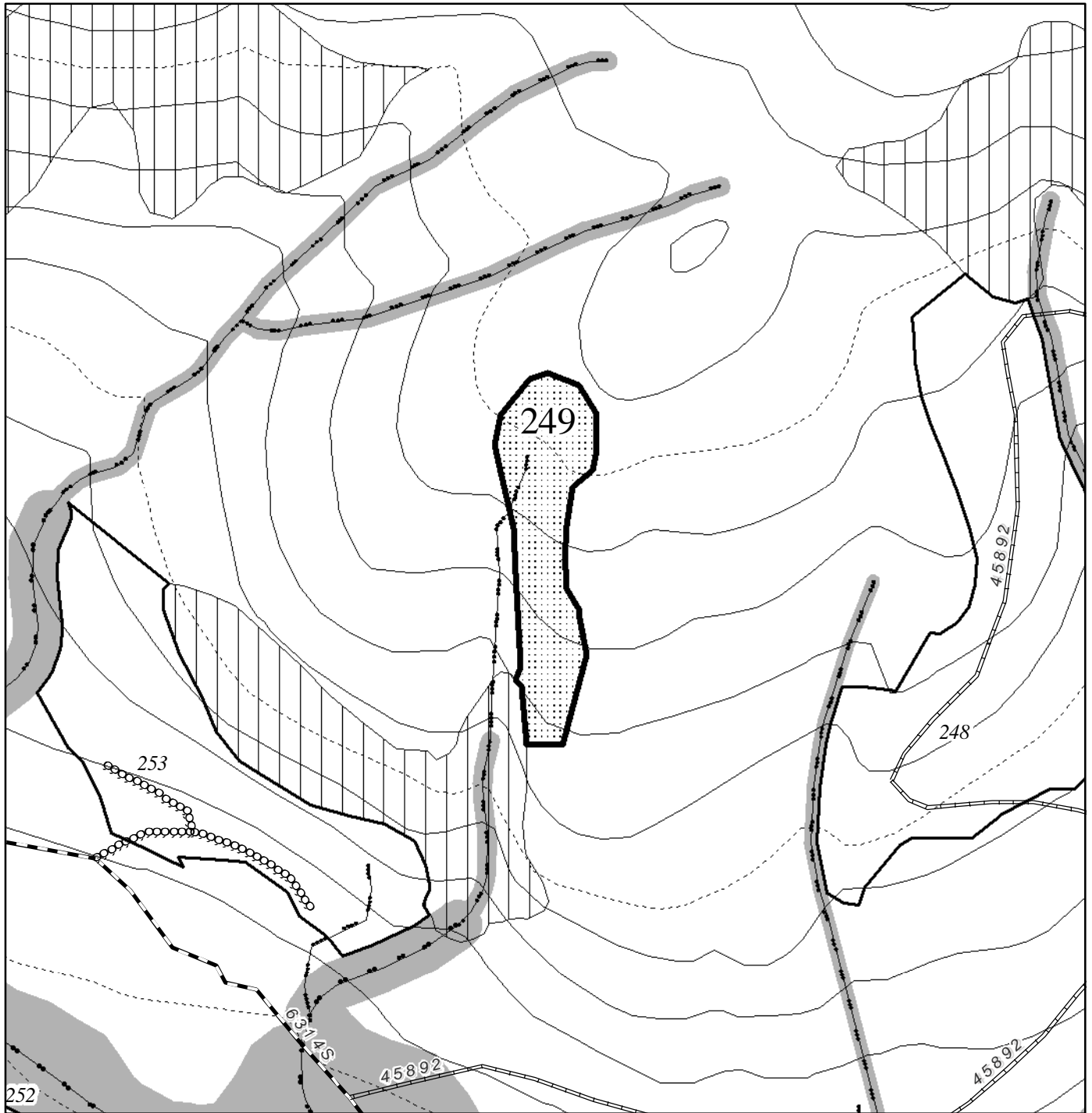
**Resource Soils**

**Concern:** Unit has slopes approaching 72 percent.

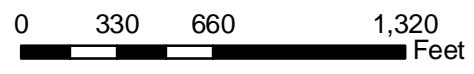
**Response:** Helicopter yard / full suspension to meet soil quality standards (BMP 13.9).

**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Karst, Wetlands, Wildlife, Heritage, Vegetation

# Central Kupreanof Alternative 2,3 Unit 249



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 250**

**Unit Size (acres): 80**

**Alternatives: 2, 3**

**Aerial Photo: 1298-102**

**VCU: 4290**

**Volume (mbf): 1,483**

**Land Use Designation: Timber Production**

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel and cable / existing NFS road and one temporary road

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

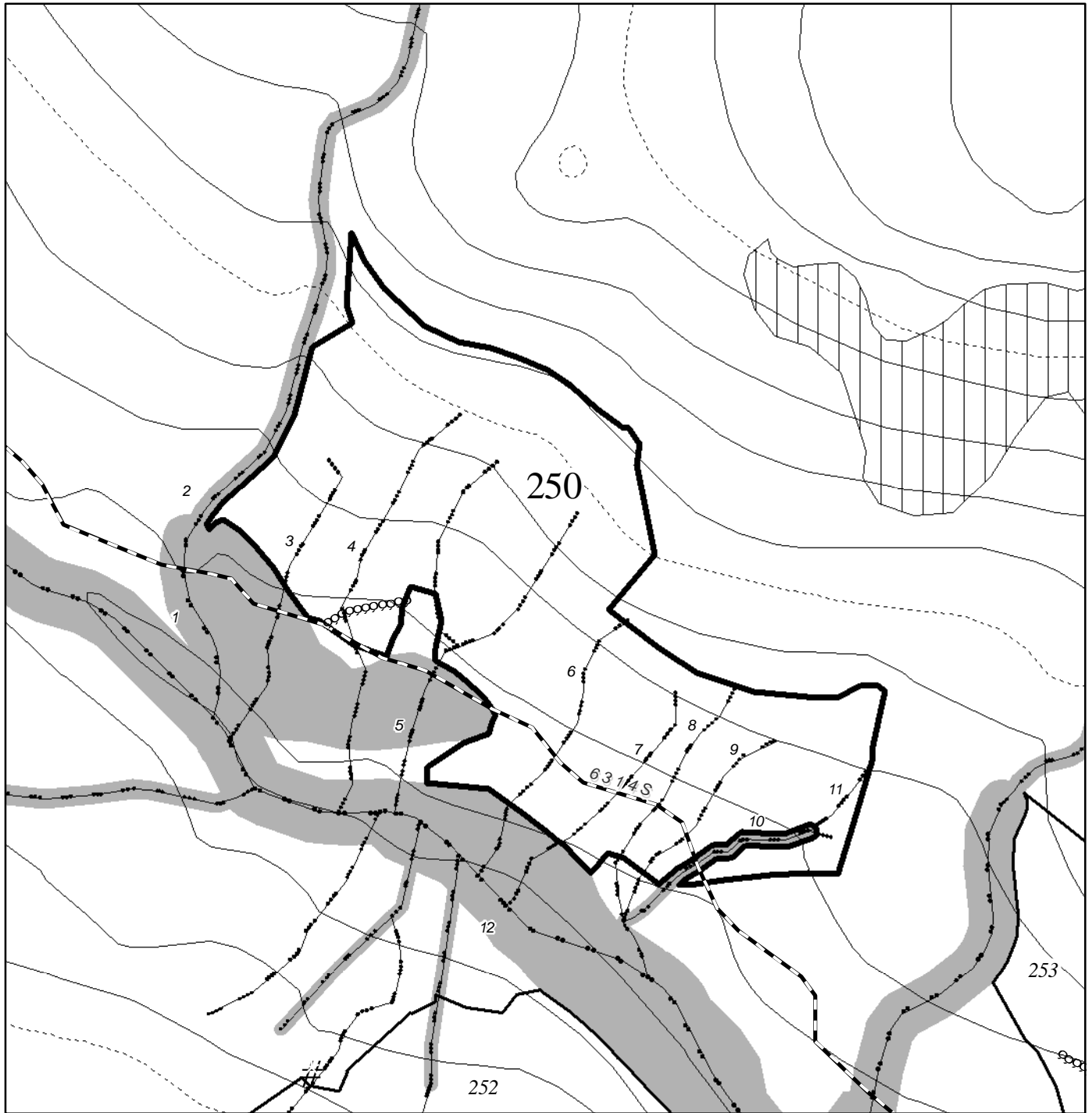
**Concern:** Stream 1 is Class II HC1.  
Stream 2 is Class III HC6.  
Streams 3-9 and 11 are Class IV HC0.  
Stream 10 is Class III HC4.  
Stream 12 is Class II MM2.

**Response:** Stream 1: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMP 12.6, 13.9, 13.16).  
Streams 2 and 10: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Streams 3-9 and 11: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 12: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

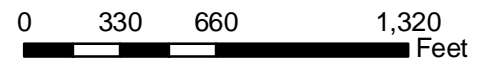
**No Concerns:** Scenery, Soils, Recreation, Sensitive/Rare Plants, Wetlands, Karst, Wildlife, Vegetation, Heritage



# Central Kupreanof Alternative 2,3 Unit 250



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 250**

**Unit Size (acres): 41**

**Alternative: 4**

**Aerial Photo:** 1298-102

**VCU:** 4290

**Volume (mbf): 780**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** shovel and cable / existing NFS road

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Streams 1-5 and 7 are Class IV HC0.

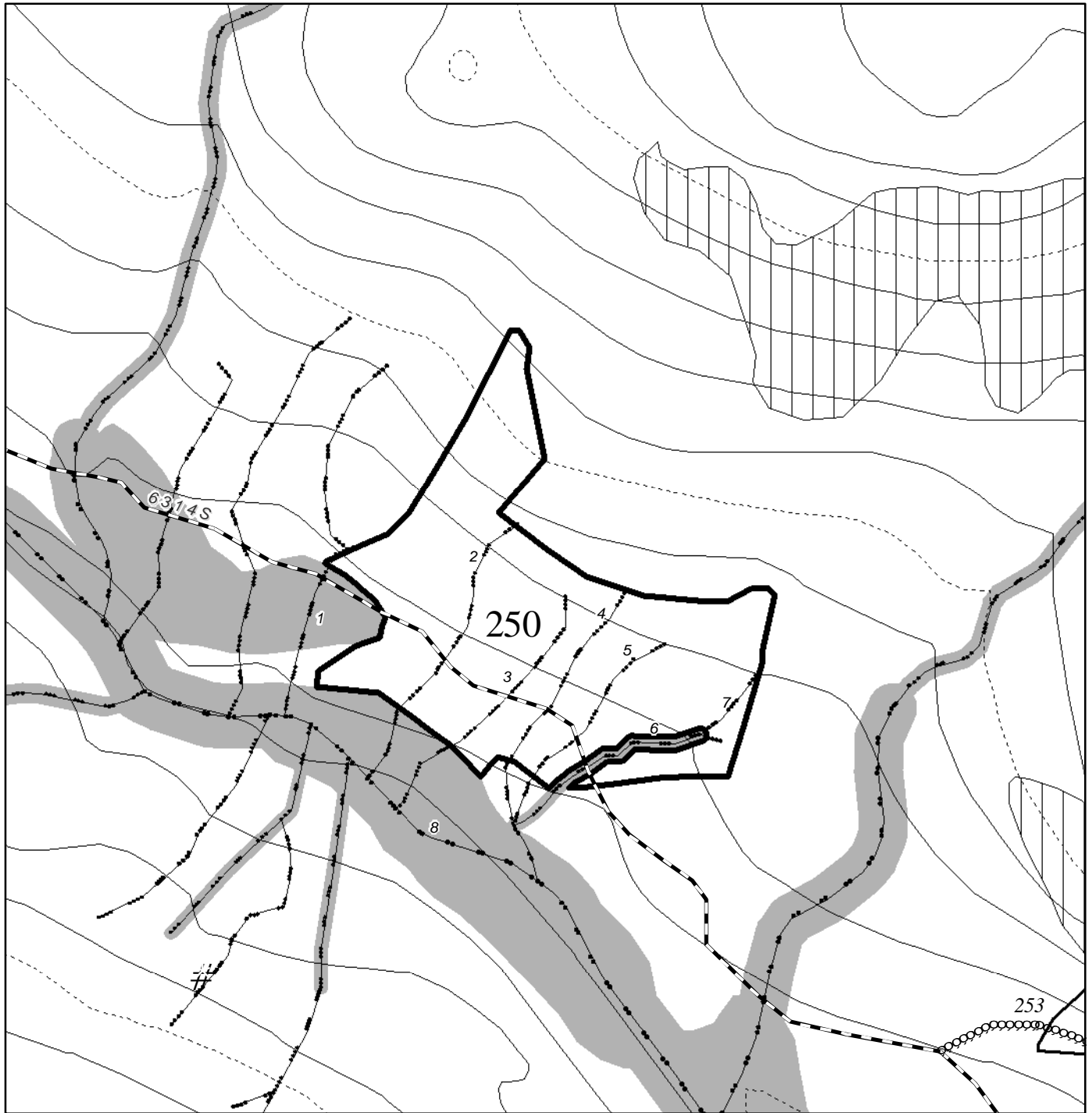
Stream 6 is Class III HC4.

Stream 8 is Class II MM2.

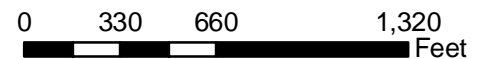
**Response:** Streams 1-5 and 7: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 6: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Stream 8: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

**No Concerns:** Scenery, Soils, Wetlands, Karst, Recreation, Sensitive/Rare Plants, Heritage, Wildlife, Vegetation

# Central Kupreanof Alternative 4 Unit 250



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 252**

**Unit Size (acres): 98**

**Alternatives: 2, 3**

**Aerial Photo:** 1298-101

**VCU:** 4290 & 4380

**Volume (mbf): 1,777**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel and cable / new NFS road

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Streams 1, 5, and 6 are Class IV HC0.  
Stream 2 is Class III HC5.  
Streams 3 and 4 are Class IV HC5.  
Stream 7 is Class IV MM0.  
Stream 8 is Class II FP4.

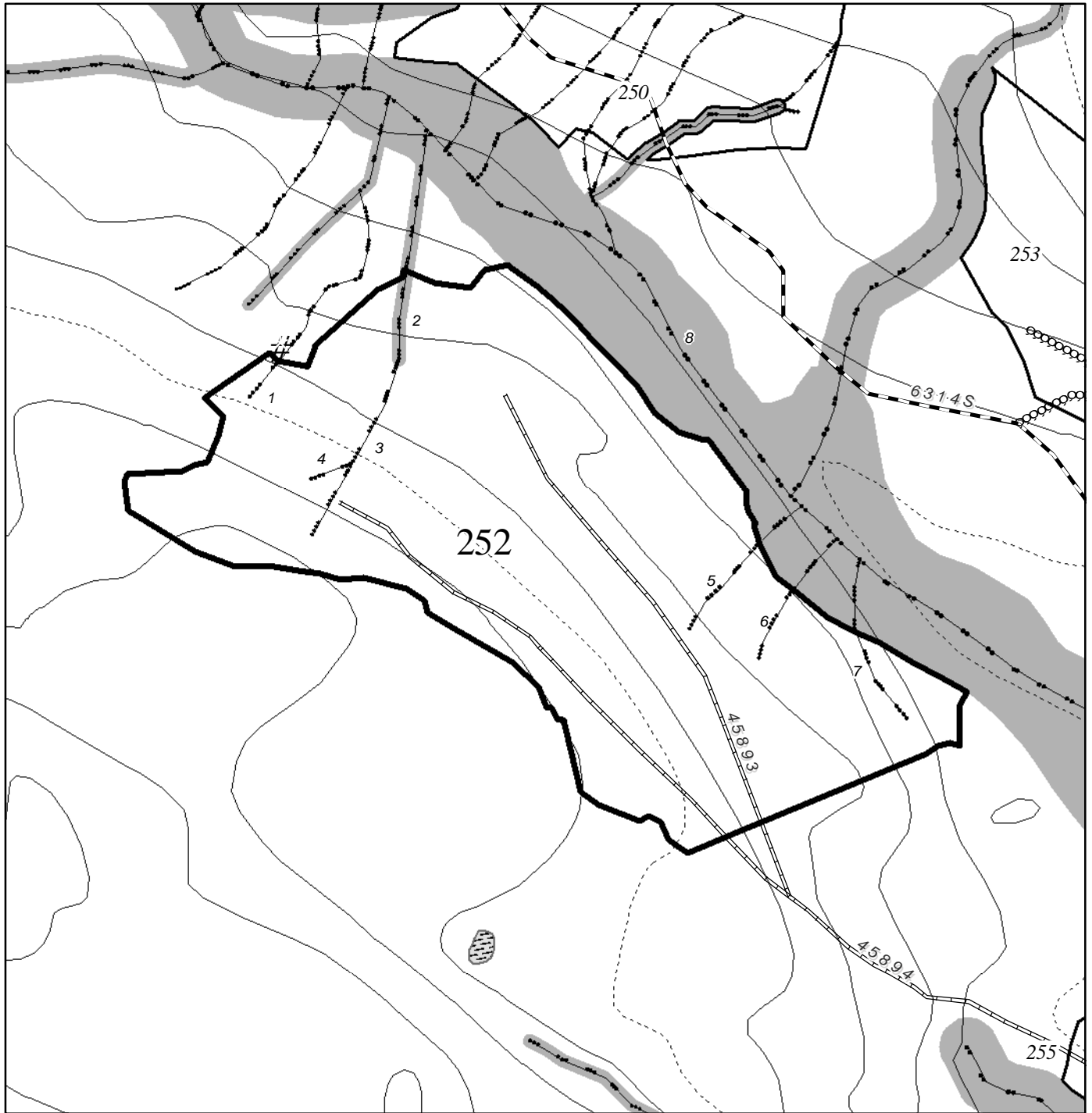
**Response:** Streams 1 and 3-7: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Streams 2: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Stream 8: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 130 feet of channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

**Resource Sensitive/Rare Plants**

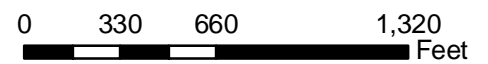
**Concern:** Rare plant, Broad-leaved twayblade (*Listera convallarioides*), found by unit.  
**Response:** Portion of unit on northwest side was dropped. Falling timber into unit would avoid the population on the unit boundary.

**No Concerns:** Scenery, Soils, Recreation, Karst, Wetlands, Vegetation, Wildlife, Heritage

# Central Kupreanof Alternative 2,3 Unit 252



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 253**

**Unit Size (acres): 28**

**Alternatives: 2, 3**

**Aerial Photo: 1298-102**

**VCU: 4380**

**Volume (mbf): 530**

**Land Use Designation: Timber Production**

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / temporary road construction

**Resource Concerns & Responses**

**Resource Fisheries/Watershed**

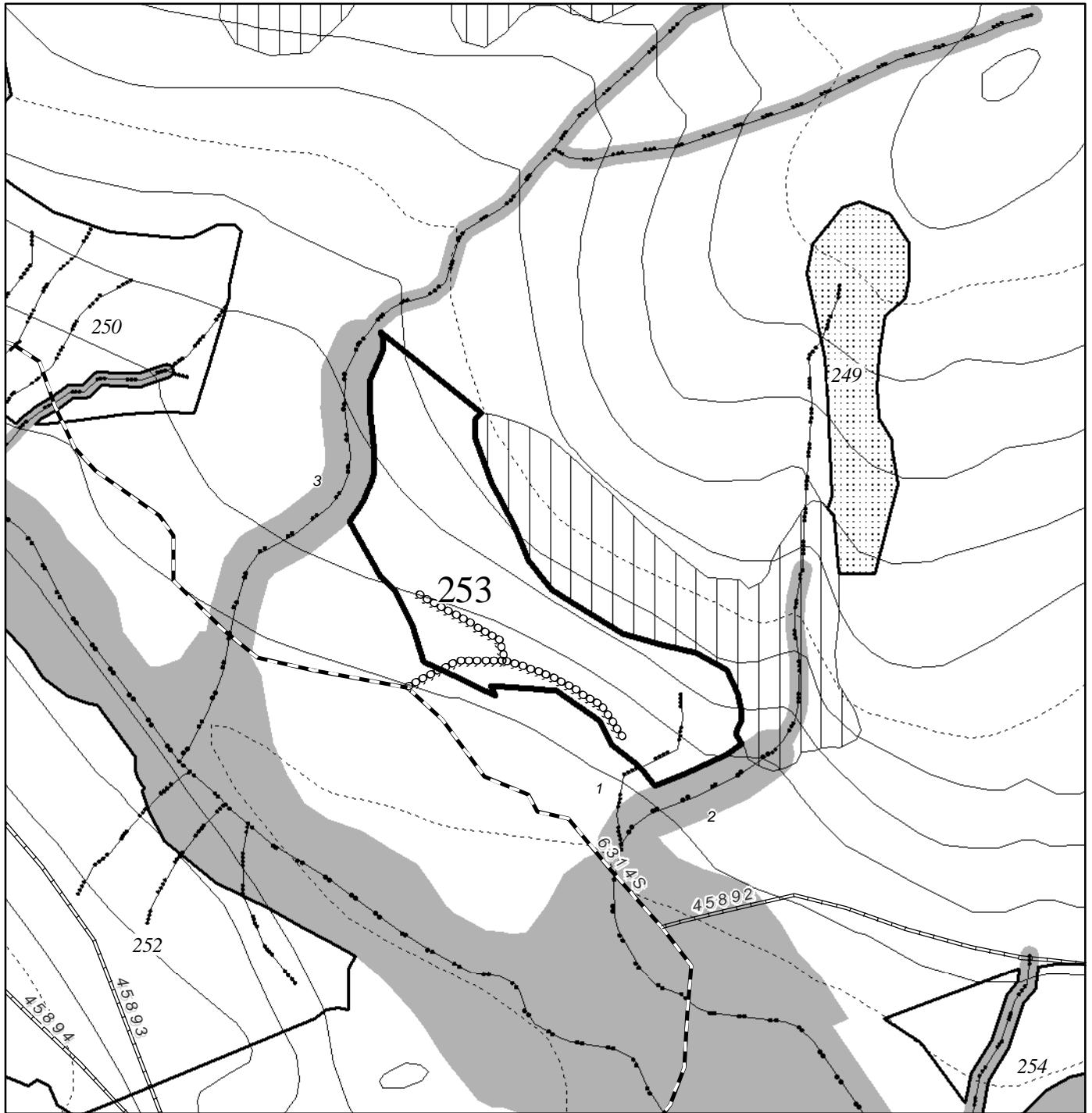
**Concern:** Stream 1 is Class IV HC0.

Stream 2 is Class II HC2.

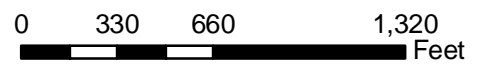
**Response:** Stream 1: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 2: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).

**No Concerns:** Scenery, Soils, Recreation, Sensitive/Rare Plants, Karst, Wetlands, Wildlife, Heritage, Vegetation

# Central Kupreanof Alternative 2,3 Unit 253



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 253**

**Unit Size (acres): 10**

**Alternative: 4**

**Aerial Photo:** 1298-102

**VCU:** 4380

**Volume (mbf): 201**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / temporary road construction

### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class IV HC0.

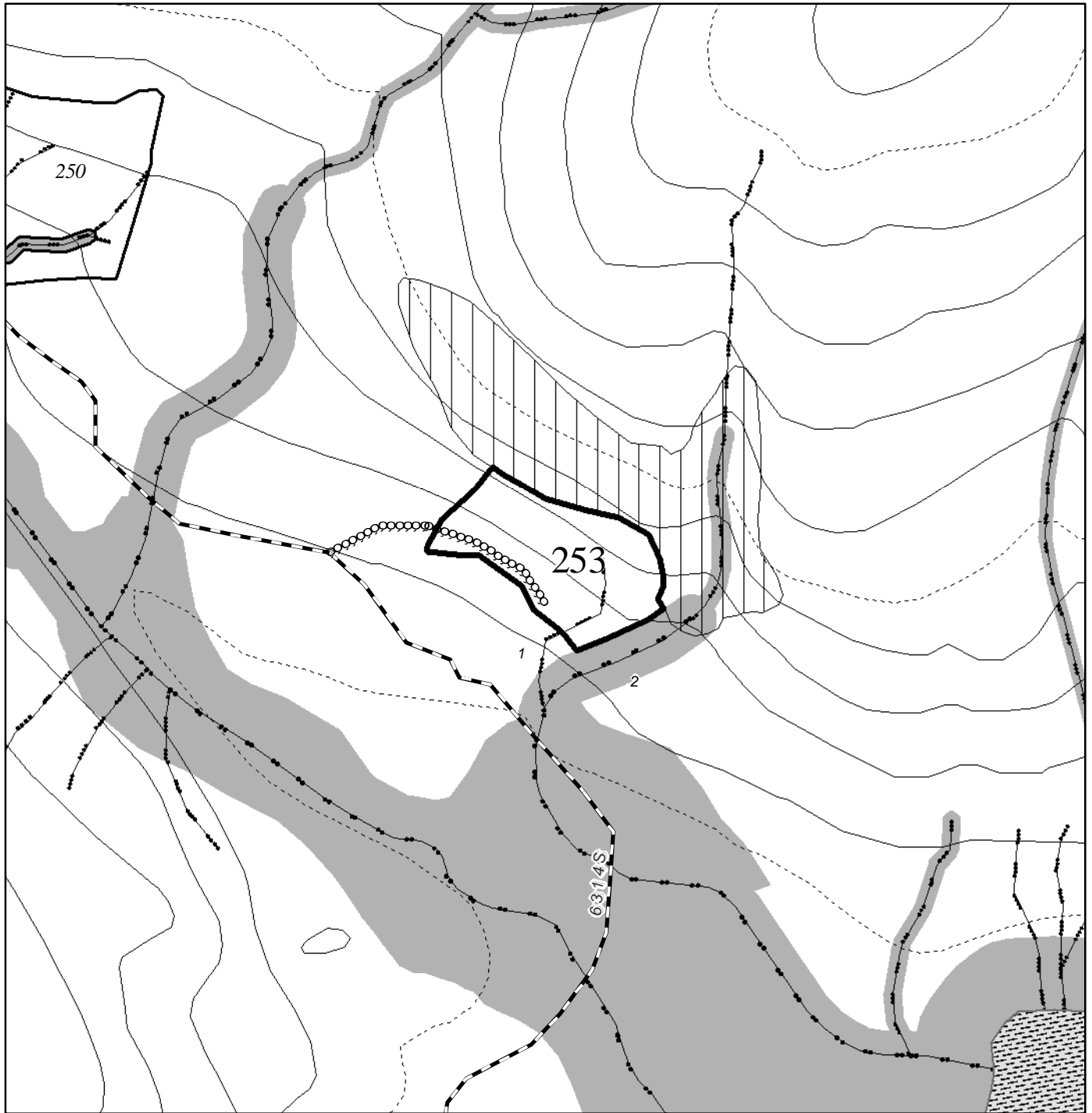
Stream 2 is Class II HC2.

**Response:** Stream 1: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 2: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).

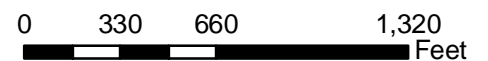
**No Concerns:** Scenery, Soils, Karst, Wetlands, Recreation, Sensitive/Rare Plants, Vegetation, Heritage, Wildlife



# Central Kupreanof Alternative 4 Unit 253



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 254**

**Unit Size (acres): 14**

**Alternative: 3**

**Aerial Photo:** 1298-102

**VCU:** 4380

**Volume (mbf): 259**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / new NFS road construction

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class III HC2.  
Streams 2 and 5 are Class IV HC0.  
Streams 3 and 4 are Class IV HC2.  
Stream 6 is Class III HC5.  
Lake is Class II.

**Response:** Streams 1 and 6: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Streams 2-5: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Lake: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).

**Resource Recreation**

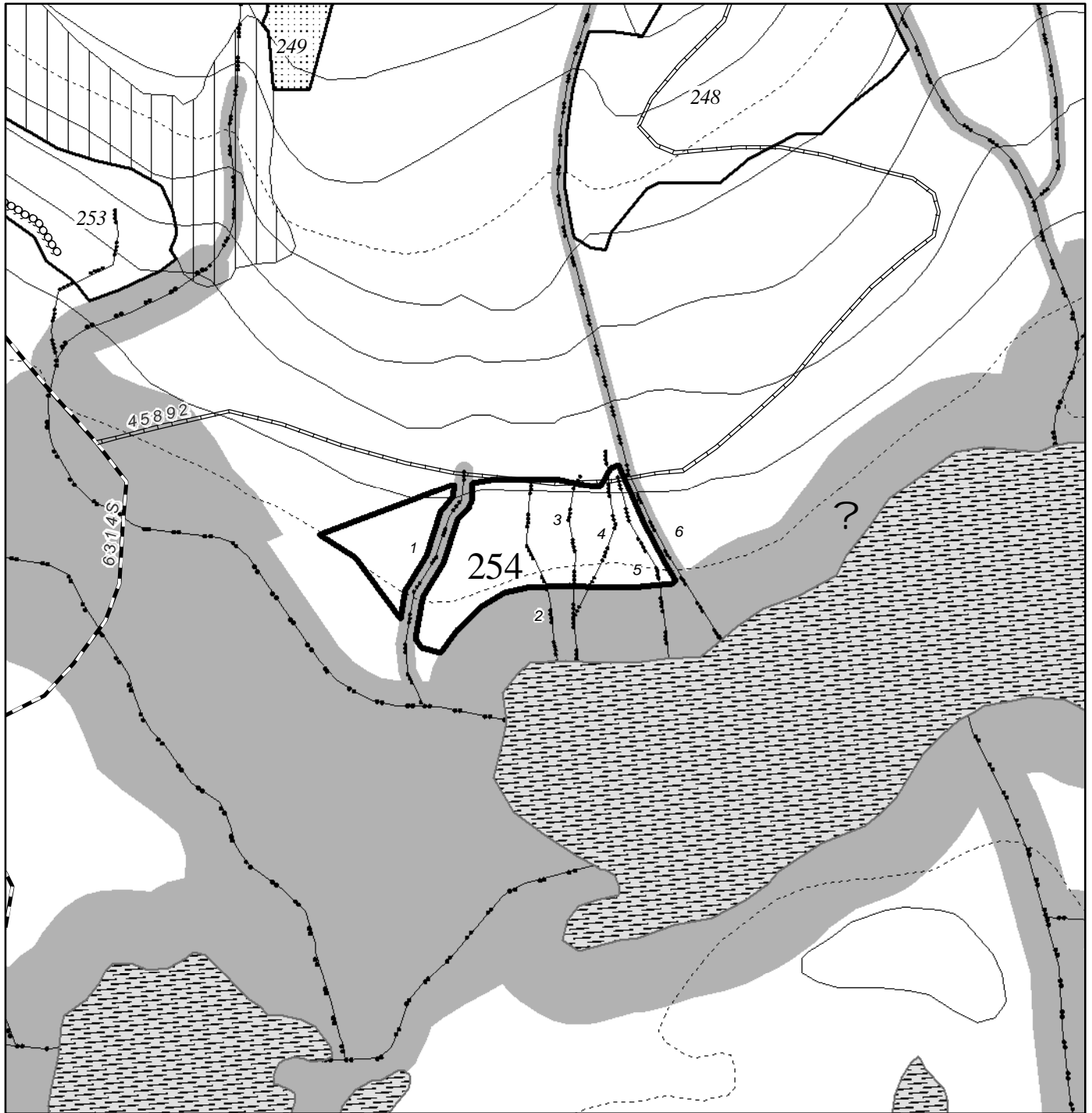
**Concern:** Area east of unit is used as a hunting camp.  
**Response:** Camp is not under permit and would not be affected by logging the unit.

**Resource Sensitive/Rare Plants**

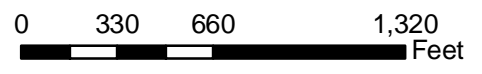
**Concern:** Sensitive Plant, Davy mannagrass (*Glyceria leptostachya*), found east of unit.  
**Response:** Plant found at least 600 feet outside of unit. No protection measures necessary.

**No Concerns:** Scenery, Soils, Karst, Wetlands, Vegetation, Heritage, Wildlife

# Central Kupreanof Alternative 3 Unit 254



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 255**

**Unit Size (acres): 3**

**Alternatives: 2, 3**

**Aerial Photo:** 1298-101

**VCU:** 4380

**Volume (mbf): 63**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing and proposed NFS road

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream is Class II MM1

**Response:** No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

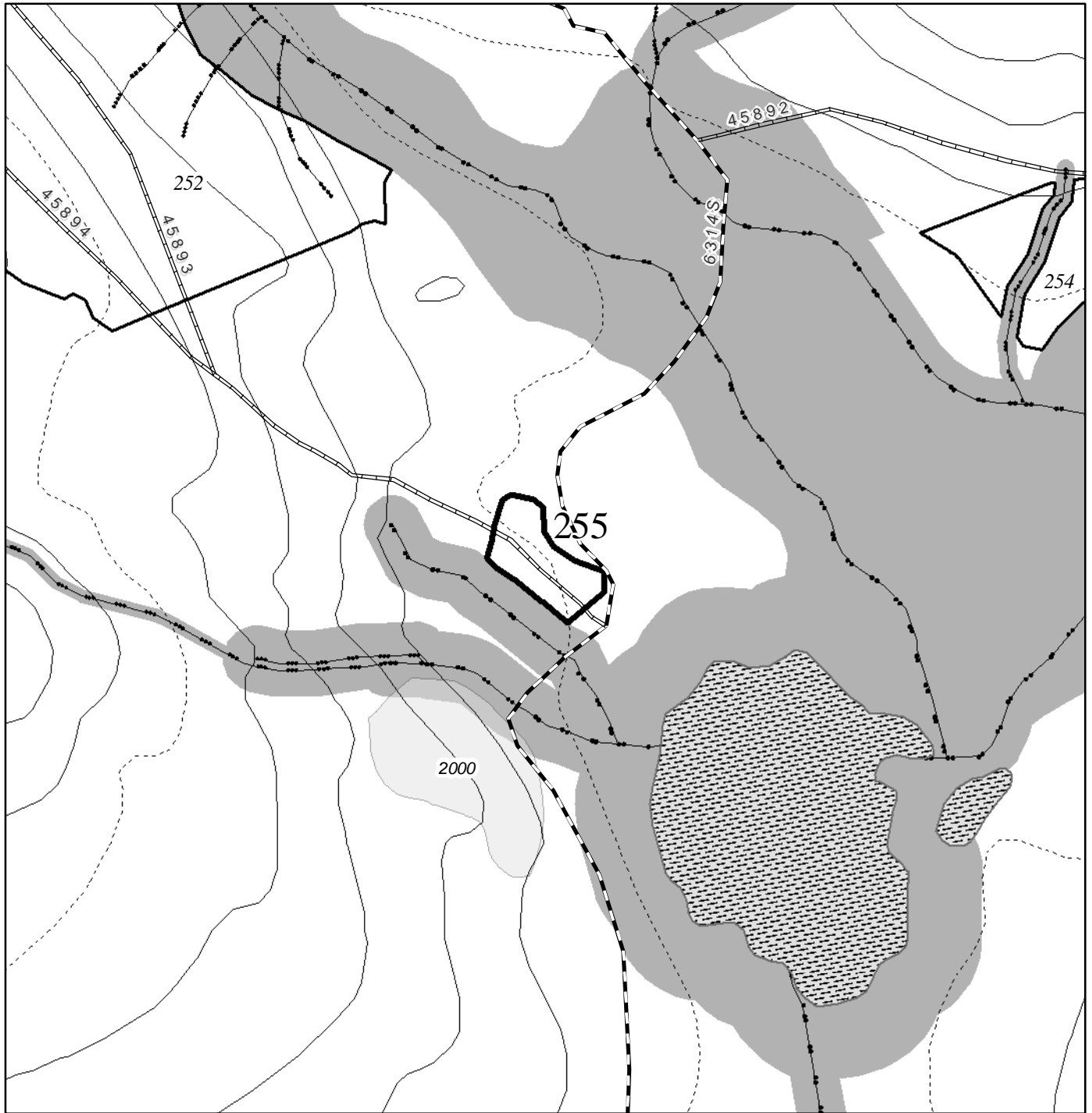
**Resource Wetlands**

**Concern:** Approximately 1 acre of harvest is proposed on forested and non forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

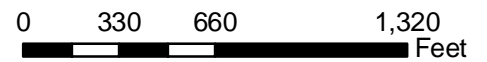
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on higher areas of the unit (BMP 13.2, 13.9).

**No Concerns:** Scenery, Soils, Karst, Recreation, Sensitive/Rare Plants, Heritage, Wildlife, Vegetation

# Central Kupreanof Alternative 2,3 Unit 255



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 257**

**Unit Size (acres): 27**

**Alternative: 3**

**Aerial Photo:** 1498-200

**VCU:** 4380

**Volume (mbf): 390**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / temporary road construction

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Streams 1, 3, and 4 are Class IV HC0.  
Stream 2 is Class III HC5.

**Response:** Streams 1, 3, and 4: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 2: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

**Resource Wetlands**

**Concern:** Proposed temporary road is located on forested wetland and no alternative route exists.

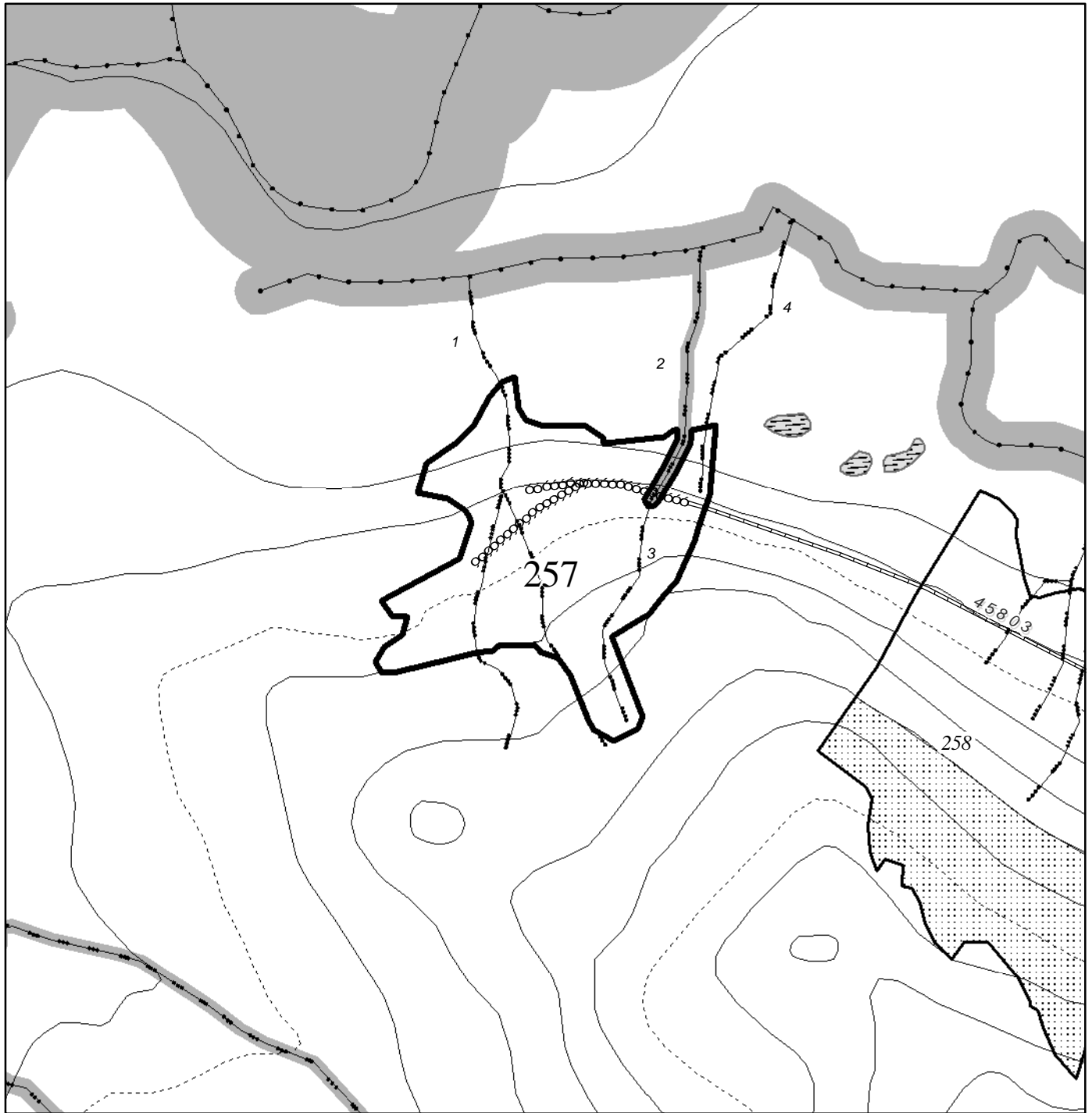
**Response:** Provide adequate cross drainage to maintain groundwater flow. Remove all structures and close the road after the unit has been harvested (BMP 14.9) (33 CFR BMPs 4, 5, 6).

**Concern:** The proposed unit is entirely on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

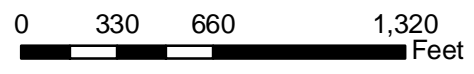
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

**No Concerns:** Scenery, Soils, Karst, Recreation, Sensitive/Rare Plants, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 3 Unit 257



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 258**

**Unit Size (acres): 54**

**Alternative: 3**

**Aerial Photo:** 1498-200

**VCU:** 4380

**Volume (mbf): 693**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut and uneven-aged management, single tree selection

**Logging Method/Transportation:** Cable (34 acres), helicopter (20 acres) / new NFS road construction

**Resource Concerns & Responses**

**Resource Fisheries/Watershed**

**Concern:** Streams 1-5 are Class IV HC0.  
Stream 6 is Class III HC5.  
Stream 7 is Class I MM1.

**Response:** Streams 1-5: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 6 "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Stream 7: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16); (MC2) No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).

**Resource Wetlands**

**Concern:** Approximately 14 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

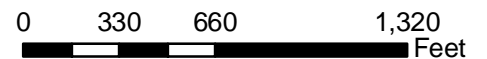
**No Concerns:** Scenery, Soils, Karst, Recreation, Sensitive/Rare Plants, Heritage, Wildlife, Vegetation



# Central Kupreanof Alternative 3 Unit 258



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 260**

**Unit Size (acres): 30**

**Alternative: 3**

**Aerial Photo:** 1498-200

**VCU:** 4380

**Volume (mbf): 442**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut and uneven-aged management, single tree selection

**Logging Method/Transportation:** Cable (23 acres) and helicopter (7 acres) / new NFS road construction

### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream is Class IV HC0.

**Response:** "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**Resource Soils**

**Concern:** Originally proposed road to unit crosses MMI-4 soils. Steep slopes and cliffs present above upper portion of the unit.

**Response:** Road has been re-routed along lower portion of unit (BMP 14.2) and helicopter yarding is proposed for upper portion of unit (BMP 13.9).

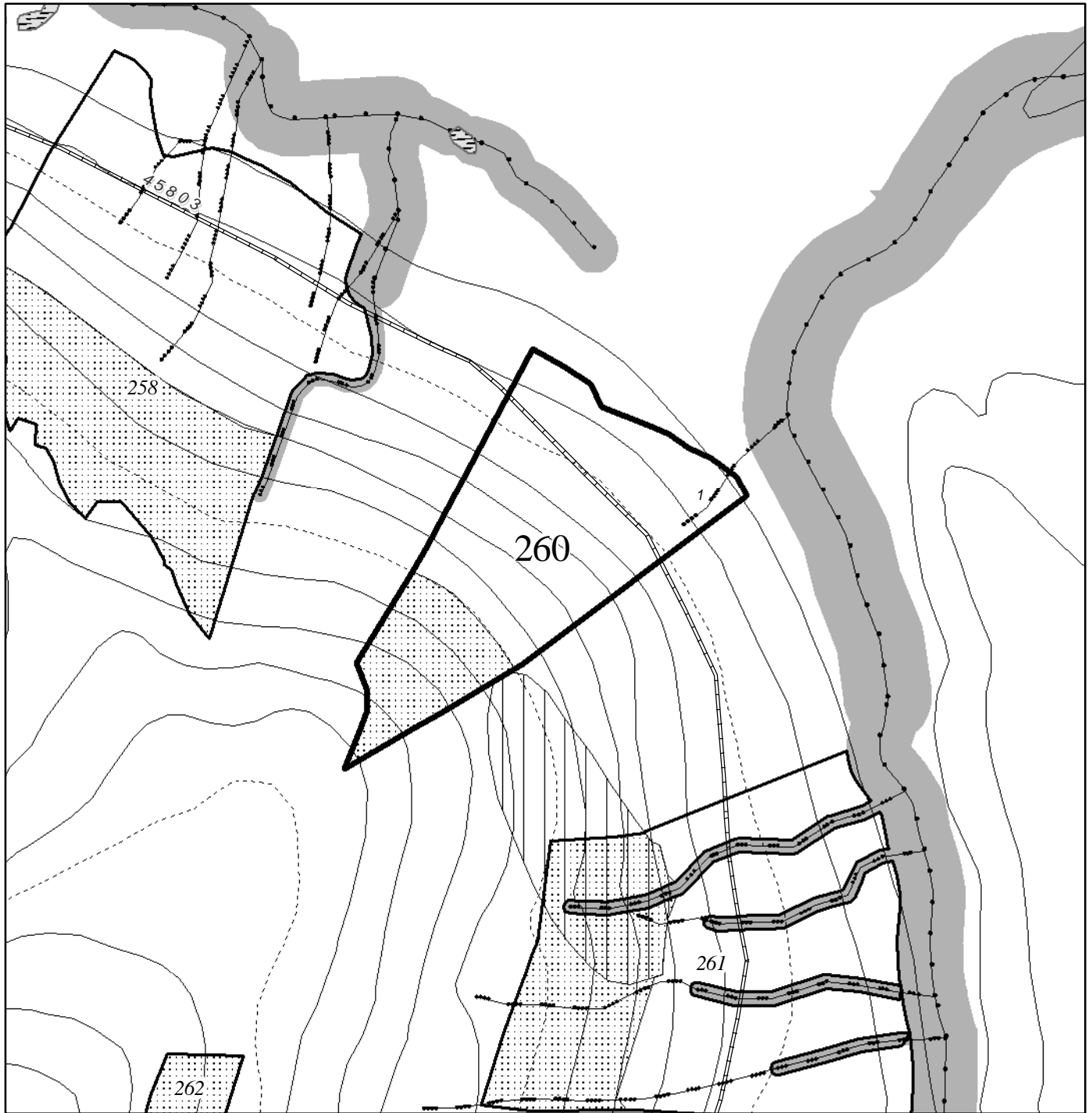
**Resource Wetlands**

**Concern:** Approximately 3 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

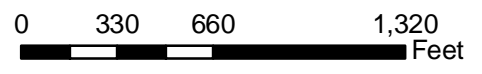
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Karst, Vegetation, Wildlife, Heritage

# Central Kupreanof Alternative 3 Unit 260



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 261**

**Unit Size (acres): 46**

**Alternative: 3**

**Aerial Photo:** 1498-201

**VCU:** 4380

**Volume (mbf): 697**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut and uneven-aged management, single tree selection

**Logging Method/Transportation:** Cable (31 acres) and Helicopter (15 acres) / new NFS Road construction

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Streams 1, 3, 5, and 7 are Class III HC5.  
Stream 2 is Class IV HC5.  
Streams 4 and 6 are Class IV HC0.  
Stream 8 is Class I MM2.

**Response:** Streams 1, 3, 5, and 7: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Streams 2, 4, and 6: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 8: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

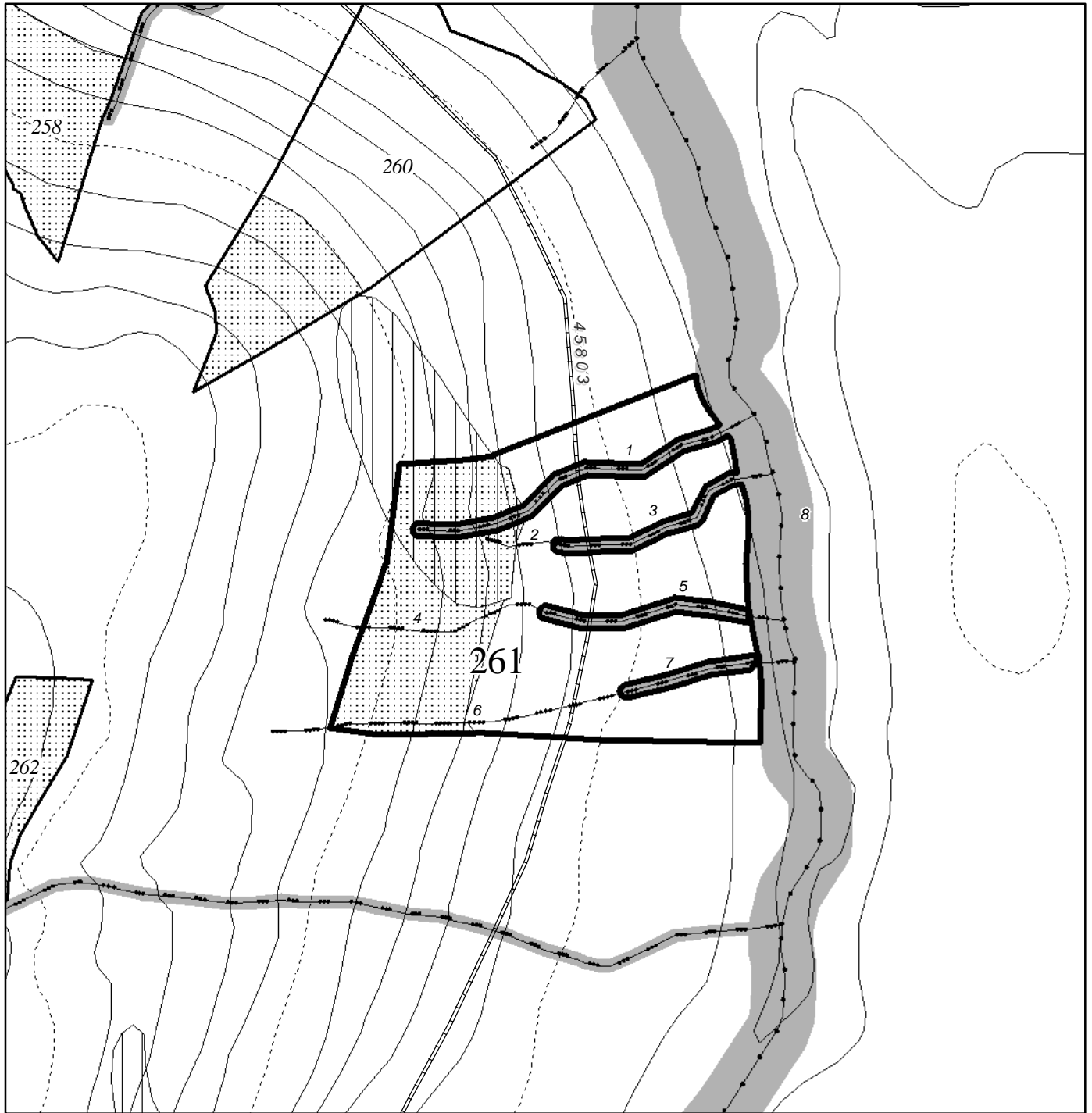
**Resource Soils**

**Concern:** MMI-4 soils at northwest section of unit. Slopes are 80 percent and greater in this area with 100-150 foot cliffs.

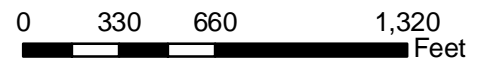
**Response:** A Soil Stability Investigation found the area beneath the MMI-4 soils to be well-benched and stable. However, to protect soil stability, helicopter yarding is proposed on the portion of unit that is on MMI-4 soils (BMP 13.9).

**No Concerns:** Scenery, Recreation, Wetlands, Karst, Sensitive/Rare Plants, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 3 Unit 261



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 262**

**Unit Size (acres): 9**

**Alternative: 3**

**Aerial Photo:** 1098-200

**VCU:** 4380

**Volume (mbf): 53**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Uneven-aged management, single tree selection

**Logging Method/Transportation:** Helicopter / new NFS road construction

**Resource Concerns & Responses**

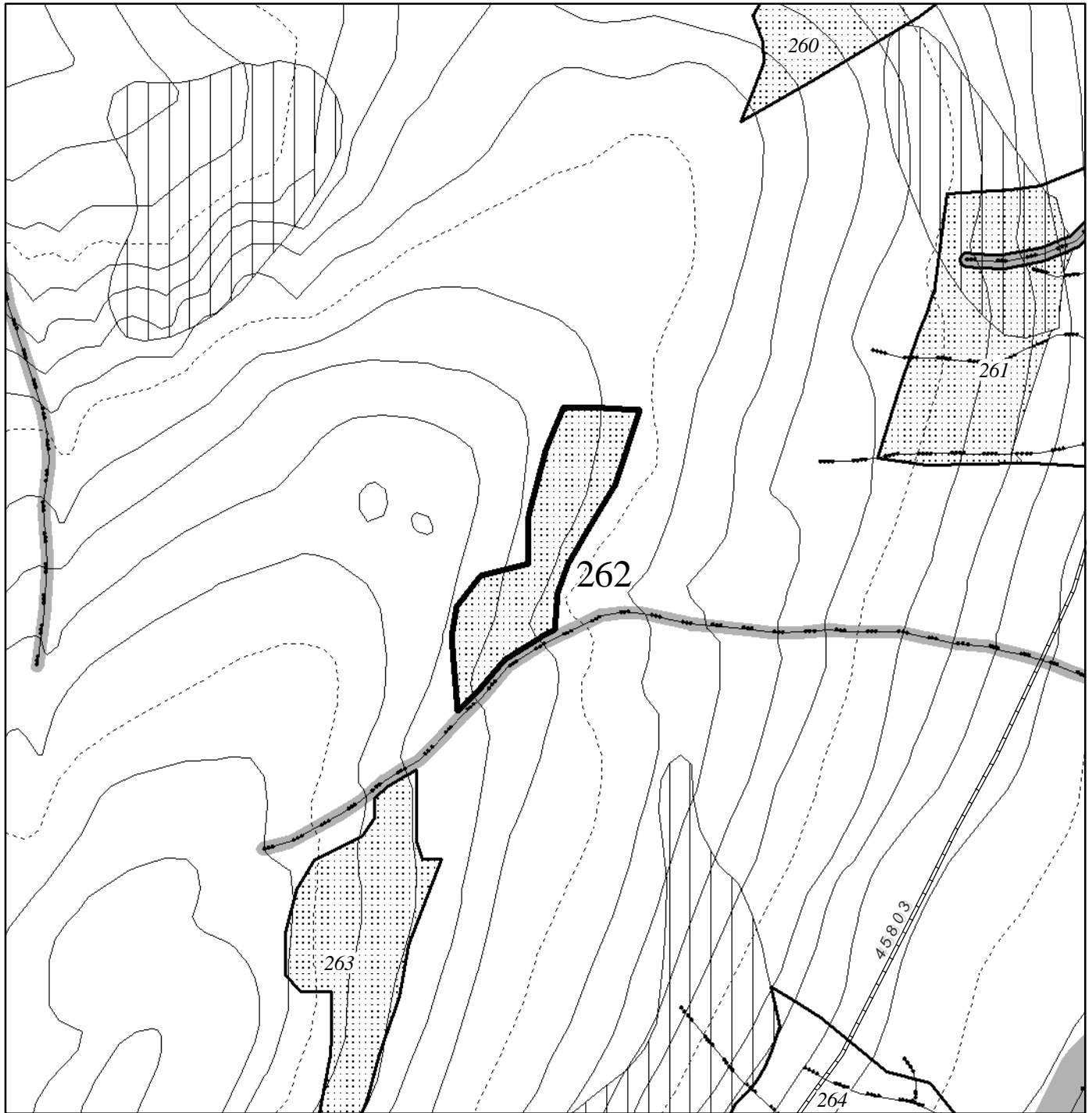
**Resource Fisheries/Watershed**

**Concern:** Stream below the unit is Class III HC5.

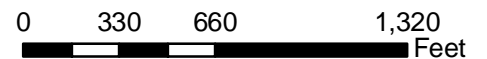
**Response:** "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

**No Concerns:** Scenery, Soils, Wetlands, Karst, Recreation, Sensitive/Rare Plants, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 3 Unit 262



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 263**

**Unit Size (acres): 59**

**Alternative: 3**

**Aerial Photo:** 1498-202

**VCU:** 4380

**Volume (mbf): 537**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut and uneven-aged management, single tree selection

**Logging Method/Transportation:** Cable (12 acres) and helicopter (47 acres) / new NFS Road construction

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class III HC5.

Streams 2 and 3 are Class IV HC5.

**Response:** Stream 1: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

Streams 2 and 3: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**Resource Soils**

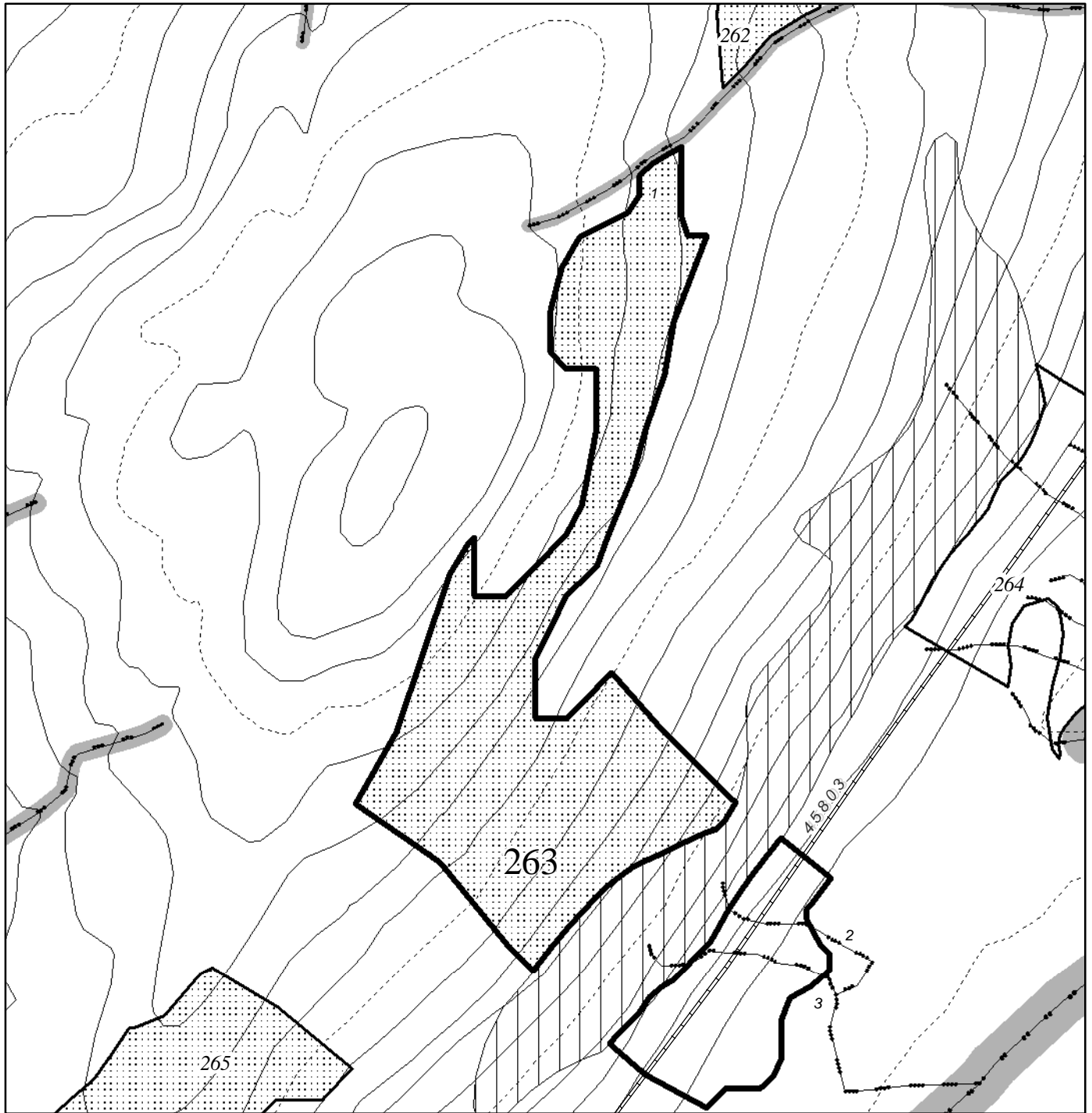
**Concern:** Part of the southeastern section of the originally proposed unit was on MMI-4 soils and the originally proposed road location ran parallel to MMI-4 soils.

**Response:** Adjusted unit boundary to avoid MMI-4 soils (BMP 13.9). Road location moved downslope to the 500-foot contour and away from MMI-4 soils (BMP 14.2).

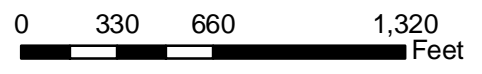
**No Concerns:** Scenery, Wetlands, Karst, Recreation, Sensitive/Rare Plants, Wildlife, Vegetation, Heritage



# Central Kupreanof Alternative 3 Unit 263



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 264**

**Unit Size (acres): 23**

**Alternative: 3**

**Aerial Photo:** 1498-202

**VCU:** 4380

**Volume (mbf): 418**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / new NFS road construction

**Resource Concerns & Responses**

**Resource Fisheries/Watershed**

**Concern:** Streams 1, 3, and 6 are Class IV HC5.  
Streams 2, 5, 7, and 8 are Class IV HC0.  
Stream 4 is Class III HC5.  
Stream 9 is Class II HC3.

**Response:** Streams 1-3 and 5-8: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 4: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Stream 9: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).

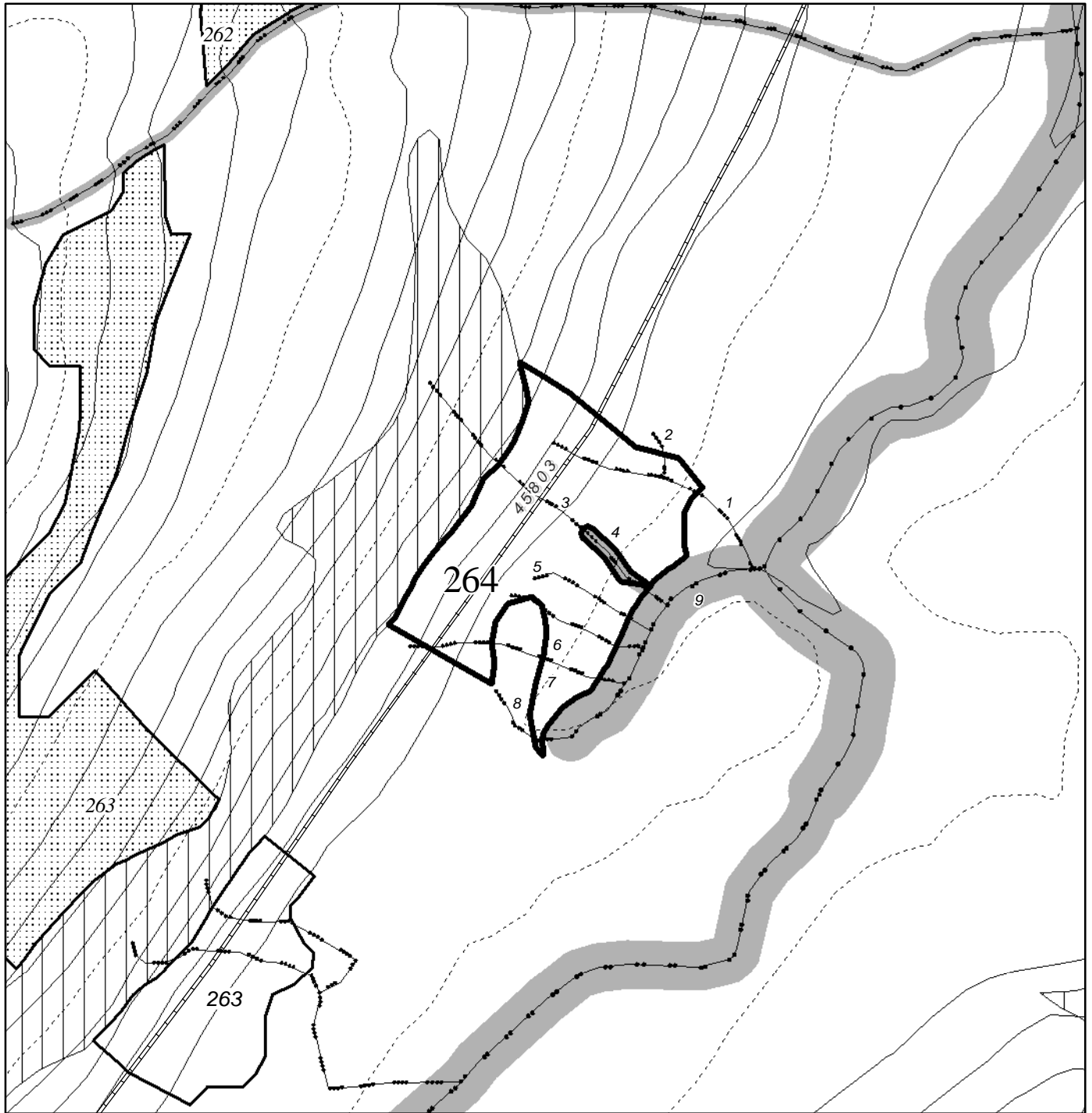
**Resource Soils**

**Concern:** MMI-4 soils present in northwestern portion of unit with the originally proposed road location ran parallel to MMI-4 soils.

**Response:** Adjusted unit boundary to avoid MMI-4 soils (BMP 13.9). Road location moved downslope to the 500-foot contour and away from MMI-4 soils (BMP 14.2).

**No Concerns:** Scenery, Wetlands, Karst, Recreation, Sensitive/Rare Plants, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 3 Unit 264



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 265**

**Unit Size (acres): 57**

**Alternative: 3**

**Aerial Photo:** 1598-20

**VCU:** 4380

**Volume (mbf): 693**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut and uneven-aged management, single tree selection

**Logging Method/Transportation:** Cable (27 acres) and helicopter (30 acres) / new NFS road construction

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Streams 1, 2, and 3 are Class IV HCO.

**Response:** "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9,13.16).

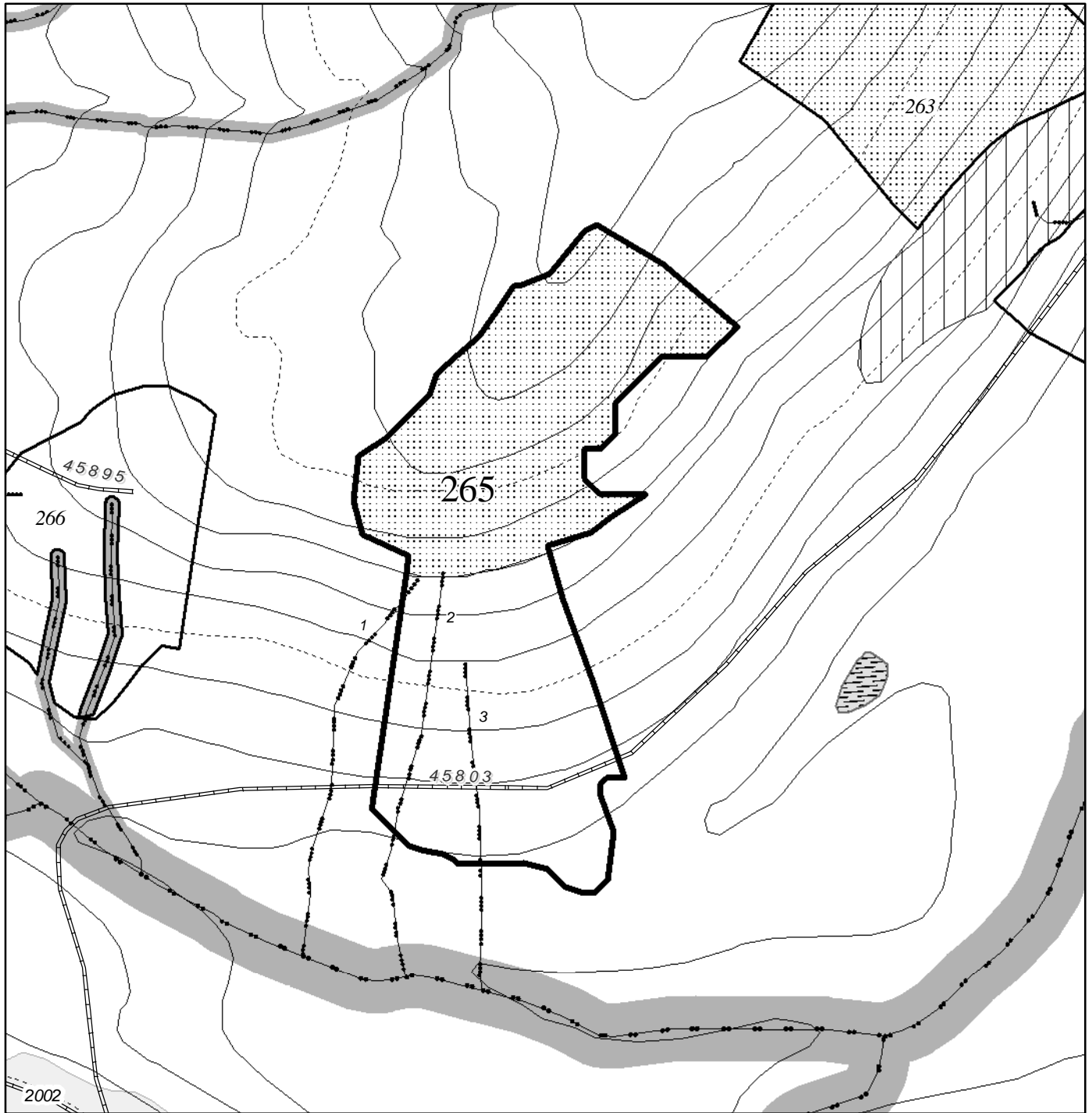
**Resource Soils**

**Concern:** Steep slopes.

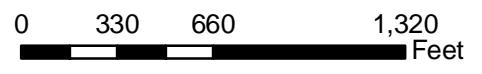
**Response:** Partial suspension to meet soil quality standards (13.9).

**No Concerns:** Scenery, Wetlands, Karst, Recreation, Sensitive/Rare Plants, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 3 Unit 265



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 266**

**Unit Size (acres): 22**

**Alternative: 3**

**Aerial Photo:**

**VCU: 4380**

**Volume (mbf): 377**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / new NFS road construction

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class IV HC0.

Streams 2 and 3 are Class III HC5.

**Response:** Stream 1: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Streams 2 and 3: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

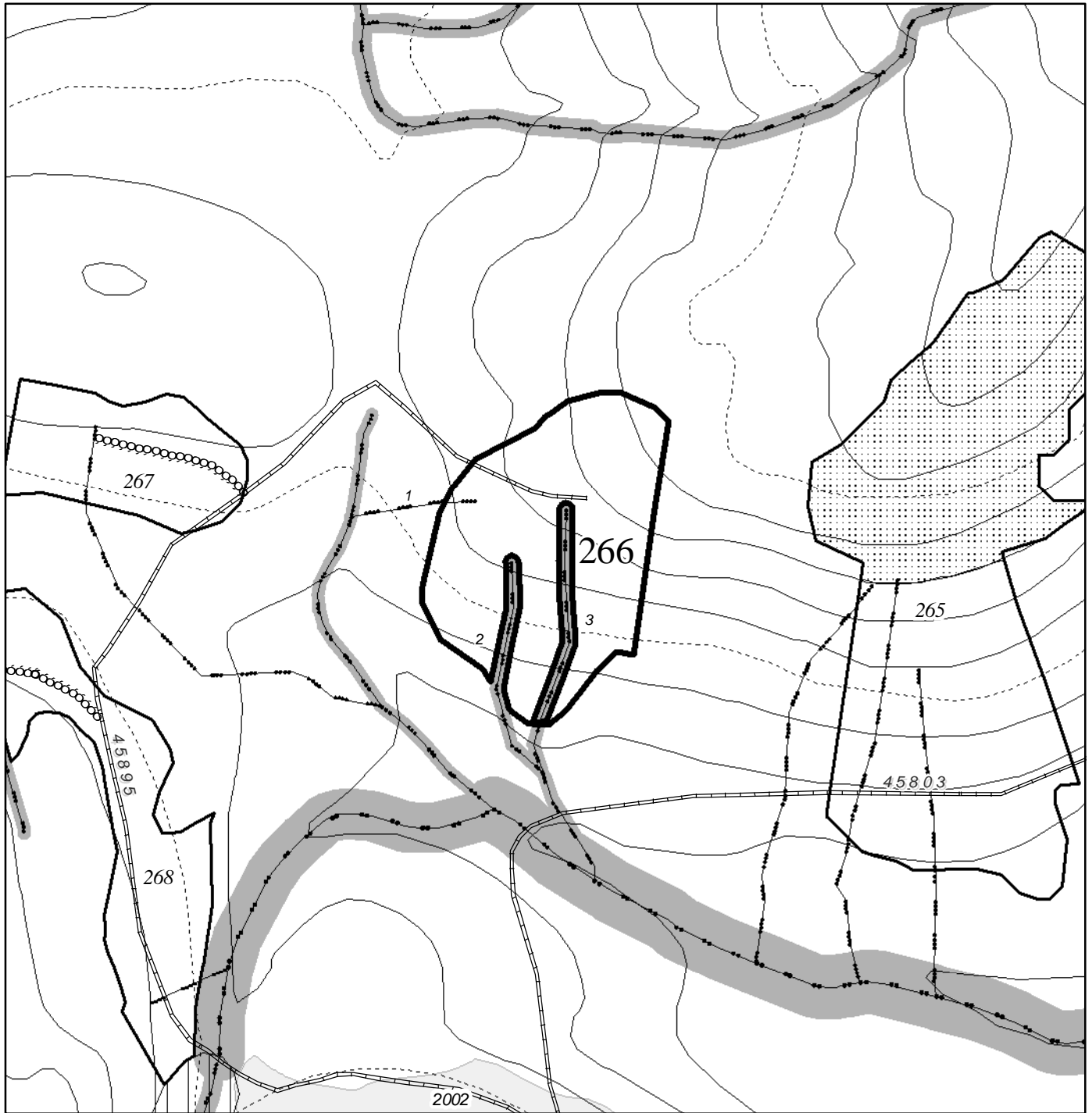
**Resource Soils**

**Concern:** Cliff located along southeast unit boundary. Steep slopes.

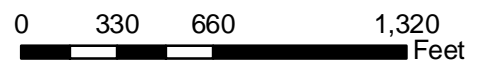
**Response:** Unit boundary modified to avoid cliff (BMP 13.5). Partial suspension to meet soil quality standards (13.9).

**No Concerns:** Scenery, Recreation, Wetlands, Karst, Sensitive/Rare Plants, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 3 Unit 266



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Road      |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 267**

**Unit Size (acres): 12**

**Alternative: 3**

**Aerial Photo:** 1598-20

**VCU:** 4380

**Volume (mbf): 194**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / new NFS road construction, and temporary road construction.

**Resource Concerns & Responses**

**Resource Fisheries/Watershed**

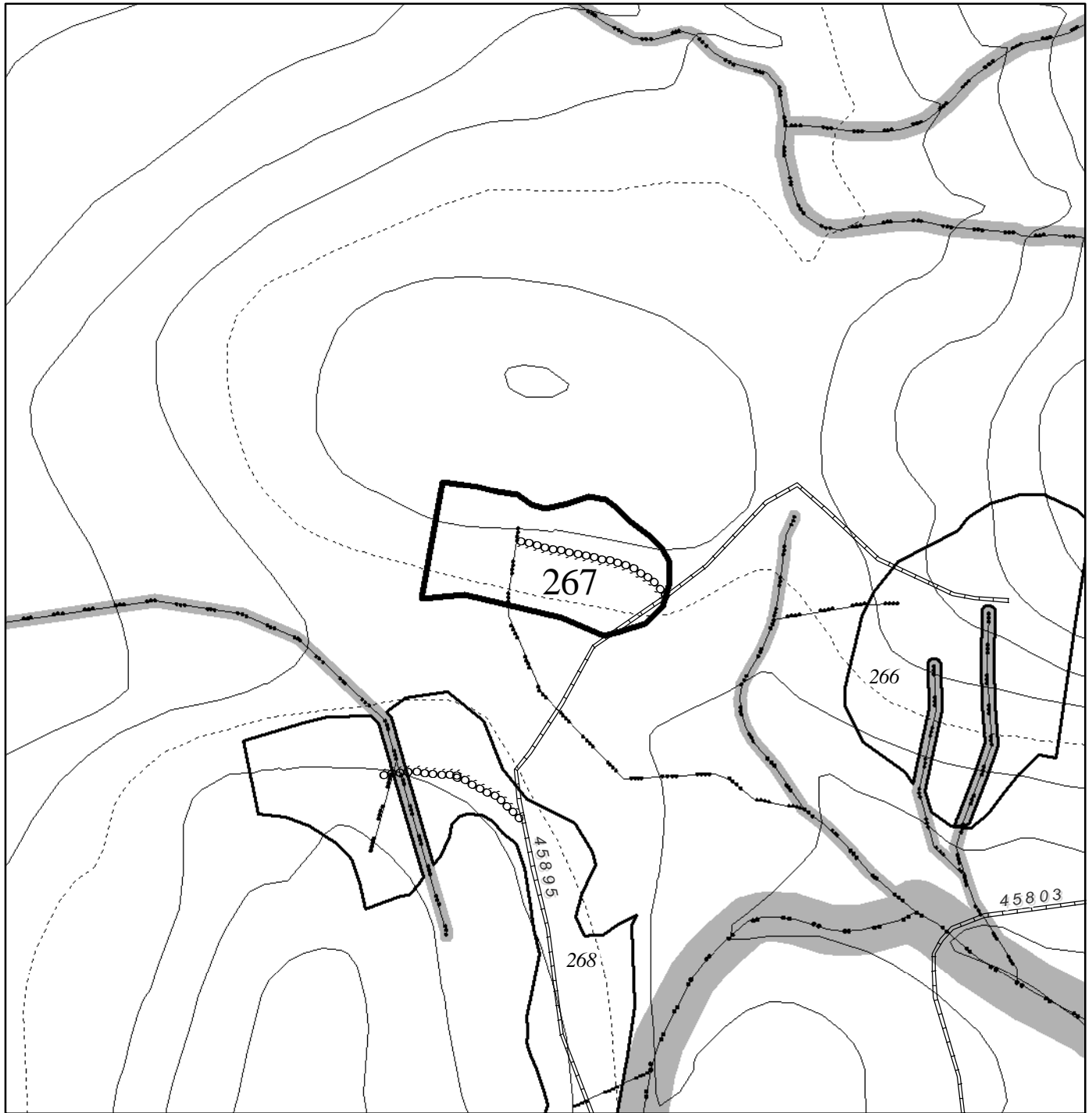
**Concern:** Stream is Class IV HC0.

**Response:** "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9,13.16).

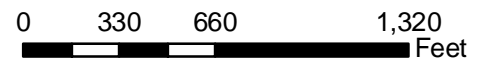
**No Concerns:** Scenery, Soils, Wetlands, Karst, Recreation, Sensitive/Rare Plants, Wildlife, Heritage, Vegetation



# Central Kupreanof Alternative 3 Unit 267



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Road      |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 268**

**Unit Size (acres): 27**

**Alternative: 3**

**Aerial Photo:** 1598-20

**VCU:** 4380

**Volume (mbf): 472**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / new NFS road and temporary road construction

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class II HC3.  
Stream 2 is Class IV HC0.  
Stream 3 is Class III HC5.  
Stream 4 is Class IV HC5.

**Response:** Stream 1: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).  
Streams 2 and 4: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 3: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9,13.16).

**Concern:** Temporary road crosses a Class III stream.

**Response:** Implement BMPs 12.17, 14.17, 14.5, 14.6, 14.8, 14.9, 14.12, 14.14, 14.15.

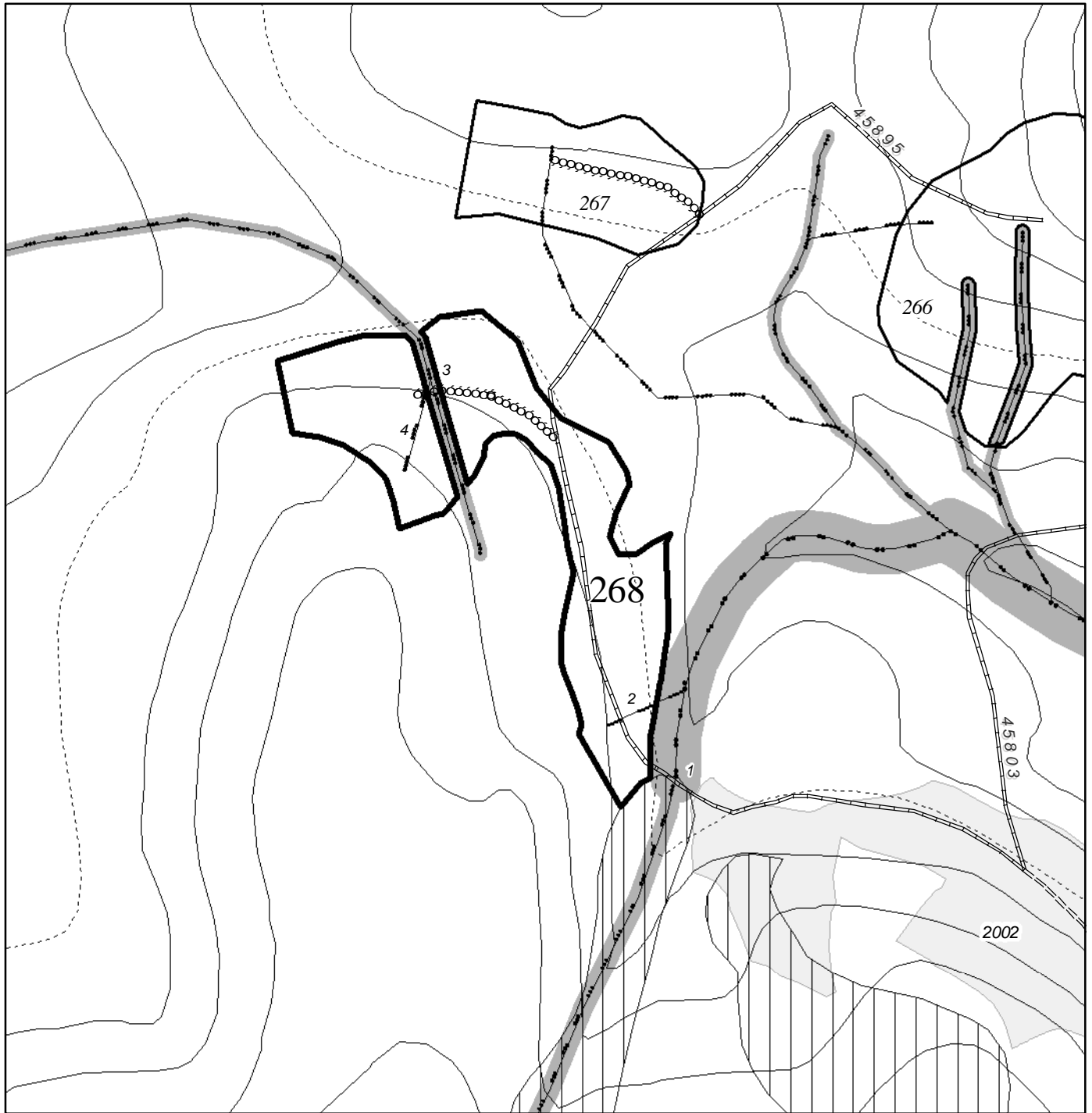
**Resource Soils**

**Concern:** Proposed road for accessing this unit crosses a small section of MMI-4 soil.

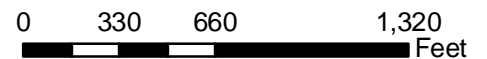
**Response:** Road location modified to avoid MMI-4 soils (14.2).

**No Concerns:** Scenery, Recreation, Wetlands, Karst, Sensitive/Rare Plants, Vegetation, Wildlife, Heritage

# Central Kupreanof Alternative 3 Unit 268



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Road      |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 269**

**Unit Size (acres): 2**

**Alternatives: 2, 3**

**Aerial Photo:** 1298-99

**VCU:** 4290

**Volume (mbf): 25**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class II MM0.

Stream 2 is Class II HC0.

Stream 3 is Class II and Class III HC2.

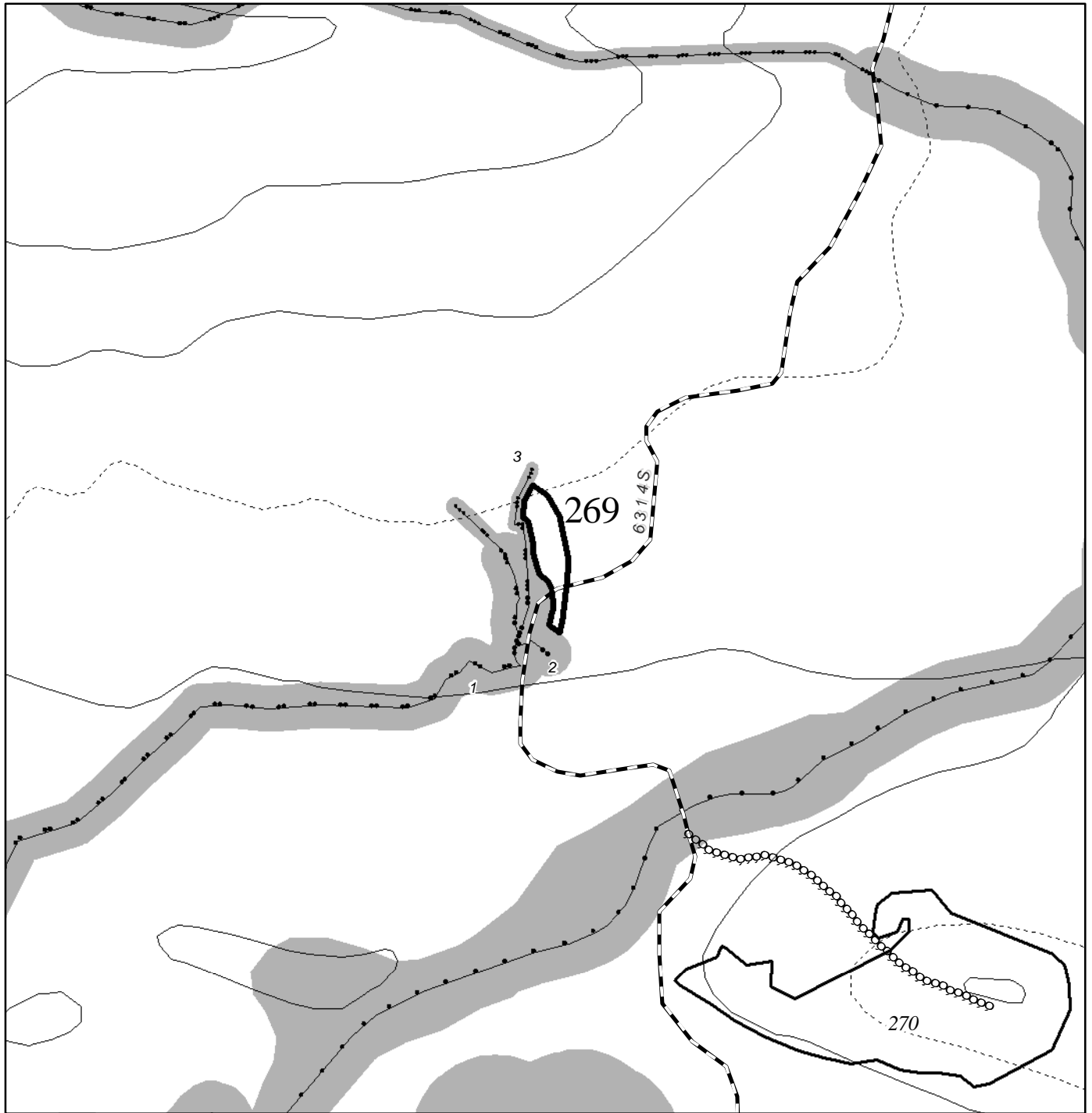
**Response:** Stream 1: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

Streams 2 and 3 (Class II): No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).

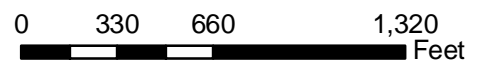
Streams 3 (Class III) and 4: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

**No Concerns:** Scenery, Soils, Wetlands, Karst, Recreation, Sensitive/Rare Plants, Vegetation, Wildlife, Heritage

# Central Kupreanof Alternative 2,3 Unit 269



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 270**

**Unit Size (acres): 90**

**Alternatives: 2, 3**

**Aerial Photo:** 1298-98

**VCU:** 4360

**Volume (mbf): 1,554**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel and cable / existing NFS road and proposed NFS road construction

**Resource Concerns & Responses**

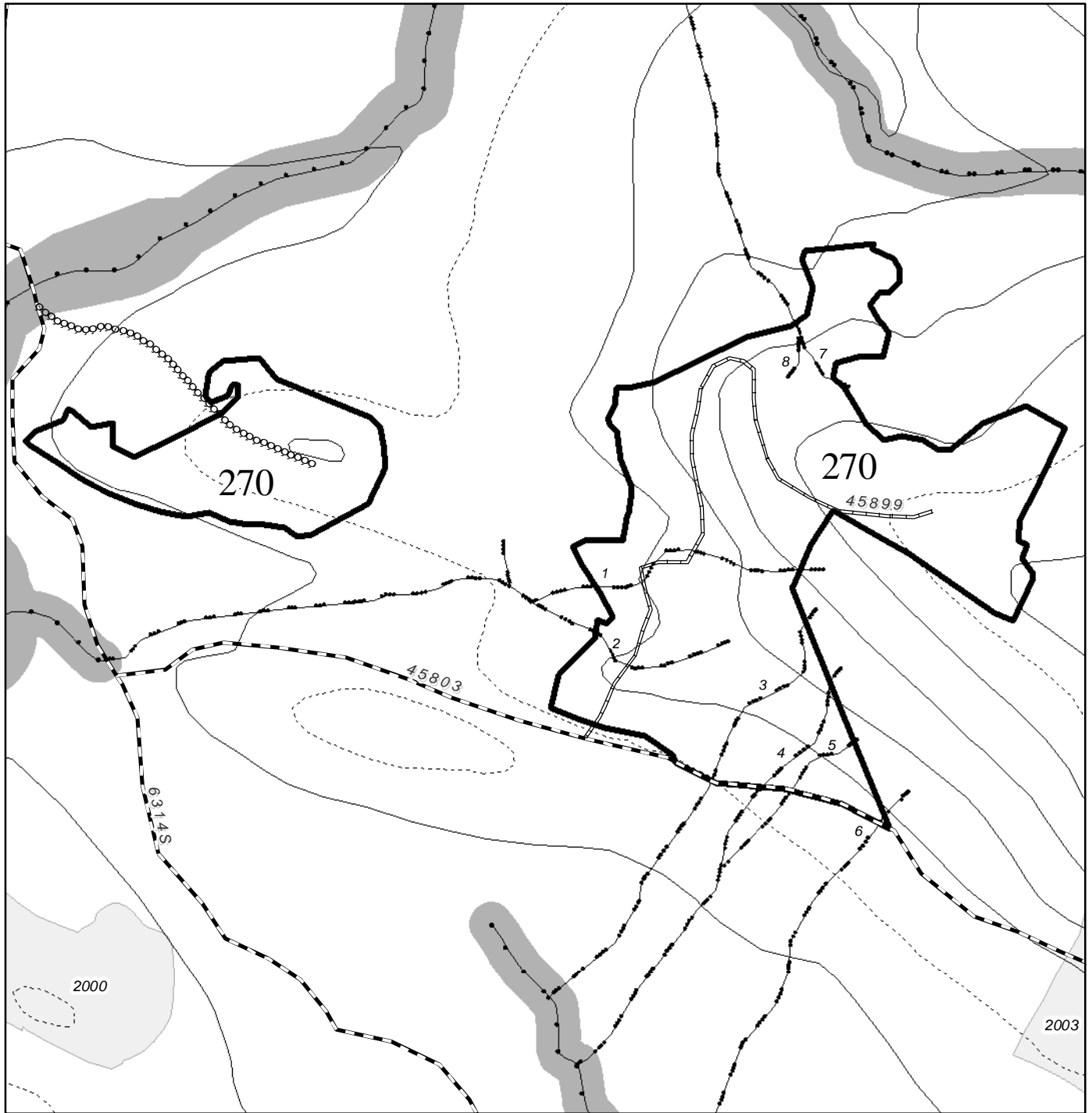
**Resource Fisheries/Watershed**

**Concern:** Streams 1, 2, and 7 are Class IV MM0.  
Streams 3-6 and 8 are Class IV HC0.

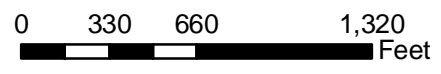
**Response:** All Streams: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9,13.16).

**No Concerns:** Scenery, Soils, Wetlands, Karst, Recreation, Sensitive/Rare Plants, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 2,3 Unit 270



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Old-growth Reserve             | Stream Value Class II   |
| Riparian Management Area       | Stream Value Class III  |
| Very High Hazard Soils (MMI-4) | Stream Value Class IV   |
| Lakes                          | 100-ft Contour Interval |
| Managed Stands                 | 500-ft Contour Interval |
| Proposed Temporary Roads       | Project Area Boundary   |
| Open NFS Roads                 | Sensitive Plants        |
| Closed Roads                   | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 271**

**Unit Size (acres): 22**

**Alternatives: 3, 4**

**Aerial Photo: 1298-40**

**VCU: 4360**

**Volume (mbf): 432**

**Land Use Designation: Timber Production**

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / existing NFS road

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class I MM1.

Streams 2-4 are Class IV HC0.

Stream 5 is Class IV HC0/AF0.

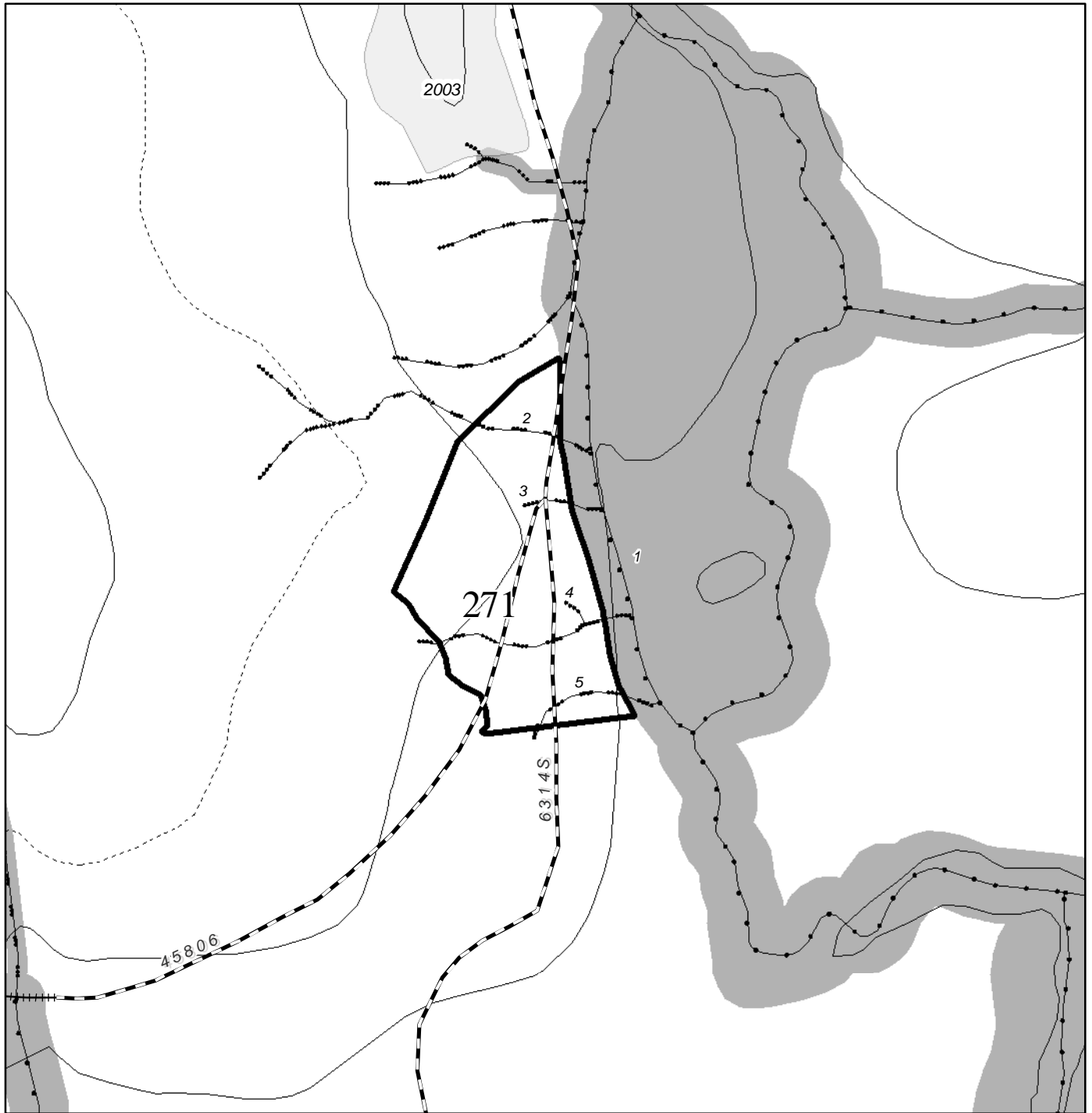
**Response:** Stream 1: No timber harvest within the greater distance of the 100-year flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet of channel. (BMP 12.6, 12.6a, 13.9, 13.16).

Streams 2-5: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

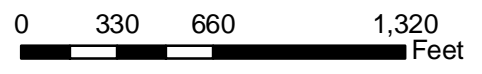
**No Concerns:** Scenery, Soils, Karst, Wetlands, Recreation, Sensitive/Rare Plants, Vegetation, Wildlife, Heritage



# Central Kupreanof Alternative 3,4 Unit 271



- |                           |                         |
|---------------------------|-------------------------|
| Proposed Unit             | Proposed NFS Roads      |
| Adjacent Proposed Unit    | Reconstructed Roads     |
| Helicopter Yarding        | Stream Value Class I    |
| Old-growth Reserve        | Stream Value Class II   |
| Riparian Management Area  | Stream Value Class III  |
| Very Hazard Soils (MMI-4) | Stream Value Class IV   |
| Lakes                     | Project Area Boundary   |
| Managed Stands            | 100-ft Contour Interval |
| Proposed Temporary Roads  | 500-ft Contour Interval |
| Open NFS Roads            | Sensitive Plants        |
| Closed Roads              | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 272**

**Unit Size (acres): 34**

**Alternative: 3**

**Aerial Photo:** 1298-40

**VCU:** 4360

**Volume (mbf): 675**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / new NFS road construction

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:**

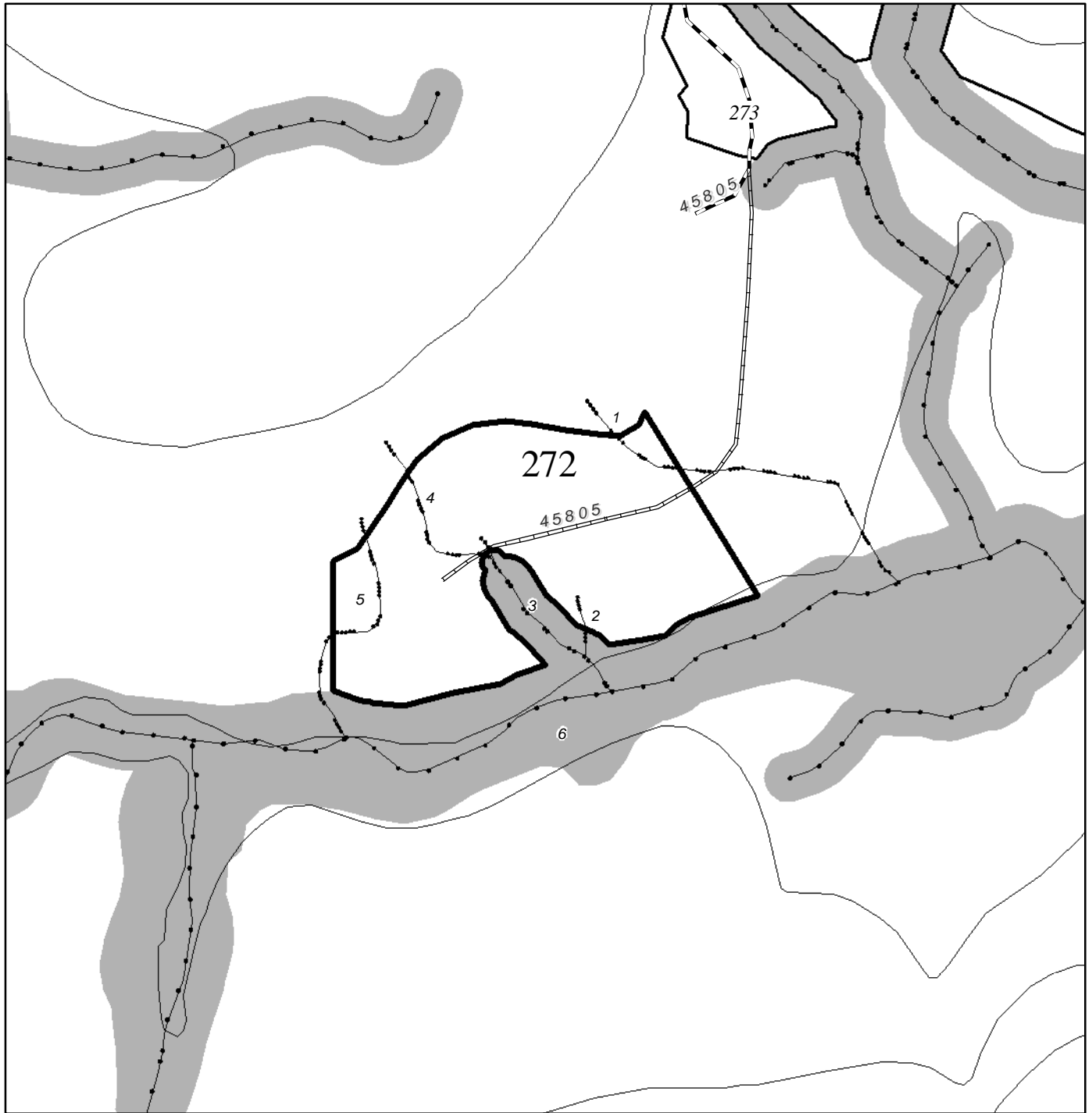
Streams 1 and 4 is Class IV MM1.  
Streams 2 and 5 are Class IV HC0.  
Stream 3 is Class II/III HC2.  
Stream 6 is Class I FP3.

**Response:**

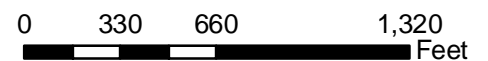
Streams 1, 2, 4, and 5: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 3 (Class II): No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMP 12.6, 13.9, 13.16).  
Stream 3 (Class III): "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Stream 6: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 130 feet of channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

**No Concerns:** Scenery, Soils, Karst, Wetlands, Recreation, Sensitive/Rare Plants, Vegetation, Heritage, Wildlife

# Central Kupreanof Alternative 3 Unit 272



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Road      |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 273**

**Unit Size (acres): 43**

**Alternative: 3**

**Aerial Photo:** 1298-40

**VCU:** 4360

**Volume (mbf): 839**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / reconstructed NFS road and existing NFS road, new NFS and temporary road construction

**Resource Concerns & Responses**

**Resource Fisheries/Watershed**

**Concern:** Streams 1, 2, 4, and 6 are Class II HC2.  
Stream 3 is Class II MC1.  
Stream 5 is Class II AF1.  
Stream 7 is Class II HC5.  
Stream 8 is Class I MM1.  
Stream 9 is Class III HC6.

**Response:** Streams 1- 4, 6, and 7: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMP 12.6, 13.9, 13.16).  
Streams 5: No timber harvest within the greater distance of the active portion of alluvial fan or 140 feet. No more than 10 percent harvest on the fan in a 30-year period. (BMP 12.6, 12.6a, 13.9, 13.16).  
Stream 8: No timber harvest within the greater distance of the 100-year flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet of channel. (BMP 12.6, 12.6a, 13.9, 13.16).  
Stream 9: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

**Resource Wetlands**

**Concern:** The proposed temporary road is located on forested wetland and no alternative route exists.

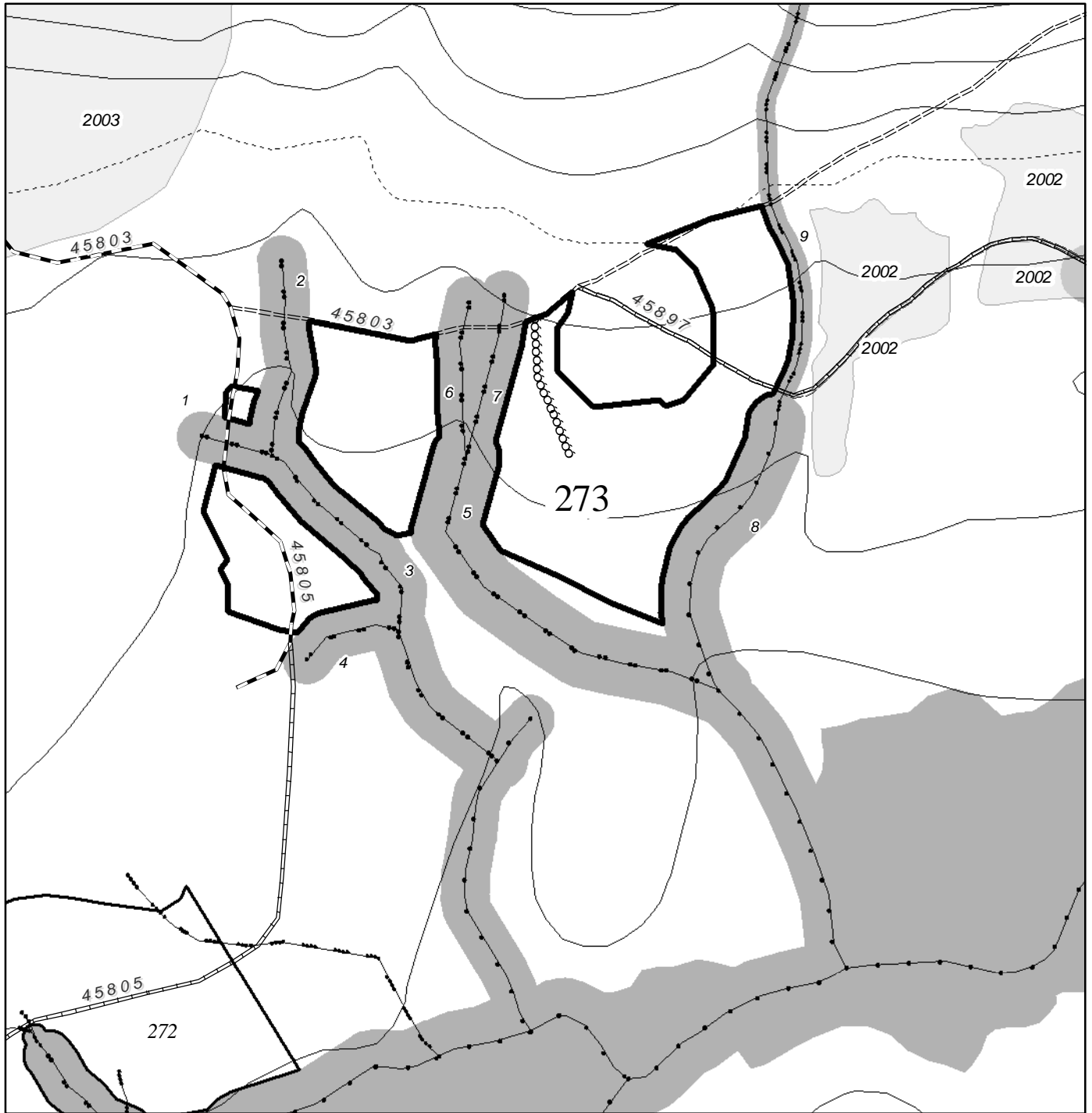
**Response:** Provide adequate cross drainage to maintain groundwater flow. Remove all structures and close the road after the unit has been harvested (BMP 14.9) (33 CFR BMPs 4, 5, 6).

**Concern:** Approximately 5 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

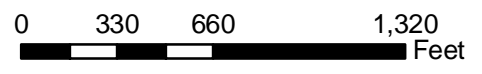
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

**No Concerns:** Scenery, Soils, Karst, Recreation, Sensitive/Rare Plants, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 3 Unit 273



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Old-growth Reserve             | Stream Value Class II   |
| Riparian Management Area       | Stream Value Class III  |
| Very High Hazard Soils (MMI-4) | Stream Value Class IV   |
| Lakes                          | Project Area Boundary   |
| Managed Stands                 | 100-ft Contour Interval |
| Proposed Temporary Roads       | 500-ft Contour Interval |
| Open NFS Roads                 | Sensitive Plants        |
| Closed Roads                   | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 273**

**Unit Size (acres): 37**

**Alternatives: 2, 4**

**Aerial Photo:** 1298-40

**VCU:** 4360

**Volume (mbf): 723**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel/ reconstructed NFS Road 45803 and existing road 45805, and one temporary road

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Streams 1, 2, 4, and 6 are Class II HC2.

Stream 3 is Class II MC1.

Stream 5 is Class II AF1.

Stream 7 is Class II HC5.

Stream 8 is Class I MM1.

Stream 9 is Class III HC6.

**Response:** Streams 1- 4, 6, and 7: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMP 12.6, 13.9, 13.16).

Streams 5: No timber harvest within the greater distance of the active portion of alluvial fan or 140 feet. No more than 10 percent harvest on the fan in a 30-year period. (BMP 12.6, 12.6a, 13.9, 13.16).

Stream 8: No timber harvest within the greater distance of the 100-year flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet of channel. (BMP 12.6, 12.6a, 13.9, 13.16).

Stream 9: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

**Resource Wetlands**

**Concern:** The proposed temporary road is located on forested wetland and no alternative route exists.

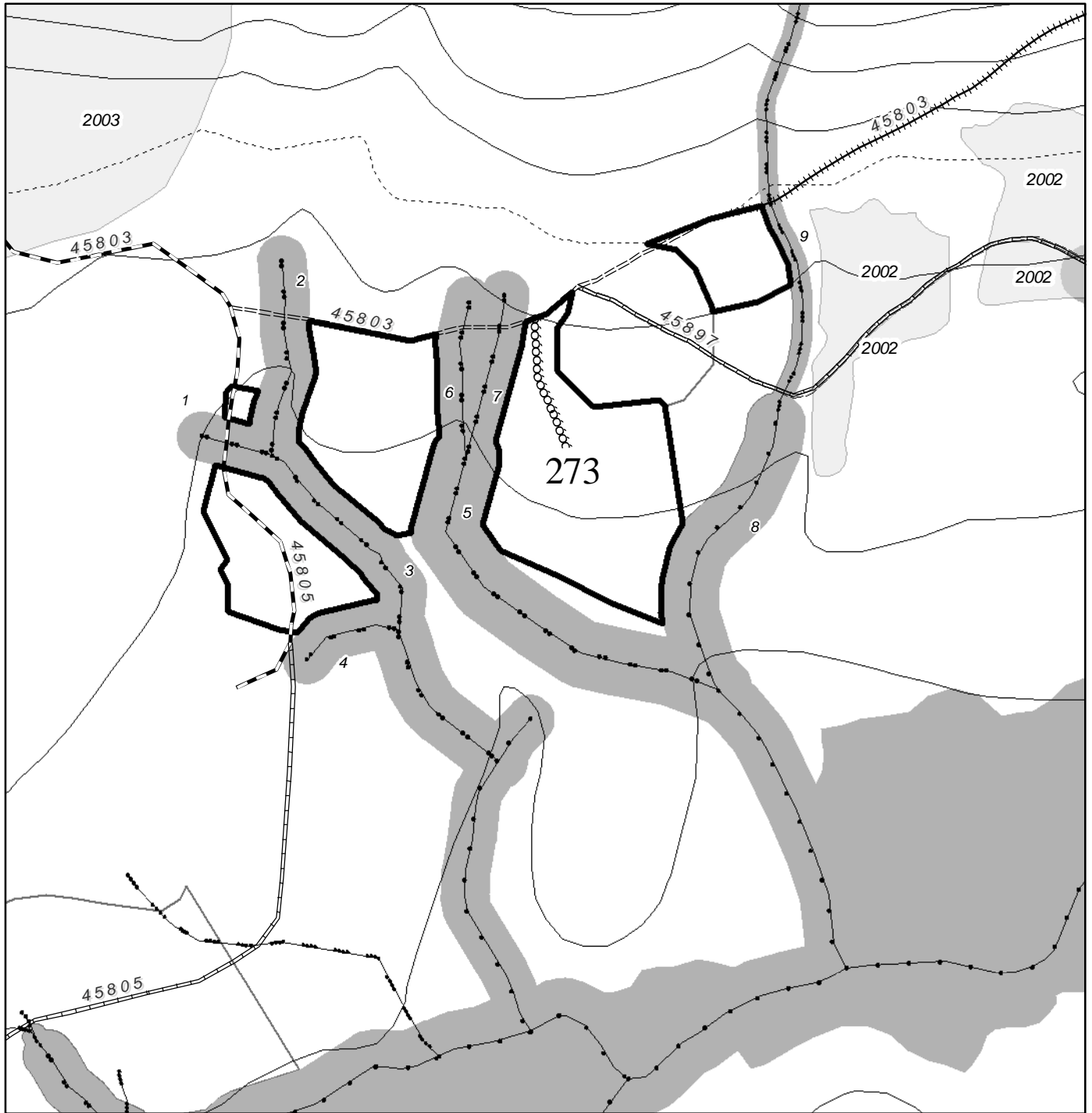
**Response:** Provide adequate cross drainage to maintain groundwater flow. Remove all structures and close the road after the unit has been harvested (BMP 14.9) (33 CFR BMPs 4, 5, 6).

**Concern:** Approximately 5 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

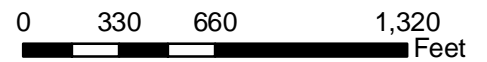
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

**No Concerns:** Scenery, Soils, Karst, Recreation, Sensitive/Rare Plants, Vegetation, Wildlife, Heritage

# Central Kupreanof Alternative 2,4 Unit 273



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Old-growth Reserve             | Stream Value Class II   |
| Riparian Management Area       | Stream Value Class III  |
| Very High Hazard Soils (MMI-4) | Stream Value Class IV   |
| Lakes                          | Project Area Boundary   |
| Managed Stands                 | 100-ft Contour Interval |
| Proposed Temporary Roads       | 500-ft Contour Interval |
| Open NFS Roads                 | Sensitive Plants        |
| Closed Roads                   | Rare Plants             |



## Central Kupreanof Unit Card Narrative

**Unit # 274**

**Unit Size (acres): 36**

**Alternative: 3**

**Aerial Photo:** 1298-28

**VCU:** 4360

**Volume (mbf): 539**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / new NFS and temporary road construction

### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concerns:** Stream 1 is Class II HC2.  
Stream 2 is Class I MM1.  
Stream 3 is Class III HC1.  
Stream 4 is Class IV HC1.  
Stream 5 is Class II MC2.

**Response:** Streams 1 and 5: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMP 12.6, 13.9, 13.16).

Stream 2: No timber harvest within the greater distance of the 100-year flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet of channel. (BMP 12.6, 12.6a, 13.9, 13.16).

Stream 3: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

Stream 4: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**Concern:** Temporary road crosses Class II stream.

**Response:** Stream crossing will be accomplished with a log stringer bridge to maintain fish passage and minimize stream channel disturbance. (BMPs 14.14, 14.17).

**Resource Wetlands**

**Concern:** The proposed temporary road is located on forested wetland and no alternative route exists.

**Response:** Provide adequate cross drainage to maintain groundwater flow. Remove all structures and close the road after the unit has been harvested (BMP 14.9) (33 CFR BMPs 4, 5, 6).

**Concern:** Approximately 15 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

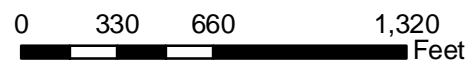
**No Concerns:** Scenery, Soils, Karst, Recreation, Sensitive/Rare Plants, Wildlife, Vegetation, Heritage



# Central Kupreanof Alternative 3 Unit 274



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Road      |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 275**

**Unit Size (acres): 42**

**Alternative: 3**

**Aerial Photo:** 1198-217

**VCU:** 4360

**Volume (mbf): 754**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / new NFS and temporary road construction

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:**

Stream 1 is Class II HC4.

Stream 2 is Class III HC0.

Stream 3 is Class I MC2 and MM1.

Stream 4 is Class IV HC0.

Stream 5 is Class I AF1.

Stream 6 Class II HC3.

**Response:**

Stream 1, 3 (MC2), and 6: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMP 12.6, 13.9, 13.16).

Stream 2: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

Stream 3 (MM1): No timber harvest within the greater distance of the 100-year flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet of channel. (BMP 12.6, 12.6a, 13.9, 13.16).

Stream 4: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

Stream 5: No timber harvest within the greater distance of the active portion of alluvial fan or 140 feet. No more than 10 percent harvest on the fan in a 30-year period. (BMP 12.6, 12.6a, 13.9, 13.16).

**Resource Soils**

**Concern:**

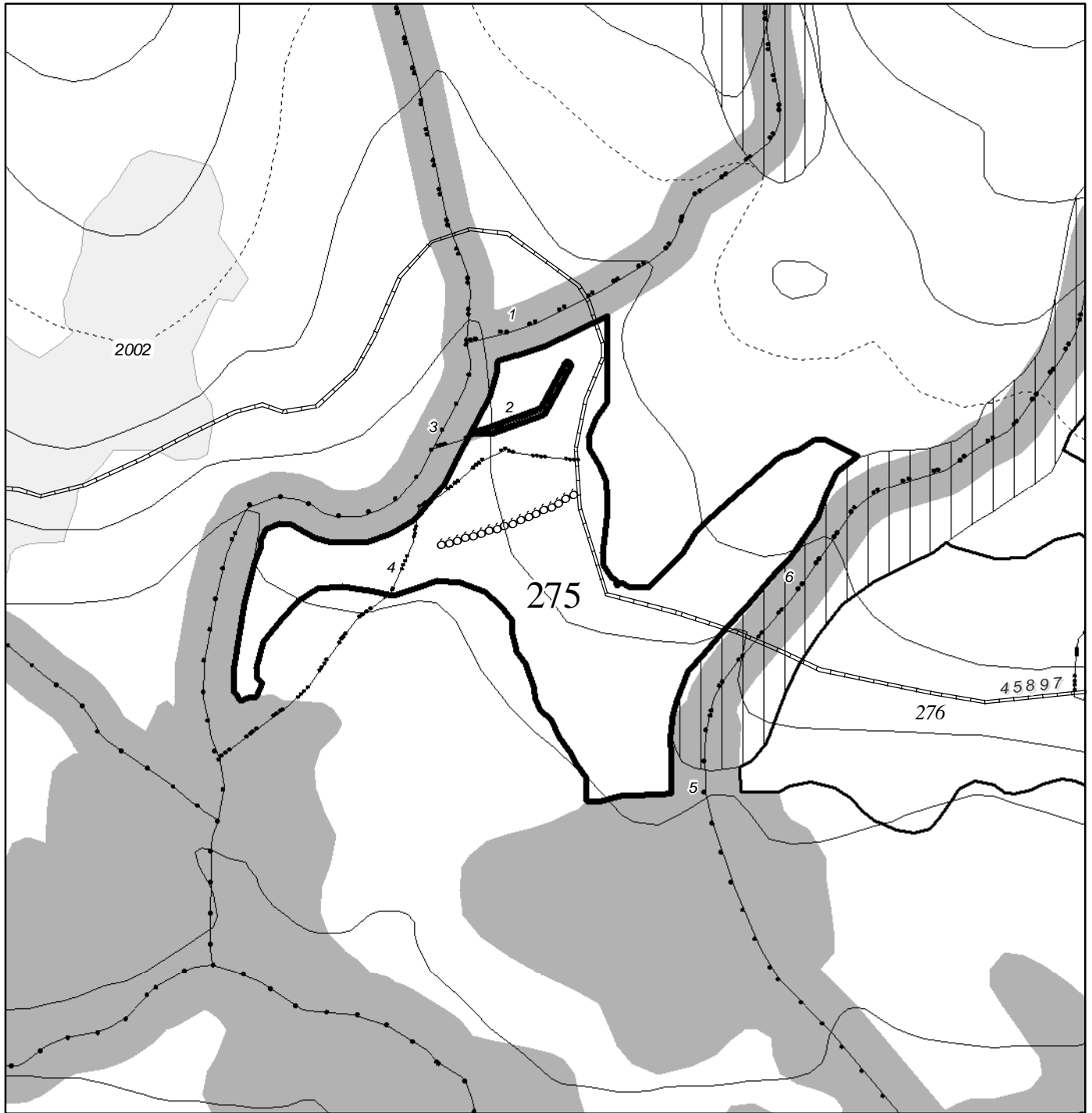
Proposed road between Units 275 and 276 is on MMI-4 soils.

**Response:**

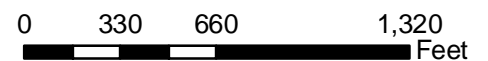
Proposed road was re-located to a stable section of the v-notch at approximately 300' elevation where side slopes are less than 65 percent (14.2).

**No Concerns:** Scenery, Karst, Wetlands, Recreation, Sensitive/Rare Plants, Vegetation, Heritage, Wildlife

# Central Kupreanof Alternative 3 Unit 275



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Road      |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 276**

**Unit Size (acres): 80**

**Alternative: 3**

**Aerial Photo:** 1198-217

**VCU:** 4360

**Volume (mbf): 1,497**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / new NFS and temporary road construction

**Resource Concerns & Responses**

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class I FP4.

Streams 2 and 3 are Class IV HC0.

Stream 4 is Class I AF1 and Class II HC3.

**Response:** Stream 1: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 130 feet of channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

Streams 2-3: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

Stream 4 (AF1): No timber harvest within the greater distance of the active portion of alluvial fan or 140 feet. No more than 10 percent harvest on the fan in a 30-year period. (BMP 12.6, 12.6a, 13.9, 13.16).

Stream 4 (HC2): No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMP 12.6, 13.9, 13.16).

**Resource Soils**

**Concern:** Proposed road between Units 275 and 276 is on MMI-4 soils.

**Response:** Proposed road was re-located to a stable section of the v-notch at approximately 300' elevation where side slopes are less than 65 percent (14.2).

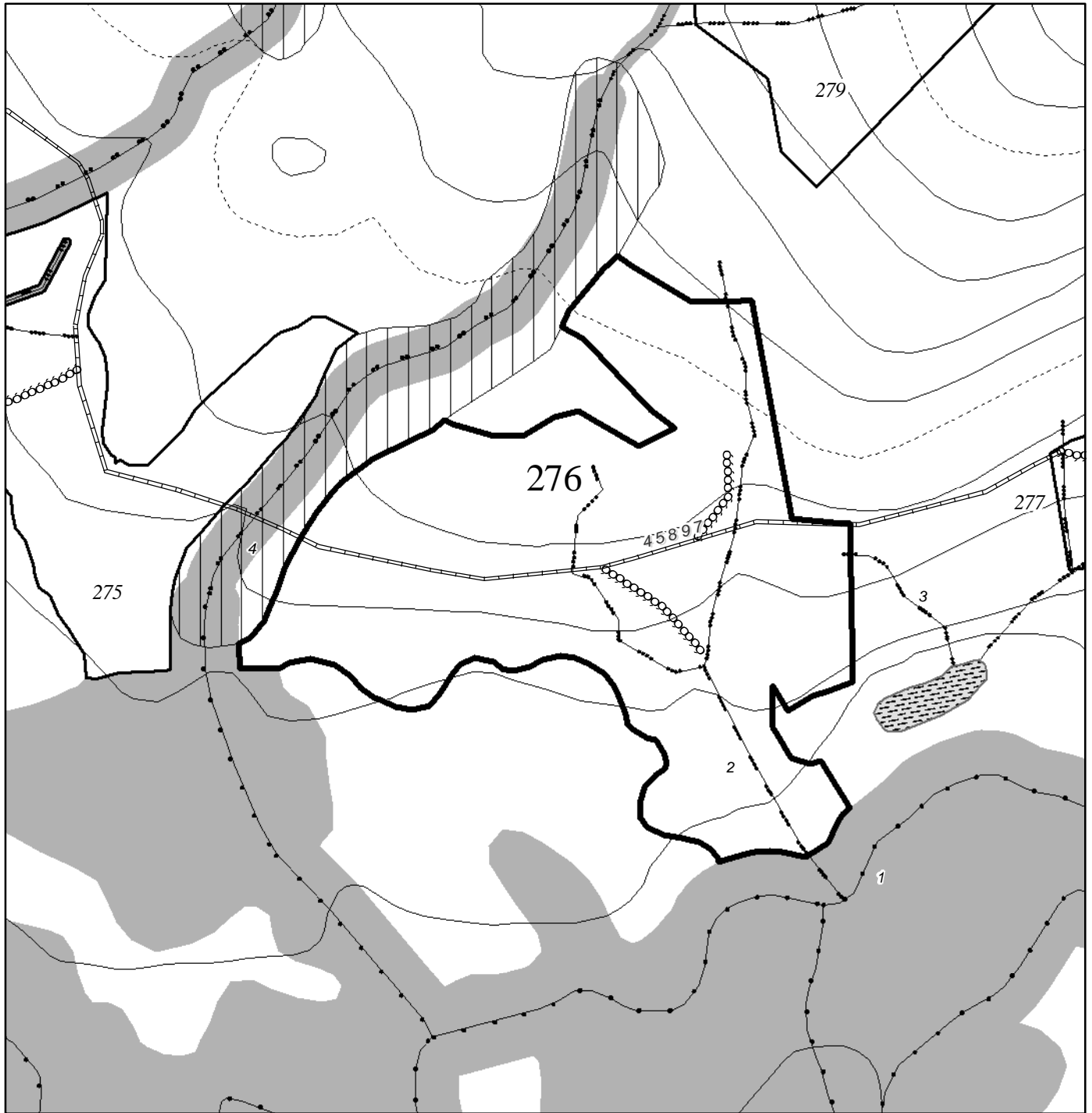
**Resource Wetlands**

**Concern:** Approximately 12 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

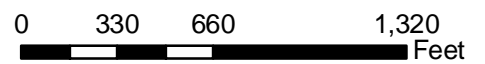
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

**No Concerns:** Scenery, Karst, Recreation, Sensitive/Rare Plants, Heritage, Wildlife, Vegetation

# Central Kupreanof Alternative 3 Unit 276



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Road      |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



## Central Kupreanof Unit Card Narrative

**Unit # 277**

**Unit Size (acres): 58**

**Alternative: 3**

**Aerial Photo:** 1498-150

**VCU:** 4360

**Volume (mbf): 1,030**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** cable and shovel / new NFS and temporary road construction

### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Streams 1 and 3 are Class IV HC0.

Stream 2 is Class II AF0.

Stream 4 is Class IV HC5.

Stream 5 is Class I FP4.

**Response:** Streams 1, 3, and 4: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

Stream 2: No timber harvest within the greater distance of the active portion of alluvial fan or 140 feet. No more than 10 percent harvest on the fan in a 30-year period. (BMP 12.6, 12.6a, 13.9, 13.16).

Stream 5: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 130 feet of channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

**Concern:** Temporary road crosses Class II stream.

**Response:** Stream crossing will be accomplished with a log stringer bridge to maintain fish passage and minimize stream channel disturbance. (BMPs 14.14, 14.17).

**Resource Soils**

**Concern:** Old landslide near northwest corner of unit.

**Response:** Partial suspension required in northwest corner of unit (BMP 13.9) Apply BMP 14.5 to avoid bank failures. Avoid road construction during heavy rains (BMP 14.6). Consider BMP 14.7 in regards to blasting and moving end haul to stable low gradient areas. Seed area to aid in soil aggregation and soil/root cohesion (BMP 14.8).

**Resource Wetlands**

**Concern:** The proposed temporary road is located on forested wetland and no alternative route exists.

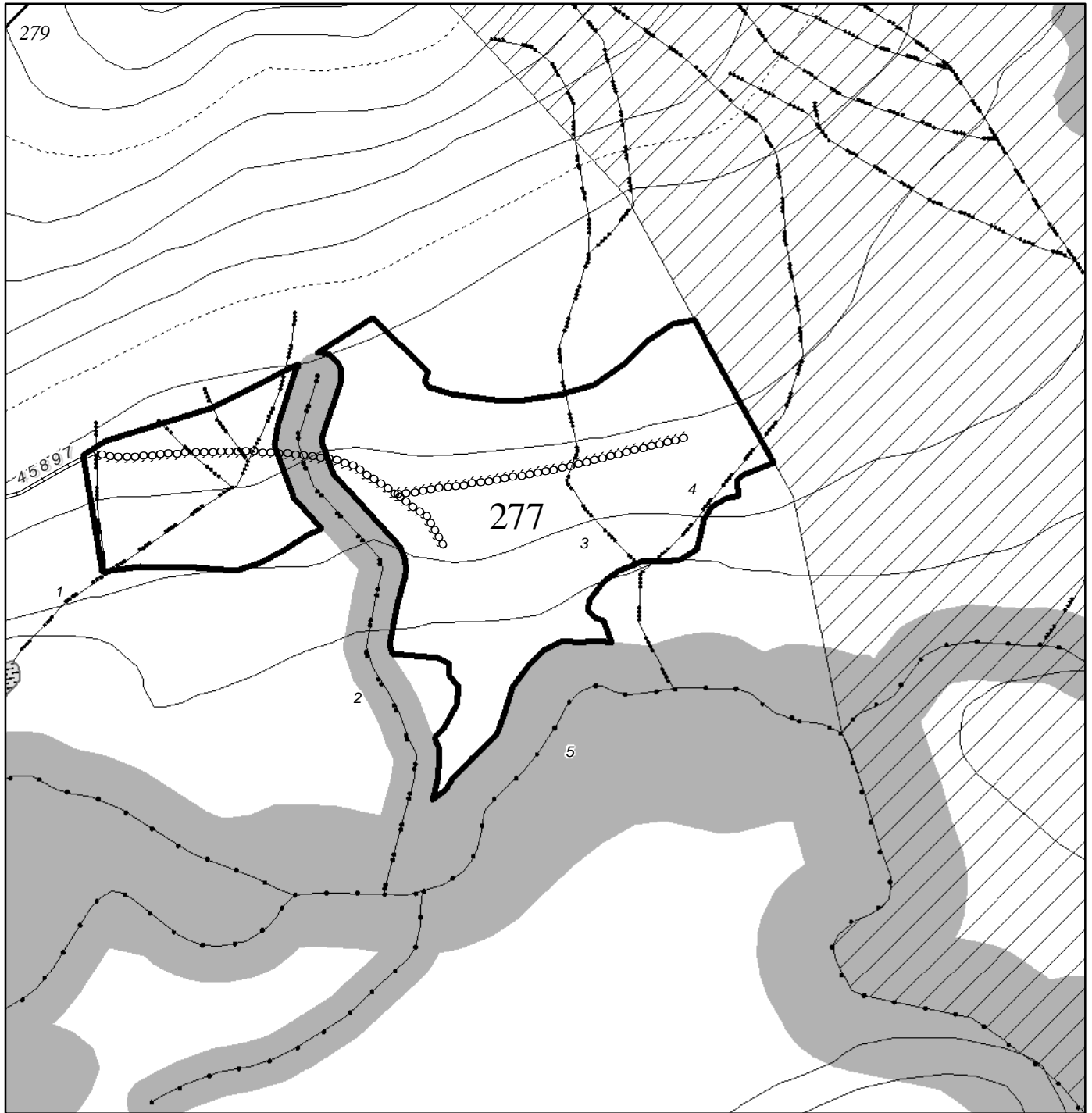
**Response:** Provide adequate cross drainage to maintain groundwater flow. Remove all structures and close the road after the unit has been harvested (BMP 14.9) (33 CFR BMPs 4, 5, 6).

**Concern:** Approximately 21 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

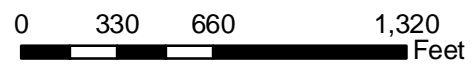
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

**No Concerns:** Scenery, Karst, Recreation, Sensitive/Rare Plants, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 3 Unit 277



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Road      |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 279**

**Unit Size (acres): 31**

**Alternative: 3**

**Aerial Photo:** 1198-217

**VCU:** 4360

**Volume (mbf): 599**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / new NFS construction

**Resource Concerns & Responses**

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class III HC6.  
Streams 2 and 3 are Class IV HC0.

**Response:** Stream 1: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Streams 2-3: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**Resource Wetlands**

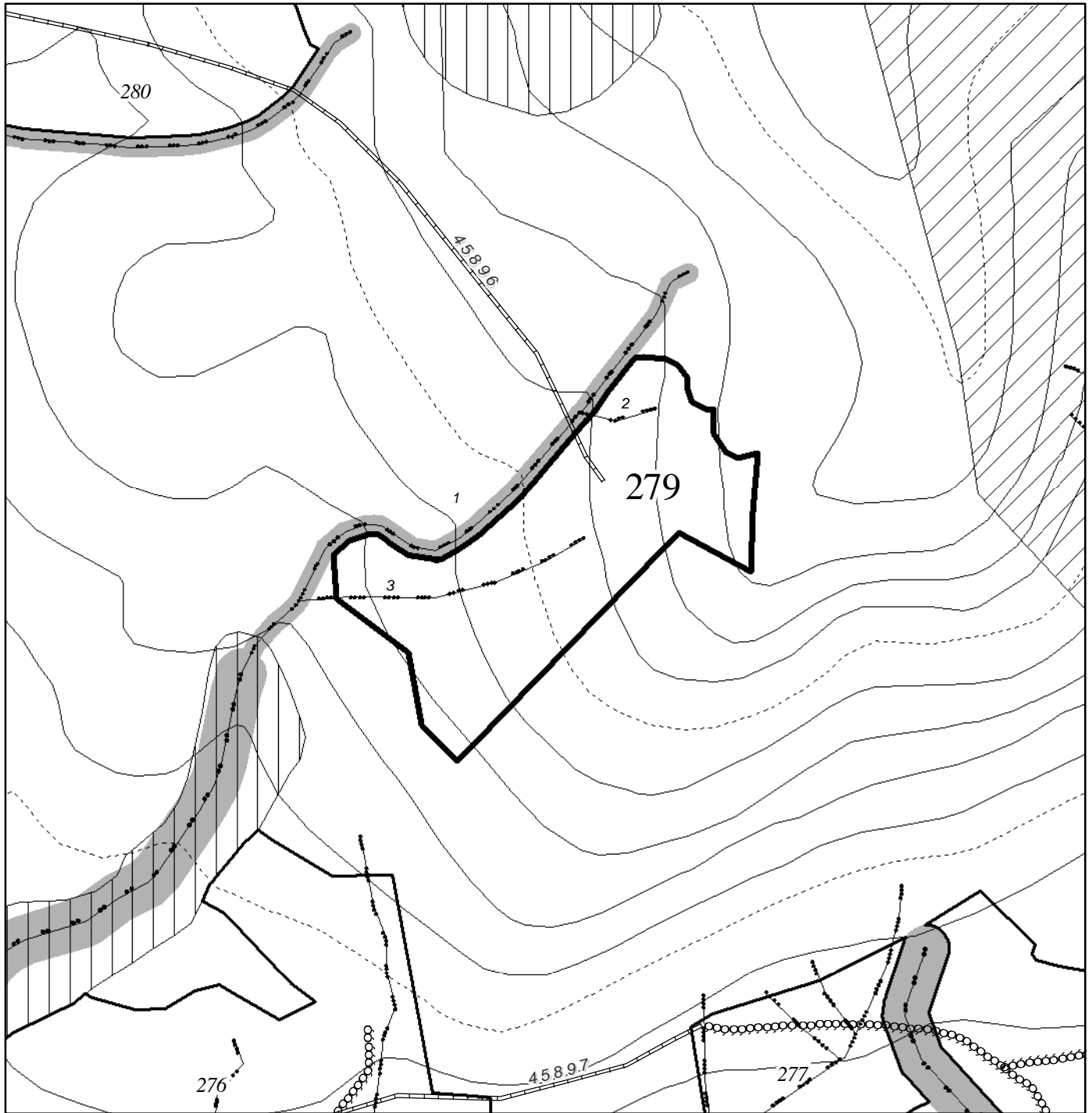
**Concern:** Approximately 1 acre of harvest is proposed on forested wetland (BMP12.5).  
Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

**Response:** Avoid shovel yarding in this area (BMP 13.2, 13.9).

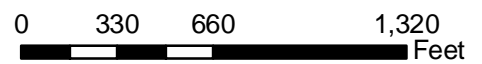
**No Concerns:** Scenery, Soils, Karst, Recreation, Sensitive/Rare Plants, Heritage, Wildlife, Vegetation



# Central Kupreanof Alternative 3 Unit 279



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Road      |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 280**

**Unit Size (acres): 43**

**Alternative: 3**

**Aerial Photo:**

**VCU: 4360**

**Volume (mbf): 764**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable and shovel / new NFS road construction

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Streams 1 and 3 are Class III HC6.

Stream 2 is Class II HC4.

**Response:** Streams 1 and 3: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

Stream 2: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).

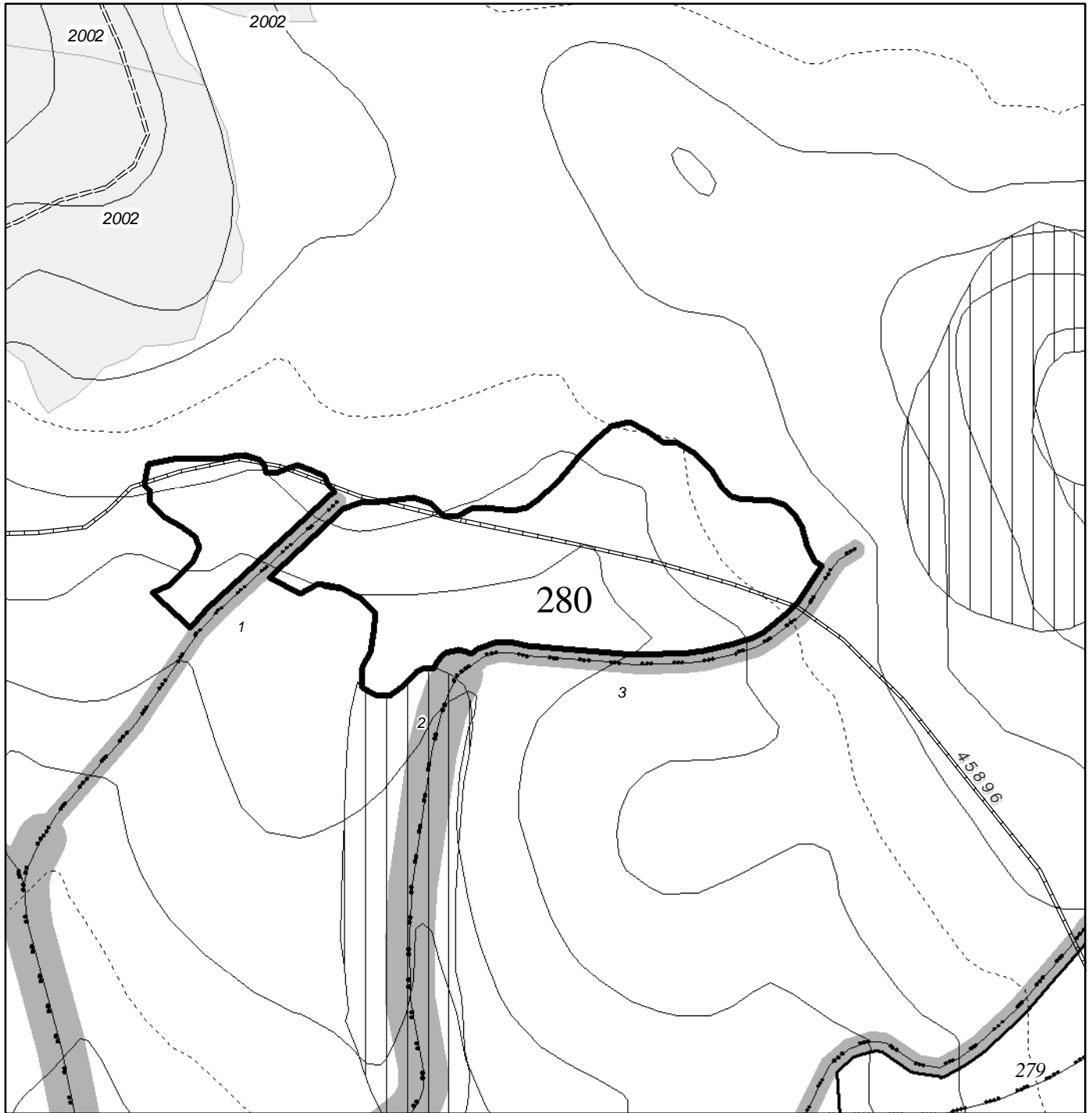
**Resource Soils**

**Concern:** Originally proposed road planned to go through MMI-4 soils along southern boundary of the unit.

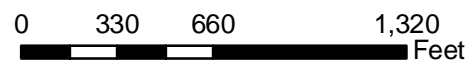
**Response:** Road location modified (BMP 14.2).

**No Concerns:** Scenery, Karst, Wetlands, Recreation, Sensitive/Rare Plants, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 3 Unit 280



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Road      |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 281**

**Unit Size (acres): 20**

**Alternative: 3**

**Aerial Photo:** 1598-22

**VCU:** 4360

**Volume (mbf): 410**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** cable / new NFS road construction

#### Resource Concerns & Responses

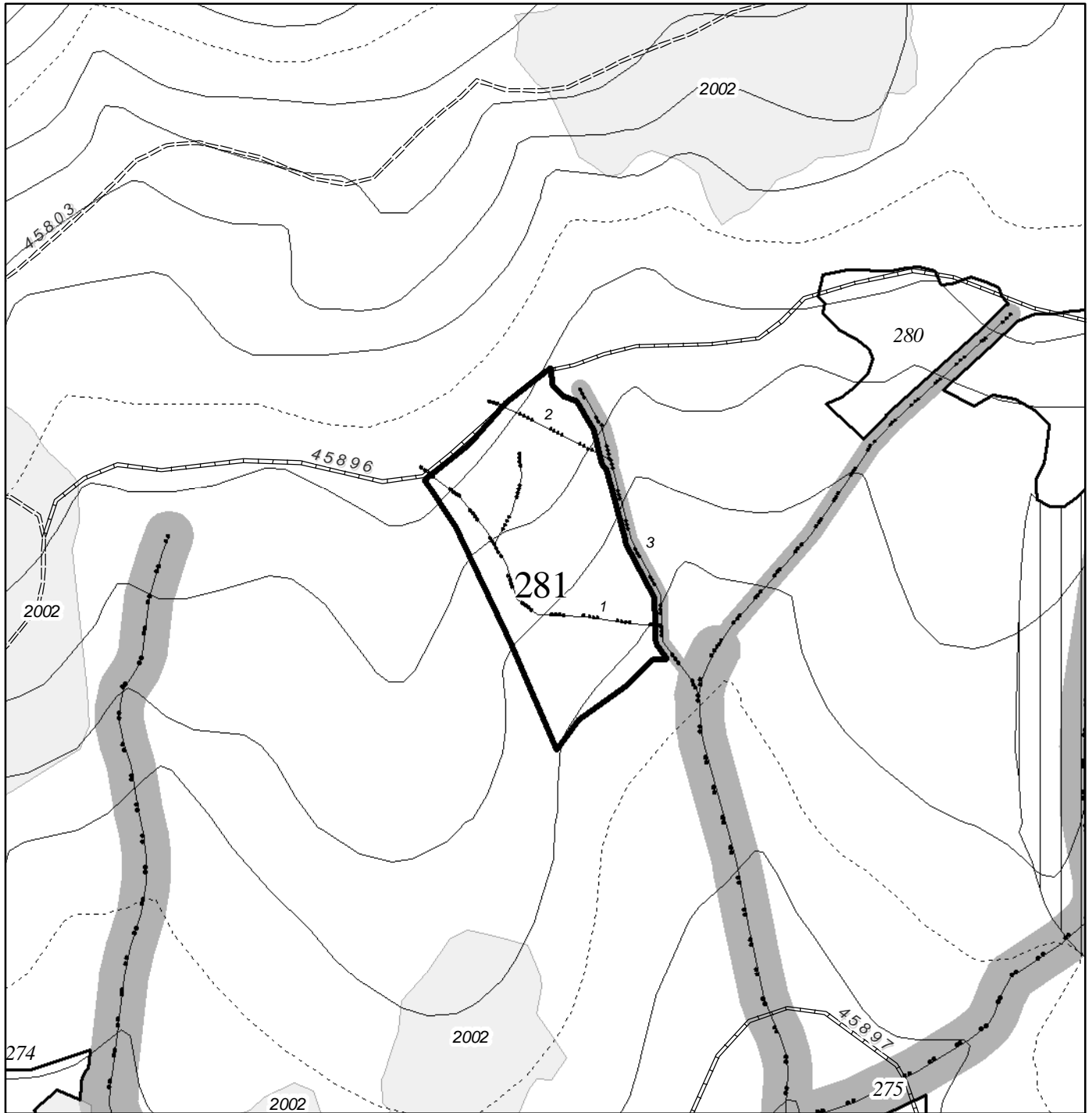
**Resource Fisheries/Watershed**

**Concern:** Streams 1 and 2 are Class IV HC0.  
Stream 3 is Class III HC5 and HC2.

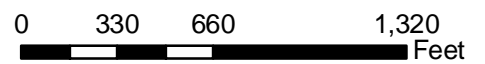
**Response:** Streams 1-2: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 3: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

**No Concerns:** Scenery, Soils, Karst, Wetlands, Recreation, Sensitive/Rare Plants, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 3 Unit 281



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Road      |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 282**

**Unit Size (acres): 48**

**Alternatives: 2, 3**

**Aerial Photo:** 1298-93

**VCU:** 4290

**Volume (mbf): 893**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** cable / existing NFS roads and new NFS road construction

**Resource Concerns & Responses**

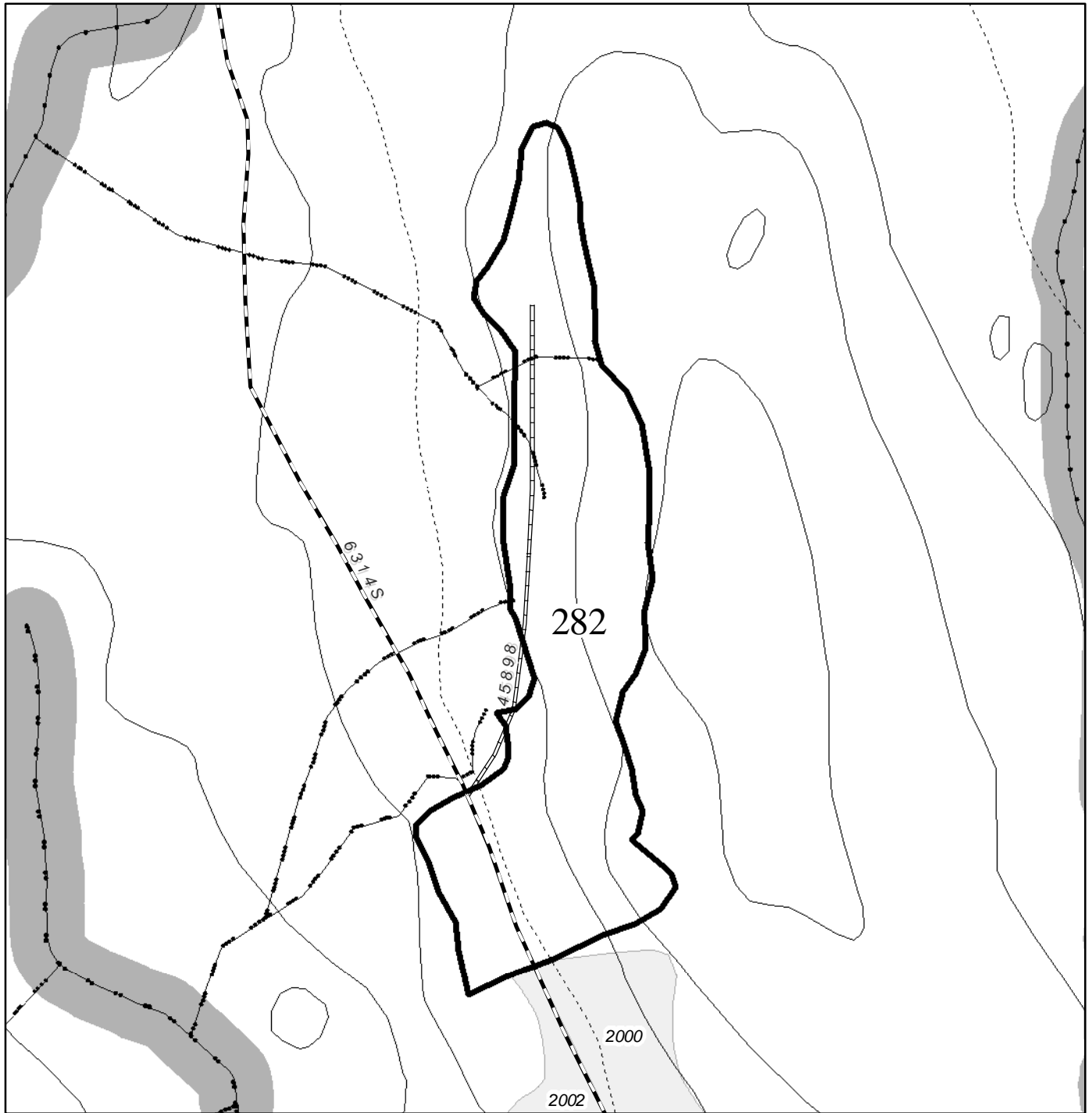
**Resource Fisheries/Watershed**

**Concern:** All streams in the unit are Class IV HC0.

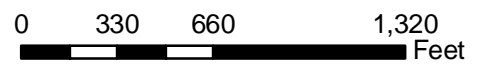
**Response:** "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**No Concerns:** Scenery, Soils, Wetlands, Karst, Recreation, Sensitive/Rare Plants, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 2,3 Unit 282



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 282**

**Unit Size (acres): 21**

**Alternative: 4**

**Aerial Photo:** 1298-93

**VCU:** 4290

**Volume (mbf): 397**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

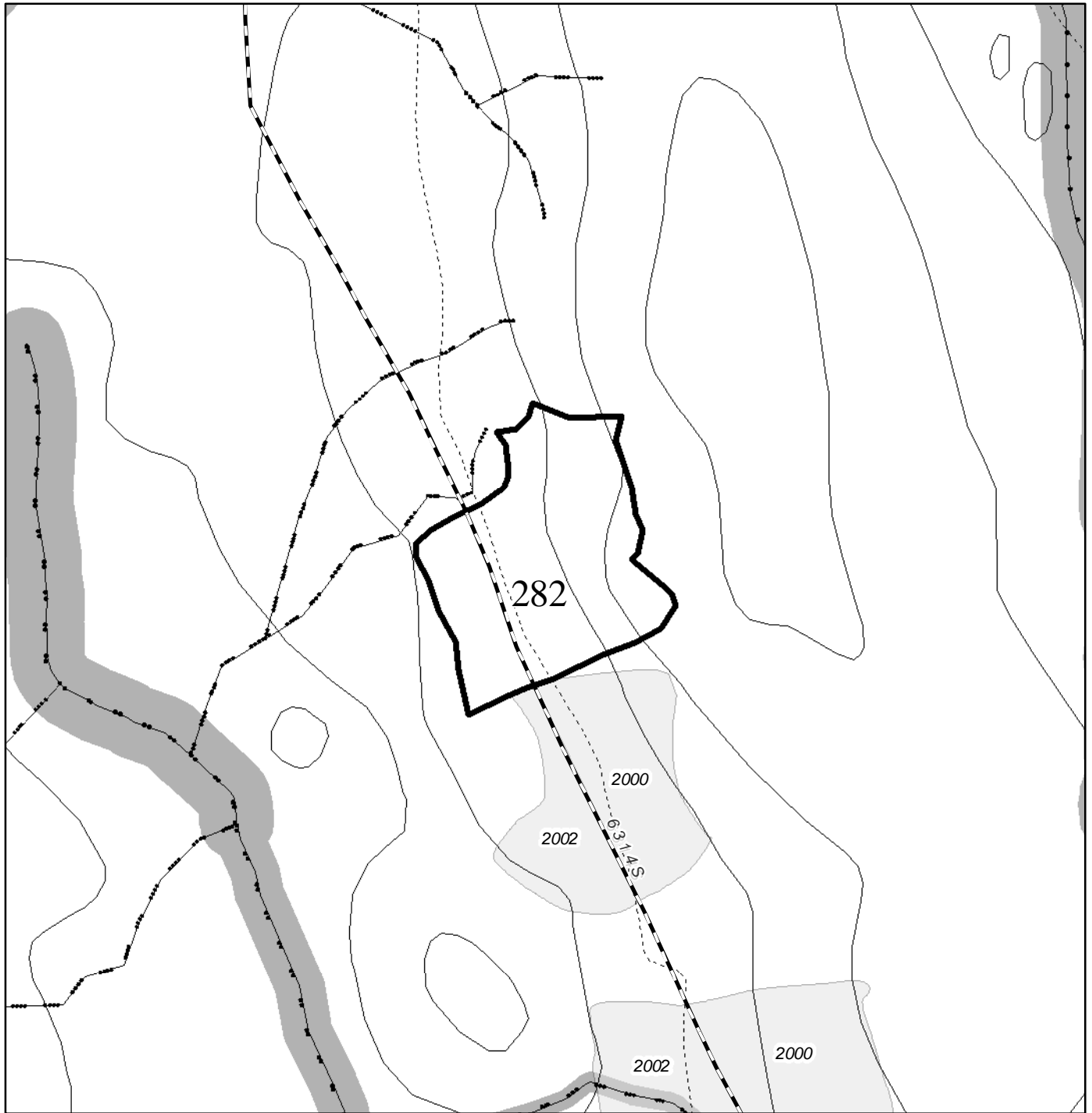
**Logging Method/Transportation:** cable / existing NFS road

### Resource Concerns & Responses

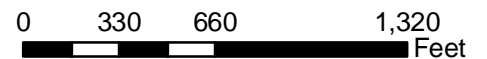
**No Concerns:** Scenery, Soils, Wetlands, Karst, Recreation, Sensitive/Rare Plants, Fisheries and Watershed, Vegetation, Wildlife, Heritage



# Central Kupreanof Alternative 4 Unit 282



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 284**

**Unit Size (acres): 56**

**Alternatives: 2, 3**

**Aerial Photo:** 1298-45

**VCU:** 4290

**Volume (mbf): 1,079**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** cable / existing NFS road

**Resource Concerns & Responses**

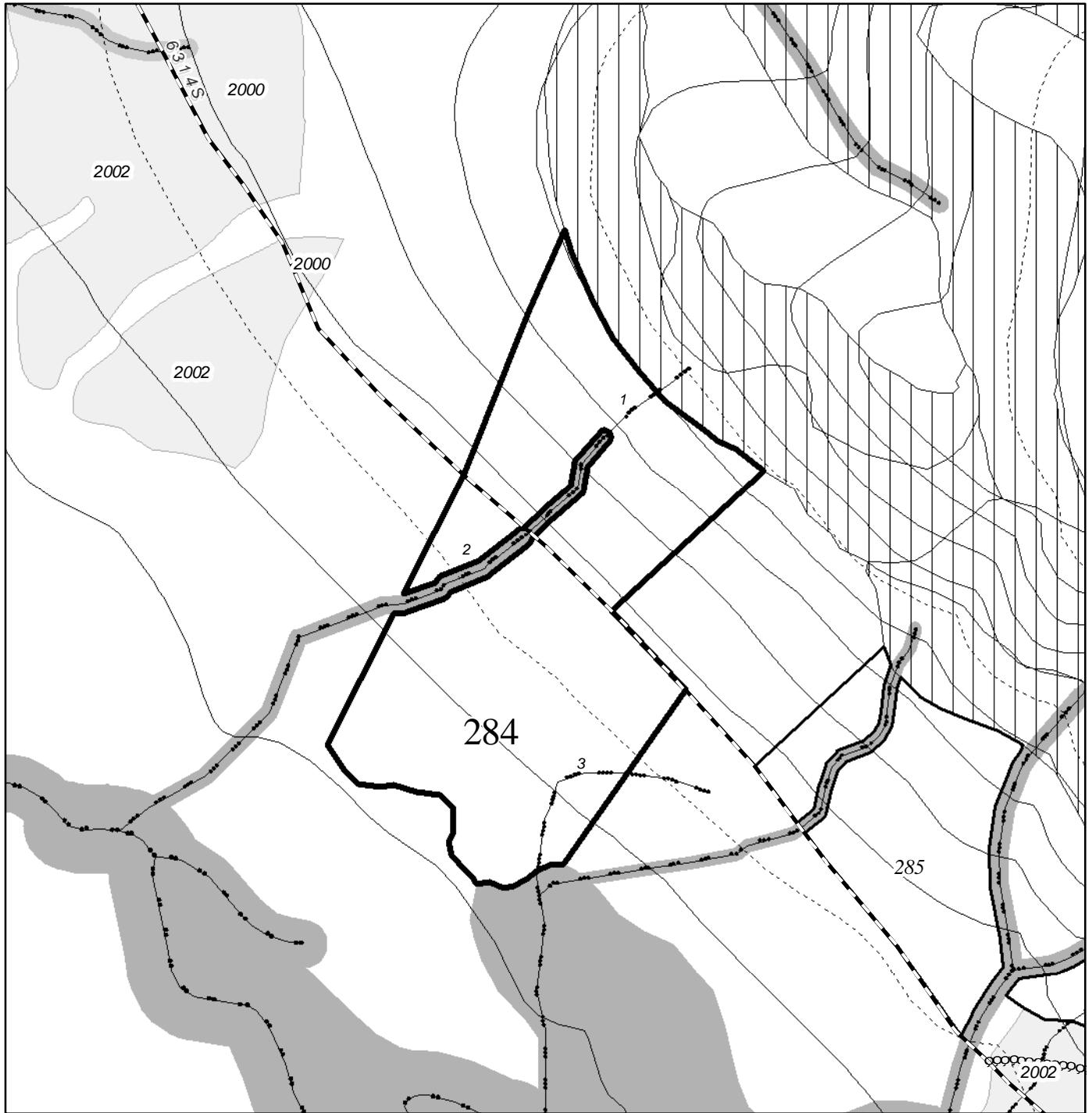
**Resource Fisheries/Watershed**

**Concern:** Streams 1 and 3 are Class IV HC5.  
Stream 2 is Class III HC2.

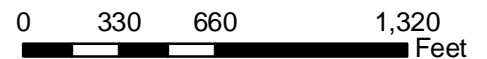
**Response:** Streams 1 and 3: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Streams 2: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Soils, Wetlands, Karst, Wildlife, Heritage, Vegetation

# Central Kupreanof Alternative 2,3 Unit 284



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 284**

**Unit Size (acres): 14**

**Alternative: 4**

**Aerial Photo:** 1298-45

**VCU:** 4290

**Volume (mbf): 267**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** cable / existing NFS road

**Resource Concerns & Responses**

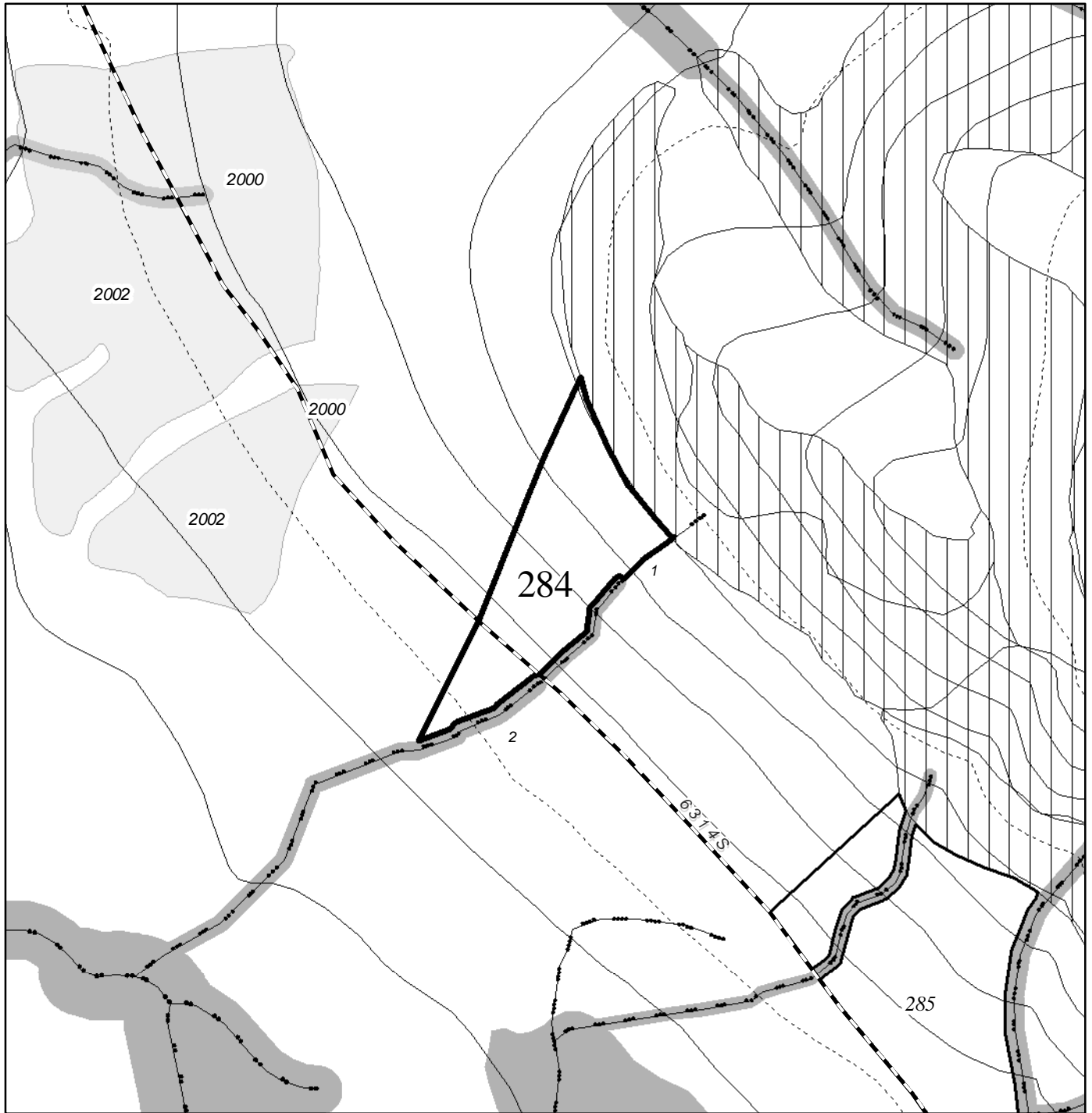
**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class IV HC5.  
Stream 2 is Class III HC2.

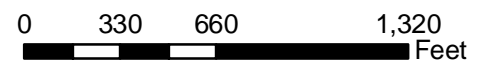
**Response:** Stream 1: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 2: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Soils, Wetlands, Karst, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 4 Unit 284



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 285**

**Unit Size (acres): 55**

**Alternatives: 2, 3**

**Aerial Photo:** 1298-45

**VCU:** 4290

**Volume (mbf): 1,116**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** cable / existing NFS road and temporary road construction

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Streams 1 and 6 are Class III HC5.

Streams 2 and 3 are Class III HC6.

Streams 4 and 5 are Class IV HC0.

**Response:** Streams 1- 3, and 6: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16). Streams 4-5: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

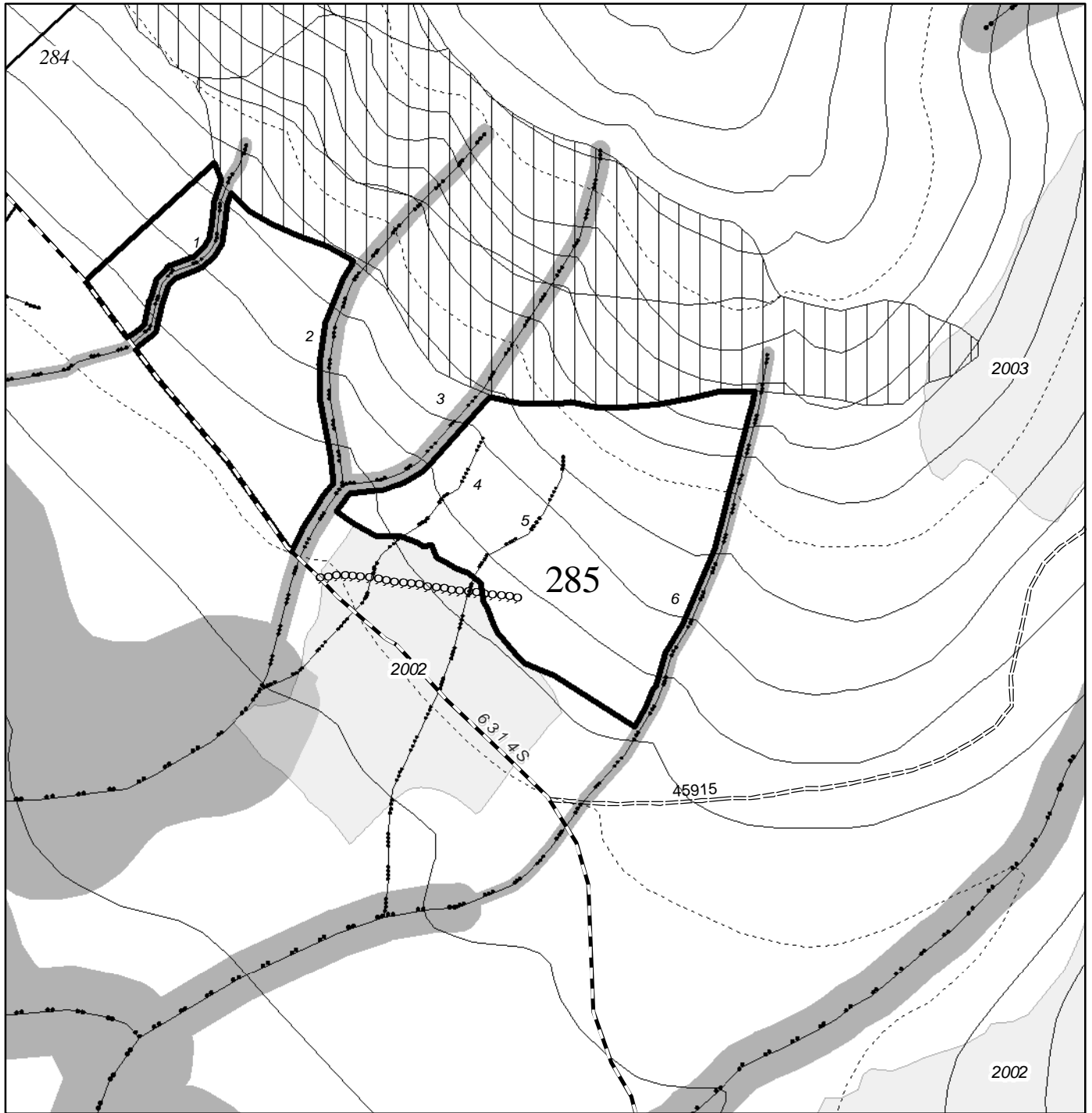
**Resource Soils**

**Concern:** Central portion of originally proposed unit contains unstable soils between two large v-notches.

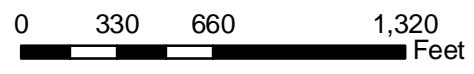
**Response:** Central portion of unit dropped (BMP 13.5). Use partial suspension in eastern section of unit to meet soil quality standards (BMP 13.9). Apply BMP 13.11 (scheduling and enforcement of erosion control measures during timber sale operations) to avoid working on steep slopes during heavy rains to minimize erosion.

**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Wetlands, Karst, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 2,3 Unit 285



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 285**

**Unit Size (acres): 22**

**Alternative: 4**

**Aerial Photo:** 1298-45

**VCU:** 4290

**Volume (mbf): 439**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** cable / existing NFS road

**Resource Concerns & Responses**

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class III HC5.

Stream 2 is Class III HC6.

**Response:** Streams 1 and 2: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

**Resource Soils**

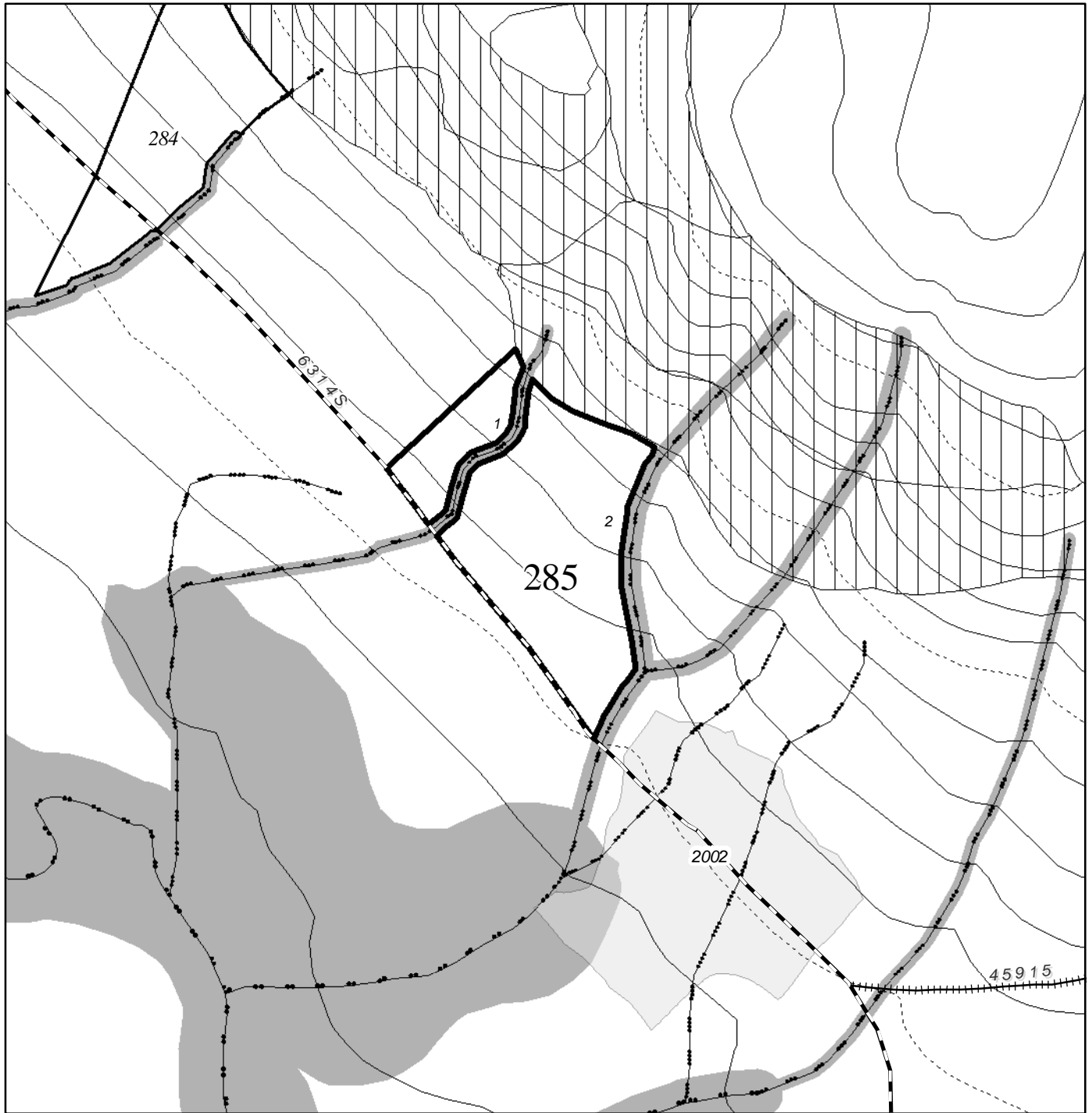
**Concern:** East portion of originally proposed unit contains unstable soils between two large v-notches.

**Response:** The unit was modified to exclude these soils (BMP 13.5).

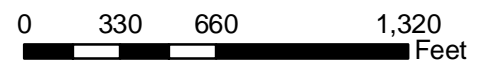
**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Wetlands, Karst, Vegetation, Wildlife, Heritage



# Central Kupreanof Alternative 4 Unit 285



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 286**

**Unit Size (acres): 32**

**Alternative: 3**

**Aerial Photo:** 1298-23

**VCU:** 4290

**Volume (mbf): 256**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-Growth

**Silvicultural Prescription:** Uneven-aged management, single tree selection

**Logging Method/Transportation:** helicopter / NFS road reconstruction

#### Resource Concerns & Responses

**Resource Fisheries/Watershed**

**Concern:** Stream 1 is Class IV HC0.

Stream 2 is Class III HC6.

**Response:** Stream 1: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 2: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

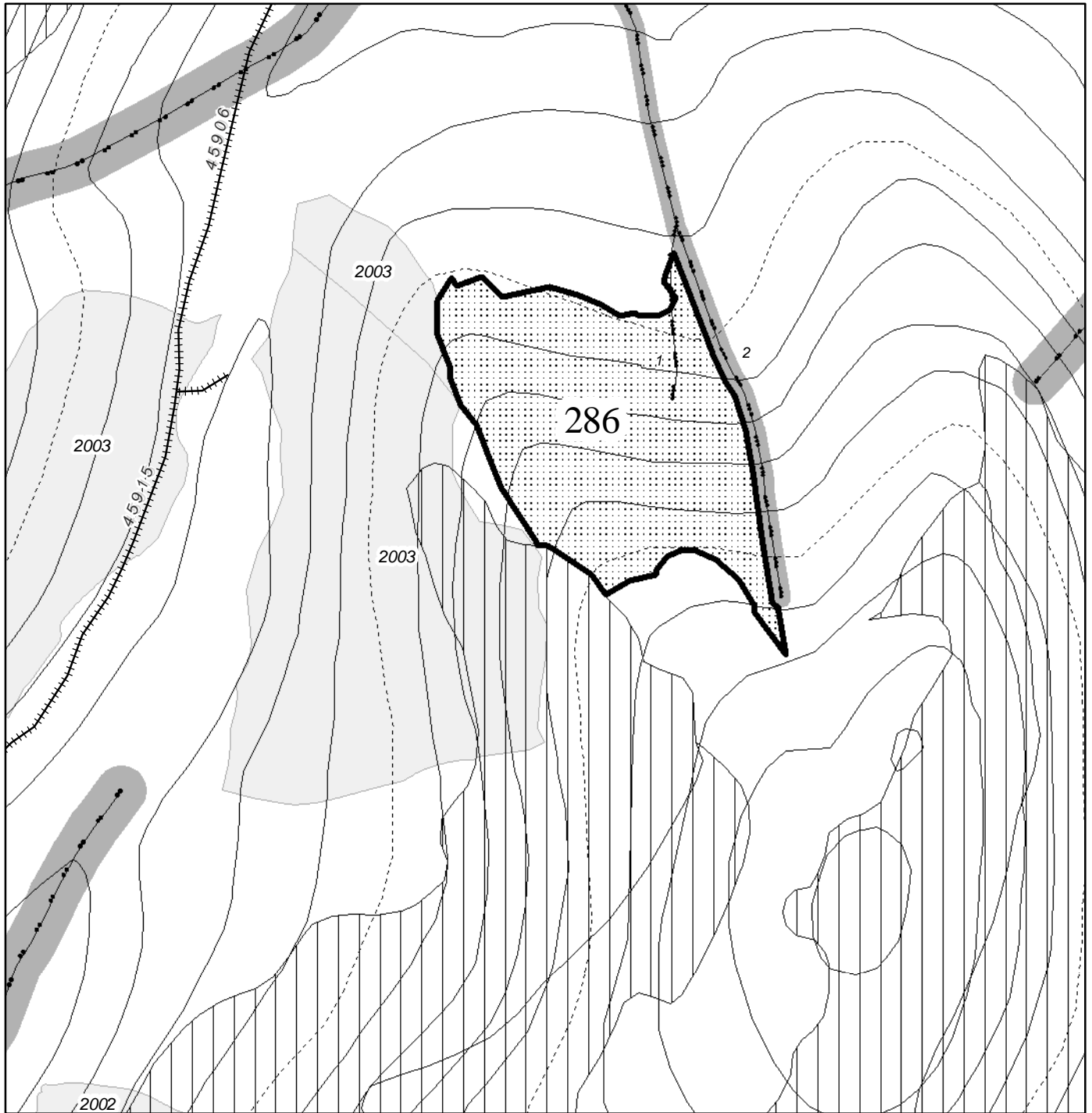
**Resource Soils**

**Concern:** Southwest portion of originally proposed unit on MMI-4 soils.

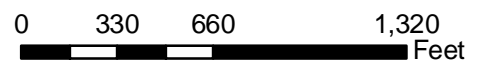
**Response:** Unit boundary re-located to avoid MMI-4 soils (BMP 13.5).

**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Wetlands, Karst, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 3 Unit 286



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Old-growth Reserve             | Stream Value Class II   |
| Riparian Management Area       | Stream Value Class III  |
| Very High Hazard Soils (MMI-4) | Stream Value Class IV   |
| Lakes                          | Project Area Boundary   |
| Managed Stands                 | 100-ft Contour Interval |
| Proposed Temporary Roads       | 500-ft Contour Interval |
| Open NFS Roads                 | Sensitive Plants        |
| Closed Roads                   | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 304**

**Unit Size (acres): 28**

**Alternatives: 2, 3, 4**

**Aerial Photo:**

**VCU: 4260**

**Volume (mbf): 484**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road

**Resource Concerns & Responses**

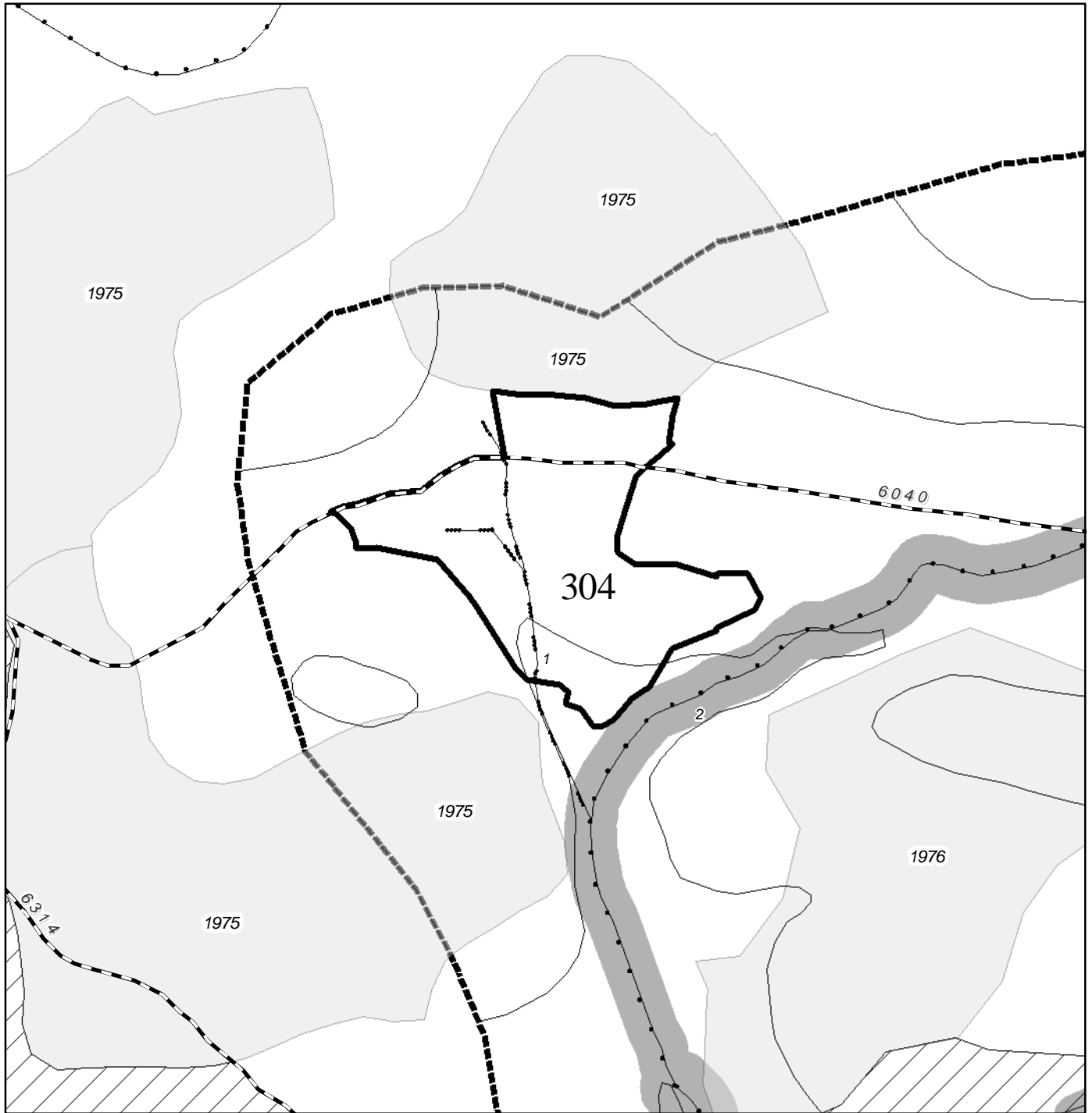
**Resource Watershed/Fisheries**

**Concern:** Stream 1 is Class IV MM0.  
Stream 2 is Class I MC2.

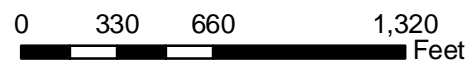
**Response:** Stream 1: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 2: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).

**No Concerns:** Scenery, Recreation, Wetlands, Karst, Sensitive/Rare Plants, Soils, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 2,3,4 Unit 304



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 305**

**Unit Size (acres):** 41

**Alternatives:** 2, 3

**Aerial Photo:**

**VCU:** 4260

**Volume (mbf):** 631

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road and new NFS road construction

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Stream 1 is Class III/IV MM0.  
Stream 2 is Class I MM1.  
Stream 3 is Class IV MM0.  
Stream 4 is Class IV MM1.

**Response:** Stream 1 (Class III section): No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).  
Streams 1 (Class IV section), 3, and 4: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 2: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

**Resource Sensitive/Rare Plants**

**Concern:** Found sensitive plant in unit – Wright Filmy Fern (*Hymenophyllum wrightii*)

**Response:** Plant is within stream riparian buffer so it would be protected.

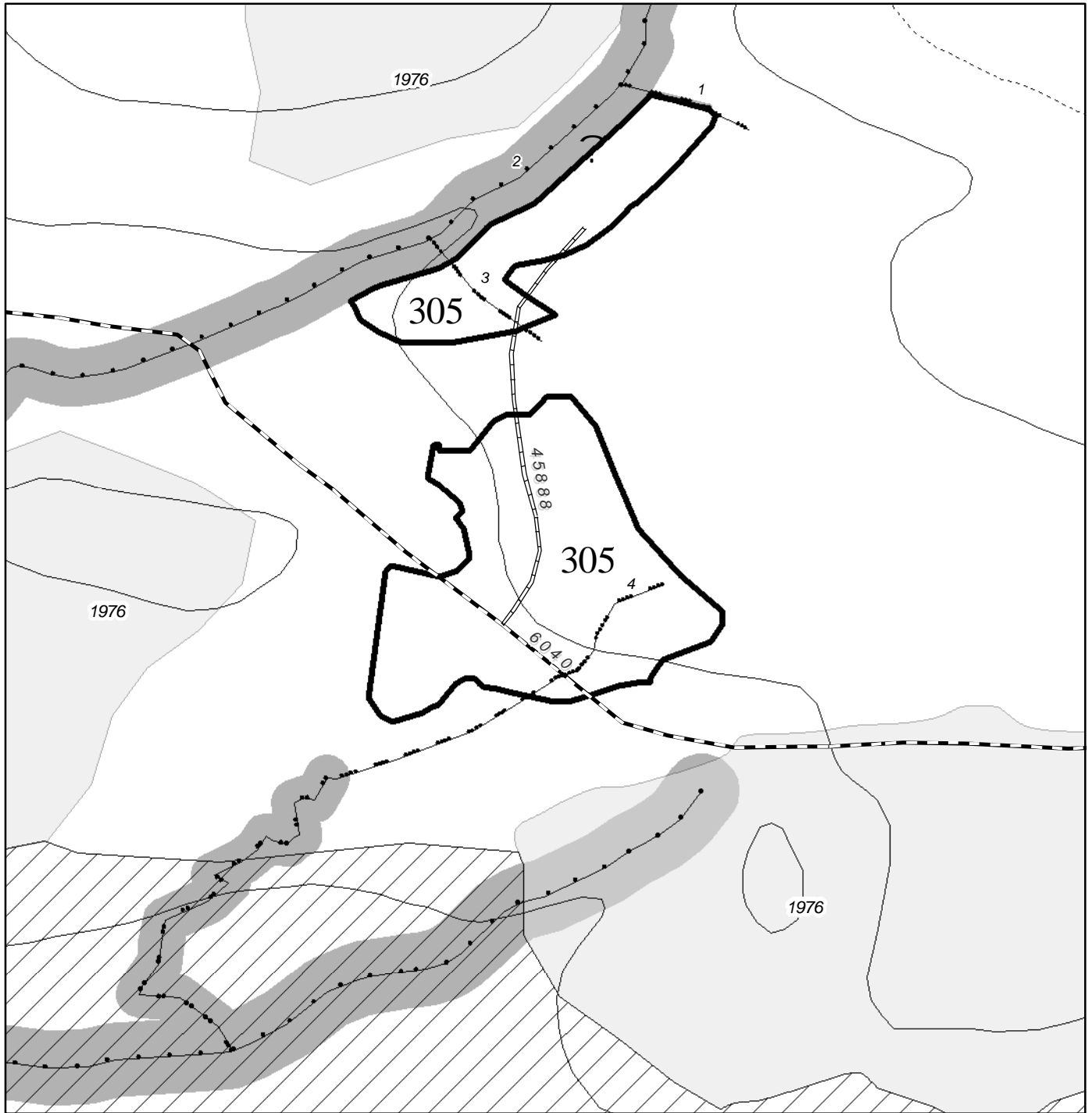
**Resource Wetlands**

**Concern:** Approximately 12 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

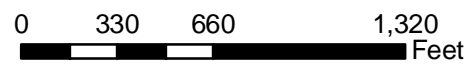
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

**No Concerns:** Scenery, Recreation, Soils, Karst, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 2,3 Unit 305



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 305**

**Unit Size (acres): 13**

**Alternative: 4**

**Aerial Photo:**

**VCU: 4260**

**Volume (mbf): 191**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Stream 1 is Class IV MM1

**Response:** Stream 1: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**Resource Wetlands**

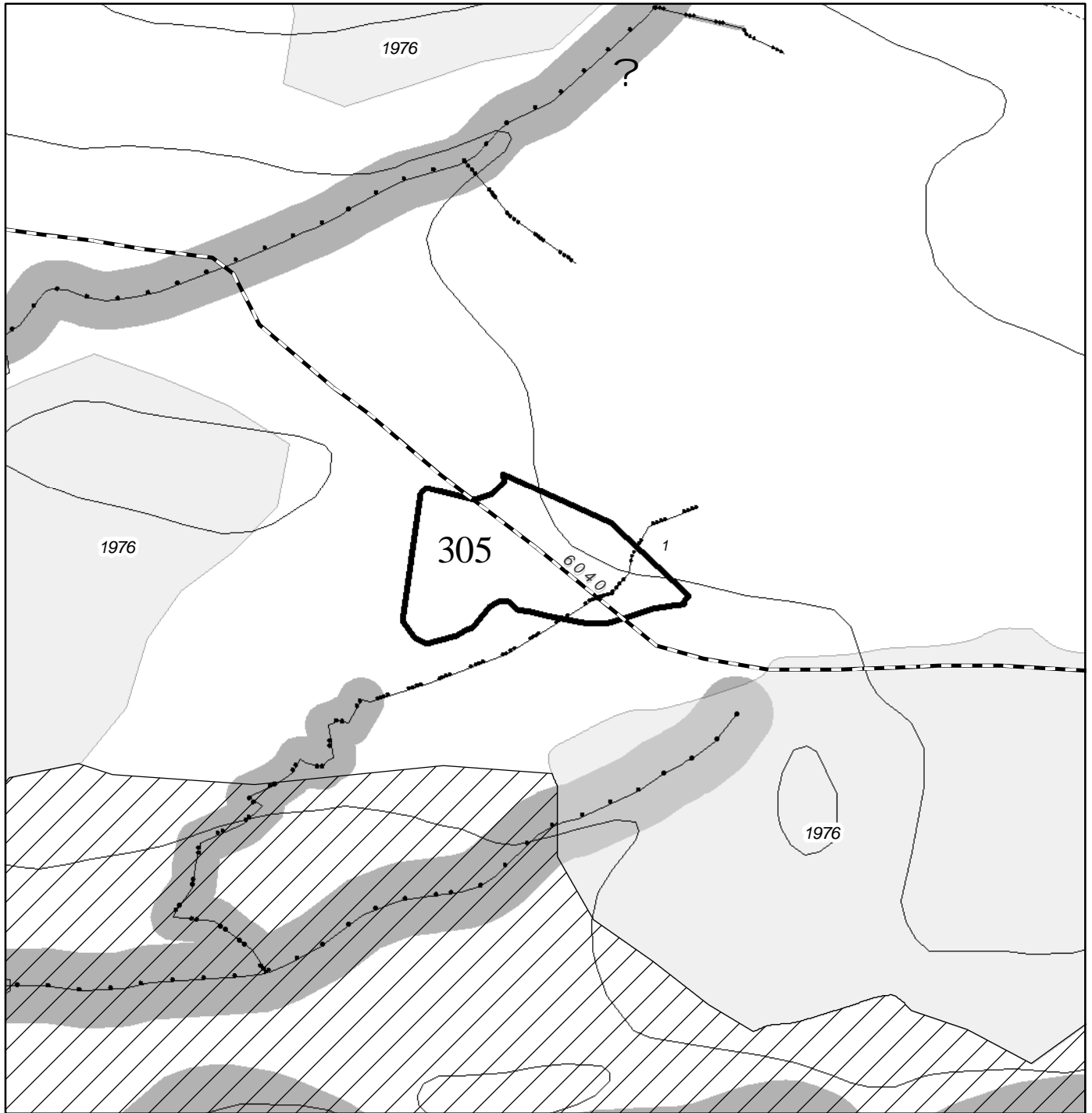
**Concern:** Approximately 2 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

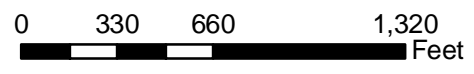
**No Concerns:** Scenery, Recreation, Soils, Karst, Sensitive/Rare Plants, Vegetation, Heritage, Wildlife



# Central Kupreanof Alternative 4 Unit 305



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 306**

**Unit Size (acres): 14**

**Alternatives: 2, 3, 4**

**Aerial Photo:**

**VCU: 4260**

**Volume (mbf): 211**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-growth

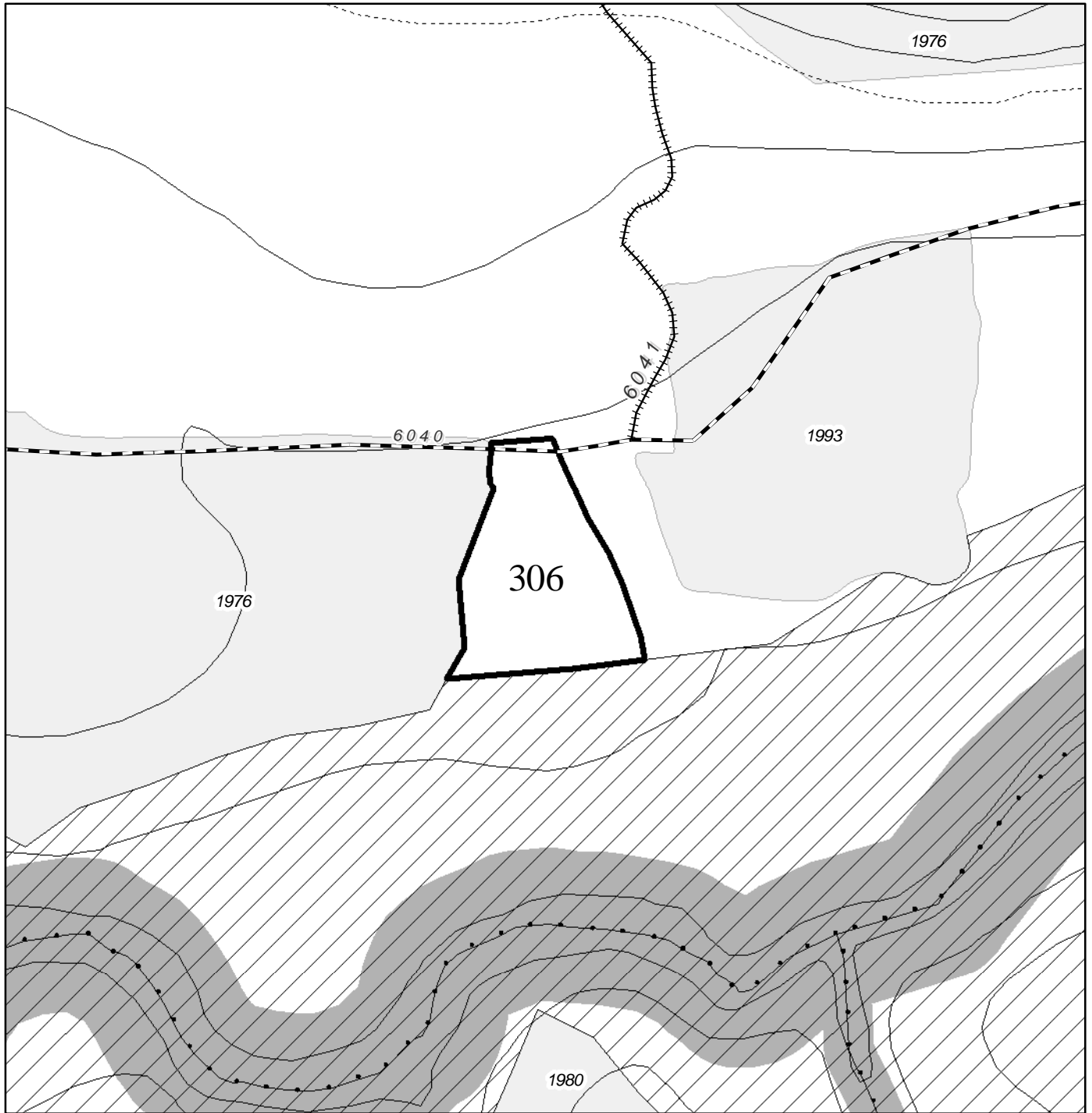
**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road

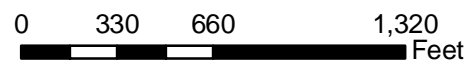
**Resource Concerns & Responses**

**No Concerns:** Watershed, Fisheries, Scenery, Recreation, Sensitive/Rare Plants, Soils, Wetlands, Karst, Heritage, Vegetation

# Central Kupreanof Alternative 2,3,4 Unit 306



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 307**

**Unit Size (acres): 22**

**Alternatives: 2, 3, 4**

**Aerial Photo:**

**VCU: 4260**

**Volume (mbf): 366**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road 6040

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Streams 1 and 2 are Class IV HC5.

**Response:** Streams 1 and 2: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

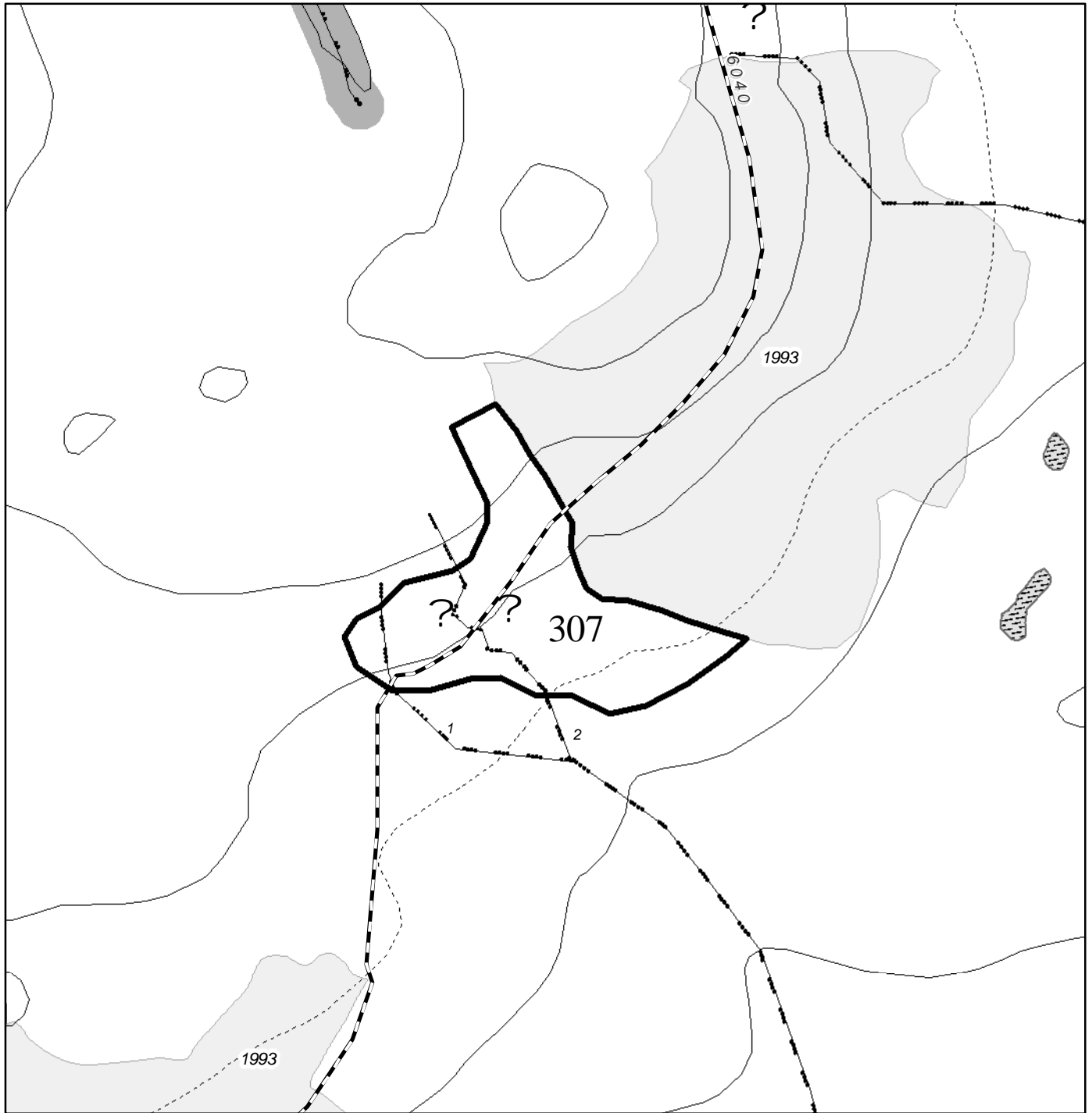
**Resource Sensitive/Rare Plants**

**Concern:** Two population of sensitive plant found in unit – Wright Filmy Fern (*Hymenophyllum wrightii*).

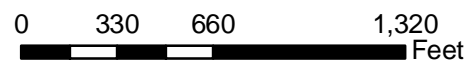
**Response:** No protection measures proposed.

**No Concerns:** Scenery, Recreation, Soils, Wetlands, Karst, Wildlife, Heritage, Vegetation

# Central Kupreanof Alternative 2,3,4 Unit 307



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 309**

**Unit Size (acres): 25**

**Alternatives: 2, 3, 4**

**Aerial Photo:**

**VCU: 4271**

**Volume (mbf): 427**

**Land Use Designation:** Modified Landscape

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Stream 1 is Class IV PA1.

Stream 2 is Class I FP3.

Stream 3 is Class IV HC1.

**Response:** Streams 1 and 3: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

Stream 2: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 130 feet of channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

**Resource Karst**

**Concern:** 1.3 acres of karst located in unit.

**Response:** Field reconnaissance found no signs of karst features (sink holes or caves); therefore the karst area is classified as low vulnerability and requires no special management (Forest Plan 2008, Standard and Guidelines, pg 4-23).

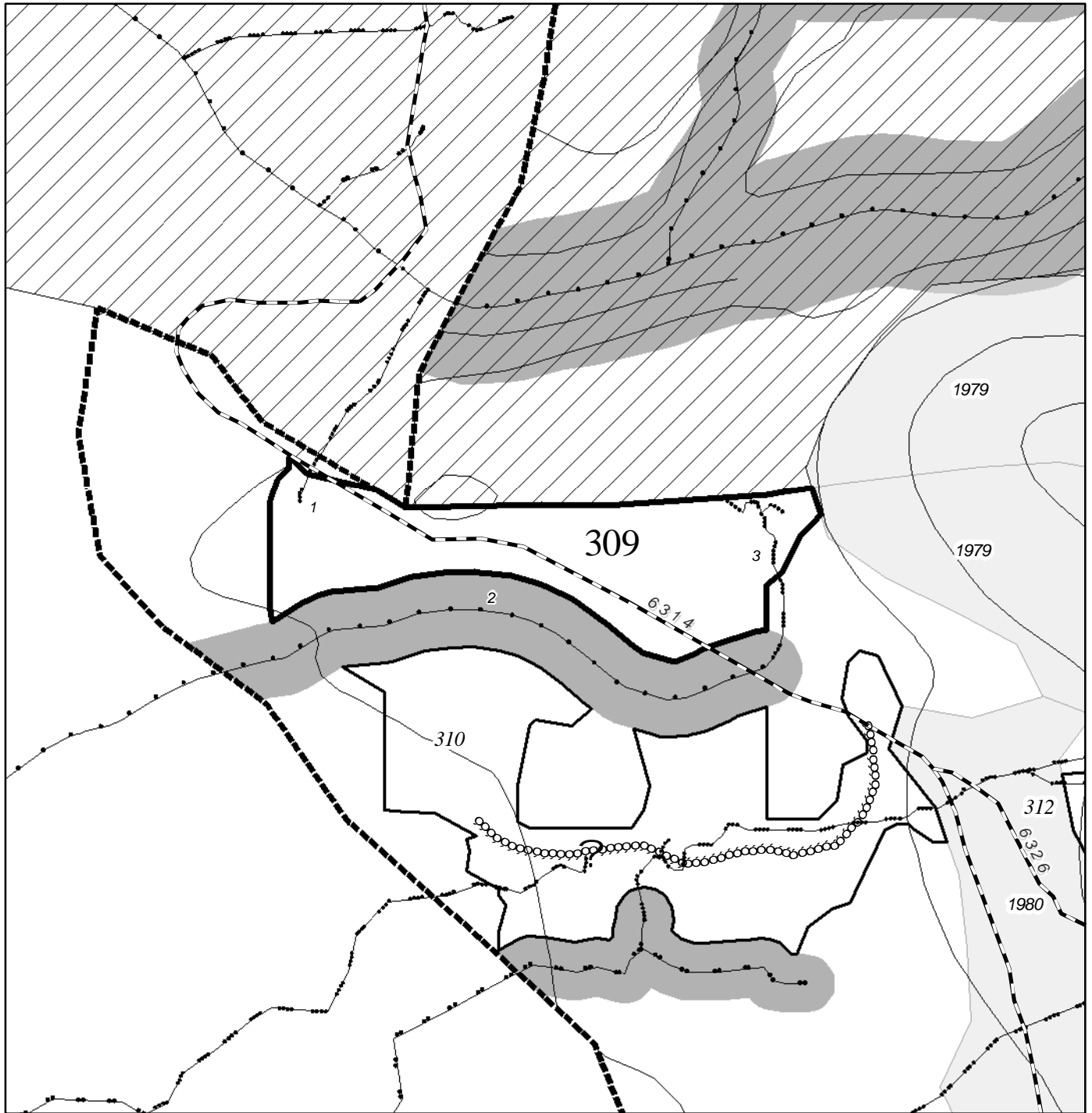
**Resource Wetlands**

**Concern:** Approximately 8 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

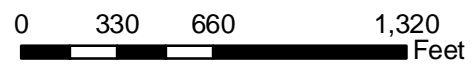
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Soils, Heritage, Wildlife, Vegetation

# Central Kupreanof Alternative 2,3,4 Unit 309



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



## Central Kupreanof Unit Card Narrative

**Unit # 310**

**Unit Size (acres):** 39

**Alternatives:** 2, 3

**Aerial Photo:**

**VCU:** 4271

**Volume (mbf):** 643

**Land Use Designation:** Modified Landscape

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road and temporary road construction

### Resource Concerns & Responses

**Resource**      **Watershed/Fisheries**

**Concern:** Stream 1 is Class I FP3.  
Streams 2 and 5 are Class IV MM1.  
Stream 3 and 4 are Class II MM1.

**Response:** Stream 1: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 130 feet of channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

Streams 2 and 5: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

Streams 3 and 4: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

**Resource**      **Sensitive/Rare Plants**

**Concern:** Found sensitive plant in unit – Wright Filmy Fern (*Hymenophyllum wrightii*).  
**Response:** No protection measures proposed.

**Resource**      **Karst**

**Concern:** 2.5 acres of karst located in unit.  
**Response:** Field reconnaissance found no signs of karst features (sink holes or caves); therefore the karst area is classified as low vulnerability and requires no special management (Forest Plan 2008, Standard and Guidelines, pg 4-23).

**Resource**      **Wetlands**

**Concern:** The proposed temporary road is located on forested wetland and no alternative route exists.

**Response:** Provide adequate cross drainage to maintain groundwater flow. Remove all structures and close the road after the unit has been harvested (BMP 14.9) (33 CFR BMPs 4, 5, 6).

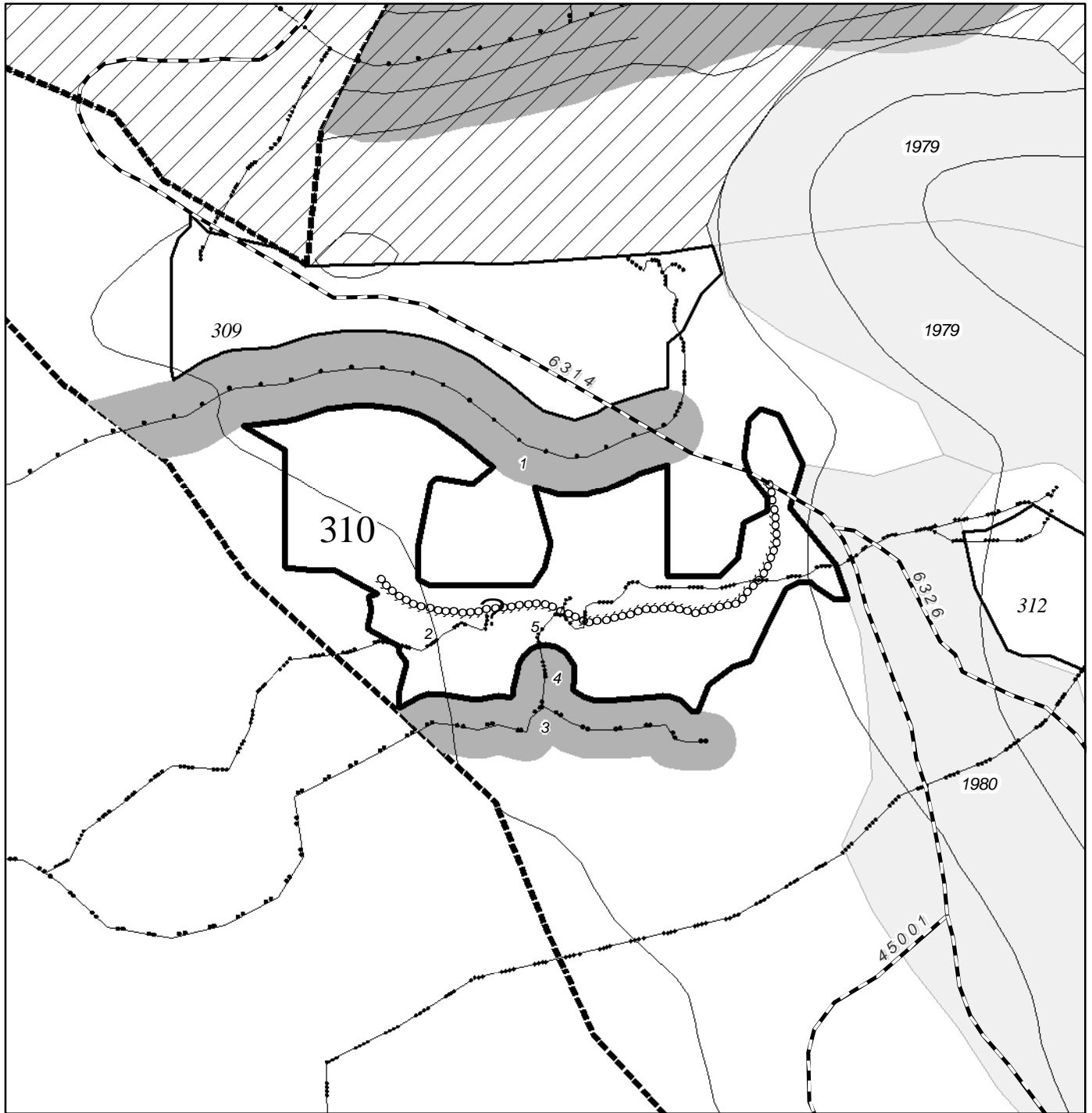
**Concern:** Approximately 21 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

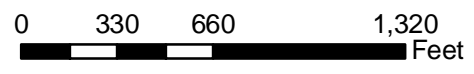
**No Concerns:** Scenery, Recreation, Soils, Wildlife, Vegetation, Heritage



# Central Kupreanof Alternative 2,3 Unit 310



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



## Central Kupreanof Unit Card Narrative

**Unit # 310**

**Unit Size (acres): 14**

**Alternative: 4**

**Aerial Photo:**

**VCU: 4271**

**Volume (mbf): 217**

**Land Use Designation:** Modified Landscape

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road, and temporary road construction

### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Stream 1 is Class I FP3.  
Stream 2 is Class IV MM1.  
Stream 3 is Class II MM1.

**Response:** Stream 1: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 130 feet of channel. (BMPs 12.6, 12.6a, 13.9, 13.16).  
Stream 2: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 3: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

**Resource Karst**

**Concern:** 2.5 acres of karst located in unit.

**Response:** Field reconnaissance found no signs of karst features (sink holes or caves); therefore the karst area is classified as low vulnerability and requires no special management (Forest Plan 2008, Standard and Guidelines, pg 4-23).

**Resource Wetlands**

**Concern:** The proposed temporary road is located on forested wetland and no alternative route exists.

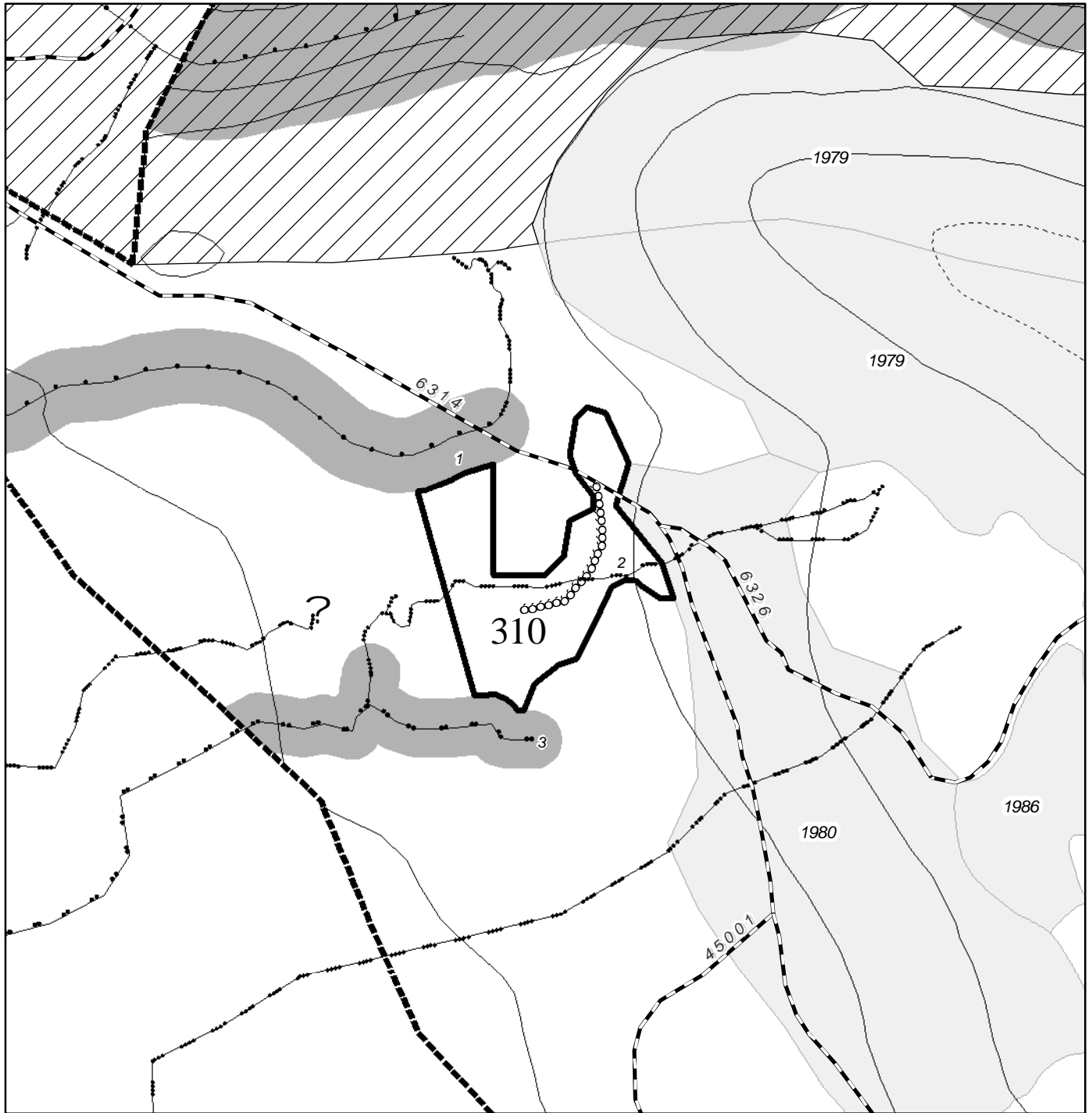
**Response:** Provide adequate cross drainage to maintain groundwater flow. Remove all structures and close the road after the unit has been harvested (BMP 14.9) (33 CFR BMPs 4, 5, 6).

**Concern:** Approximately 8 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

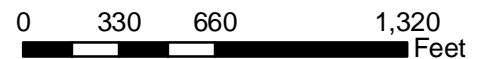
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

**No Concerns:** Scenery, Recreation, Soils, Sensitive/Rare Plants, Vegetation, Wildlife, Heritage

# Central Kupreanof Alternative 4 Unit 310



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 312**

**Unit Size (acres): 14**

**Alternatives: 2, 3, 4**

**Aerial Photo:**

**VCU: 4271**

**Volume (mbf): 252**

**Land Use Designation:** Modified Landscape

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Streams are Class IV HCO.

**Response:** "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

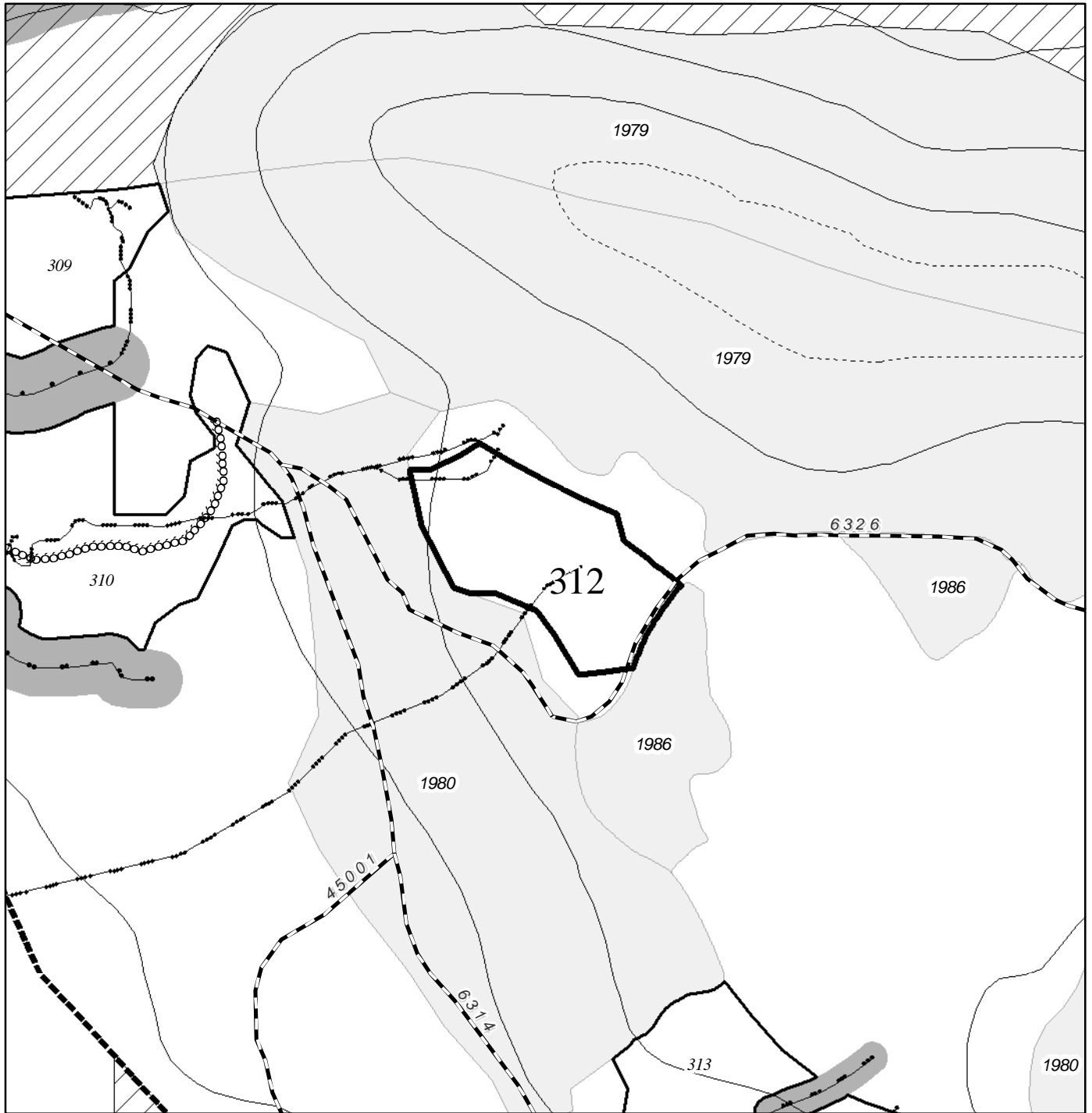
**Resource Karst**

**Concern:** 8.3 acres of karst located in unit.

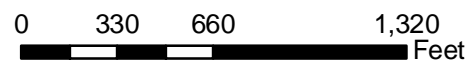
**Response:** Field reconnaissance found no signs of karst features (sink holes or caves); therefore the karst area is classified as low vulnerability and requires no special management (Forest Plan 2008, Standard and Guidelines, pg 4-23).

**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Soils, Wetlands, Heritage, Wildlife, Vegetation

# Central Kupreanof Alternative 2,3,4 Unit 312



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 313**

**Unit Size (acres): 39**

**Alternatives: 3, 4**

**Aerial Photo:**

**VCU: 4271**

**Volume (mbf): 624**

**Land Use Designation:** Modified Landscape

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road and temporary road construction

#### Resource Concerns & Responses

**Resource** Watershed/Fisheries

**Concern:** Stream 1 is Class III HC3.  
Stream 2 is Class IV HC2.  
Streams 3 and 4 are Class IV HC1.

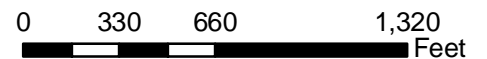
**Response:** Stream 1: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Streams 2-4: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Soils, Wetlands, Karst, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 3,4 Unit 313



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Old-growth Reserve             | Stream Value Class II   |
| Riparian Management Area       | Stream Value Class III  |
| Very High Hazard Soils (MMI-4) | Stream Value Class IV   |
| Lakes                          | Project Area Boundary   |
| Managed Stands                 | 100-ft Contour Interval |
| Proposed Temporary Roads       | 500-ft Contour Interval |
| Open NFS Roads                 | Sensitive Plants        |
| Closed Roads                   | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 313**

**Unit Size (acres): 33**

**Alternative: 2**

**Aerial Photo:**

**VCU: 4271**

**Volume (mbf): 527**

**Land Use Designation:** Modified Landscape

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road and temporary road construction

#### Resource Concerns & Responses

**Resource** Watershed/Fisheries

**Concern:** Stream 1 is Class III HC3.  
Stream 2 is Class IV HC2.  
Stream 3 is Class IV HC1.

**Response:** Stream 1: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Streams 2-3: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

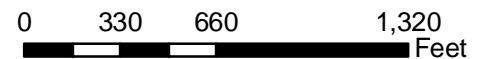
**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Soils, Wetlands, Karst, Wildlife, Heritage, Vegetation



# Central Kupreanof Alternative 2 Unit 313



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Old-growth Reserve             | Stream Value Class II   |
| Riparian Management Area       | Stream Value Class III  |
| Very High Hazard Soils (MMI-4) | Stream Value Class IV   |
| Lakes                          | Project Area Boundary   |
| Managed Stands                 | 100-ft Contour Interval |
| Proposed Temporary Roads       | 500-ft Contour Interval |
| Open NFS Roads                 | Sensitive Plants        |
| Closed Roads                   | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 314**

**Unit Size (acres): 97**

**Alternative: 2**

**Aerial Photo:**

**VCU: 4271**

**Volume (mbf): 1,566**

**Land Use Designation:** Modified Landscape

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road and temporary road construction, and new NFS road construction

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Stream 1 is a Class I MM1.  
Stream 2 is a Class IV MM1.  
Stream 3 is a Class IV HC0.  
Stream 4 is a Class IV PA1.  
Stream 5 is a Class I FP3.  
Stream 6 is a Class I MM1.

**Response:** Streams 1 and 6: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).  
Streams 2, 3, and 4: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 5: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 130 feet of channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

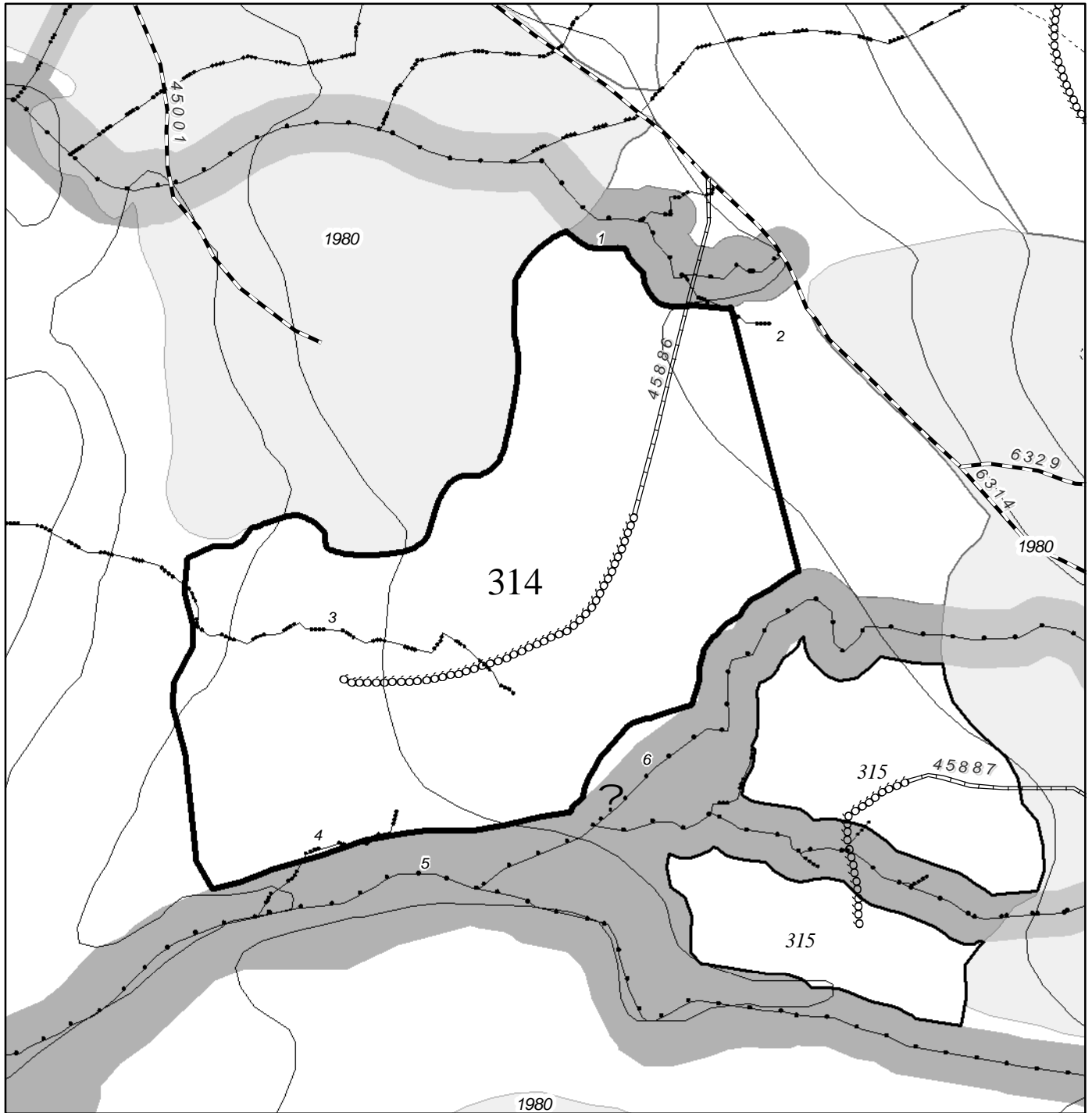
**Resource Sensitive/Rare Plants**

**Concern:** Found sensitive plant between units 314 and 315 – Wright Filmy Fern (*Hymenophyllum wrightii*).

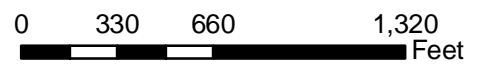
**Response:** Plant is protected within a stream riparian buffer.

**No Concerns:** Scenery, Recreation, Soils, Wetlands, Karst, Wildlife, Heritage, Vegetation

# Central Kupreanof Alternative 2 Unit 314



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Old-growth Reserve             | Stream Value Class II   |
| Riparian Management Area       | Stream Value Class III  |
| Very High Hazard Soils (MMI-4) | Stream Value Class IV   |
| Lakes                          | Project Area Boundary   |
| Managed Stands                 | 100-ft Contour Interval |
| Proposed Temporary Roads       | 500-ft Contour Interval |
| Open NFS Roads                 | Sensitive Plants        |
| Closed Roads                   | Rare Plants             |



## Central Kupreanof Unit Card Narrative

**Unit # 314**

**Unit Size (acres):** 100

**Alternative:** 3

**Aerial Photo:**

**VCU:** 4271

**Volume (mbf):** 1,862

**Land Use Designation:** Modified Landscape

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Two-aged management, clearcut with 20% area retention

**Logging Method/Transportation:** Shovel / existing NFS road, new NFS road, and temporary road construction

### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Stream 1 is a Class II HC2.  
 Stream 2 is a Class IV HC2.  
 Stream 3 is a Class I MM1.  
 Stream 4 is a Class IV MM1.  
 Stream 5 is a Class IV HC0.  
 Stream 6 is a Class IV PA1.  
 Stream 7 is a Class I FP3.  
 Stream 8 is a Class I MM1.

**Response:** Stream 1: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).  
 Streams 2 and 4-6: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
 Streams 3 and 8: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).  
 Stream 7: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 130 feet of channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

**Resource Sensitive/Rare Plants**

**Concern:** Found sensitive plant between units 314 and 315 – Wright Filmy Fern (*Hymenophyllum wrightii*).

**Response:** Plant is protected within stream riparian buffer.

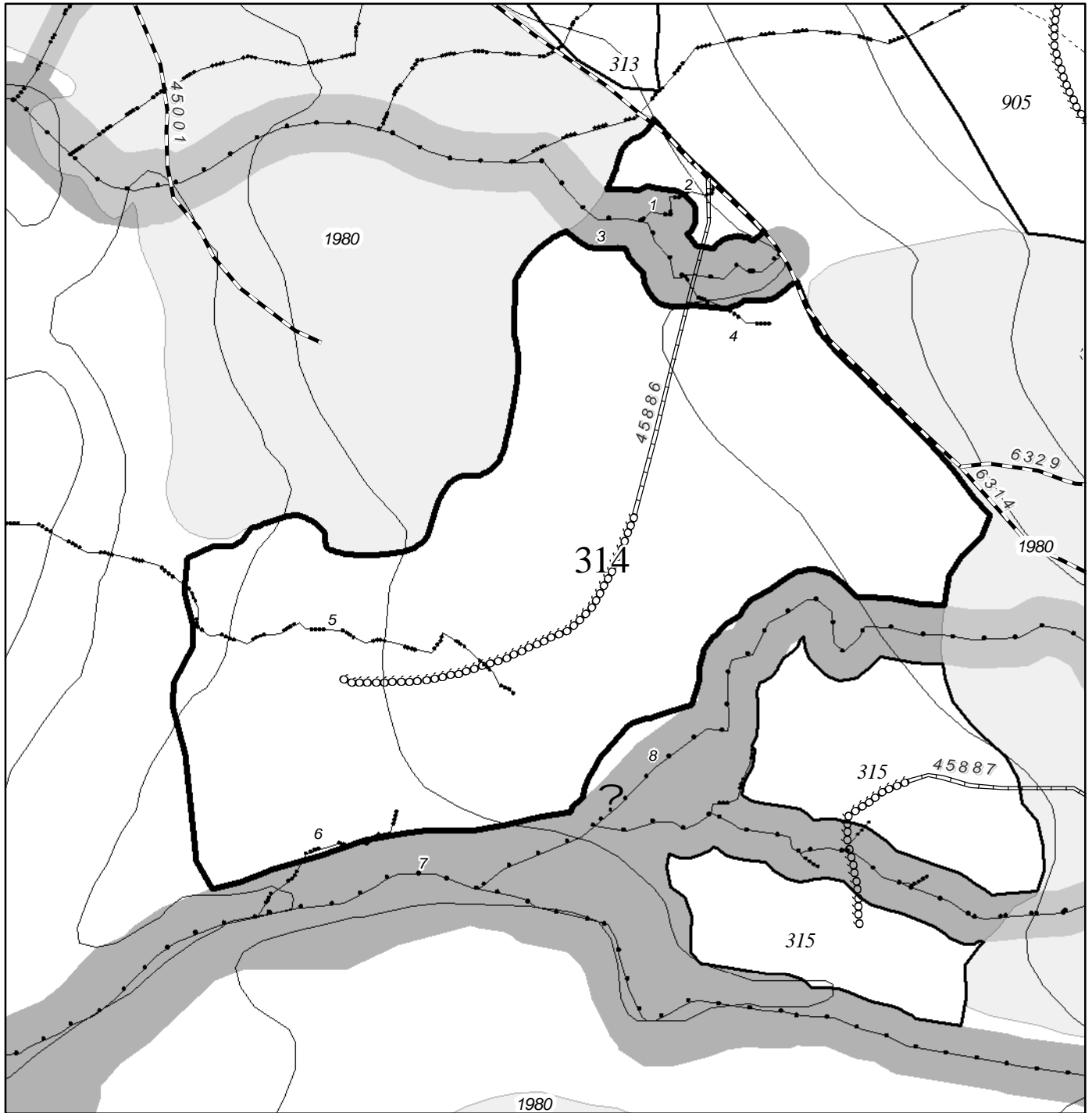
**Resource Vegetation**

**Concern:** Opening size is larger than 100 acres.

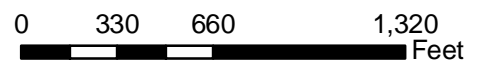
**Response:** Change to two-aged management silviculture system and retain 20 percent of the basal area to eliminate acreage size limitation.

**No Concerns:** Scenery, Recreation, Soils, Wetlands, Karst, Vegetation, Wildlife, Heritage

# Central Kupreanof Alternative 3 Unit 314



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Old-growth Reserve             | Stream Value Class II   |
| Riparian Management Area       | Stream Value Class III  |
| Very High Hazard Soils (MMI-4) | Stream Value Class IV   |
| Lakes                          | Project Area Boundary   |
| Managed Stands                 | 100-ft Contour Interval |
| Proposed Temporary Roads       | 500-ft Contour Interval |
| Open NFS Roads                 | Sensitive Plants        |
| Closed Roads                   | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 314**

**Unit Size (acres): 22**

**Alternative: 4**

**Aerial Photo:**

**VCU: 4271**

**Volume (mbf): 296**

**Land Use Designation:** Modified Landscape

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** shovel / existing NFS road

**Resource Concerns & Responses**

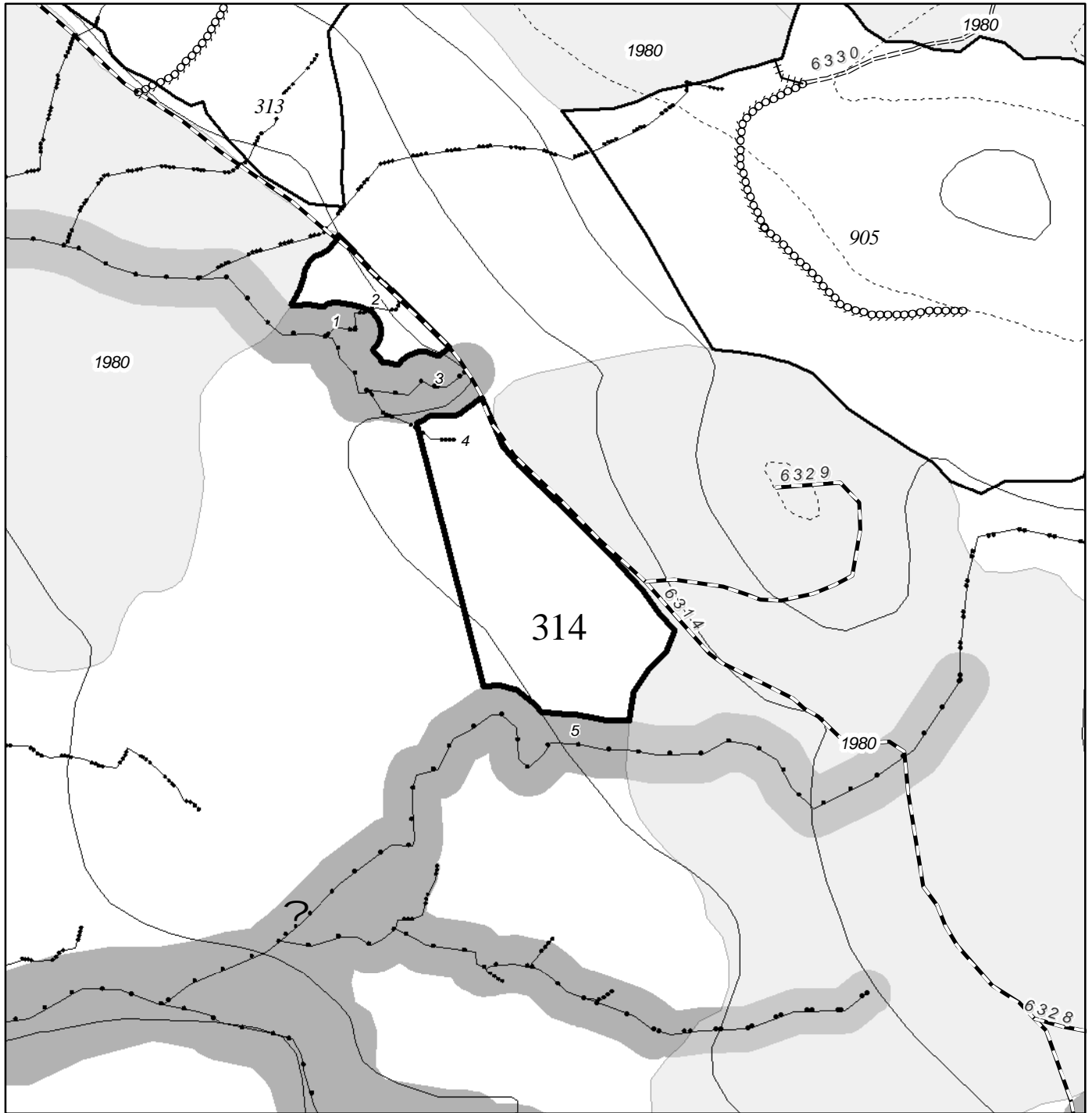
**Resource Watershed/Fisheries**

**Concern:** Stream 1 is a Class II HC2  
Stream 2 is a Class IV HC2  
Stream 3 is a Class I MM1  
Stream 4 is a Class IV MM1  
Stream 5 is a Class I MM1

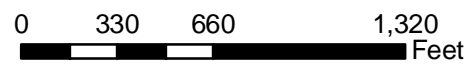
**Response:** Stream 1: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).  
Streams 2 and 4: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Streams 3 and 5: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

**No Concerns:** Scenery, Recreation, Soils, Wetlands, Karst, Sensitive/Rare Plants, Vegetation, Heritage, Wildlife

# Central Kupreanof Alternative 4 Unit 314



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 315**

**Unit Size (acres):** 33

**Alternatives:** 2, 3

**Aerial Photo:**

**VCU:** 4271

**Volume (mbf):** Alt 2 is 288; Alt 3 is 576

**Land Use Designation:** Modified Landscape

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Alternative 2 Two-aged management, clearcut with reserves (50% area retention); Alternative 3: Even aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road, new NFS road, and temporary road construction

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Streams 1 and 2 are Class I MM1.  
Stream 3 is Class III MM0.  
Stream 4 is Class IV MM0.  
Streams 5 and 6 are Class IV HC0.  
Stream 7 is Class I FP3 and MM1.

**Response:** Streams 1, 2, 3, and MM1 portion of 7: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).  
Streams 4, 5, and 6: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 7: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 130 feet of channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

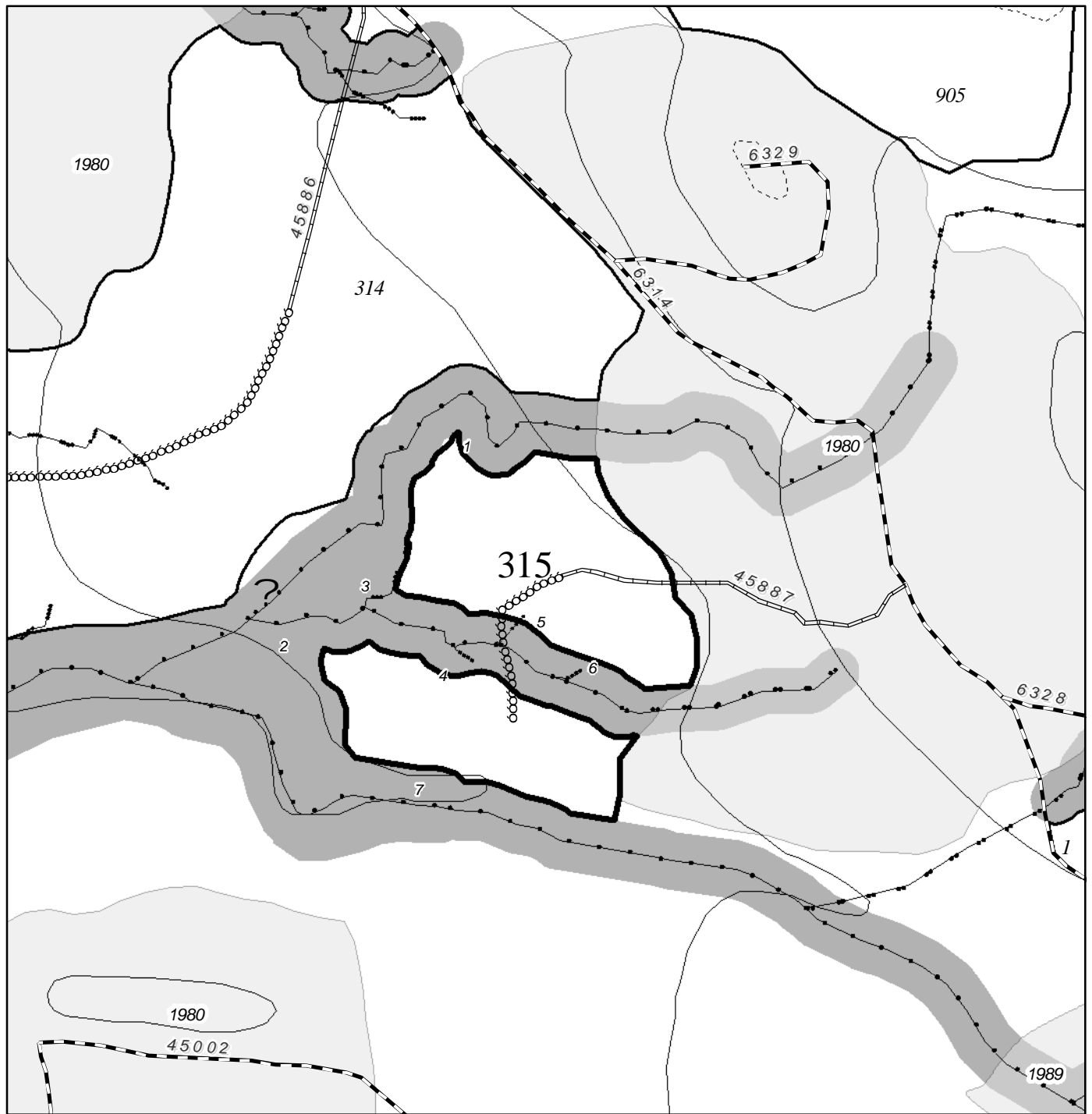
**Concern:** Temporary road crosses Class II stream.

**Response:** Stream crossing will be accomplished with a log stringer bridge to maintain fish passage and minimize stream channel disturbance. (BMPs 14.14, 14.17).

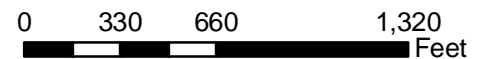
**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Soils, Wetlands, Karst, Heritage, Vegetation, Wildlife



# Central Kupreanof Alternative 2,3 Unit 315



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 316**

**Unit Size (acres):** 14

**Alternatives:** 2, 3, 4

**Aerial Photo:**

**VCU:** 4271

**Volume (mbf):** 242

**Land Use Designation:** Modified Landscape

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road

#### Resource Concerns & Responses

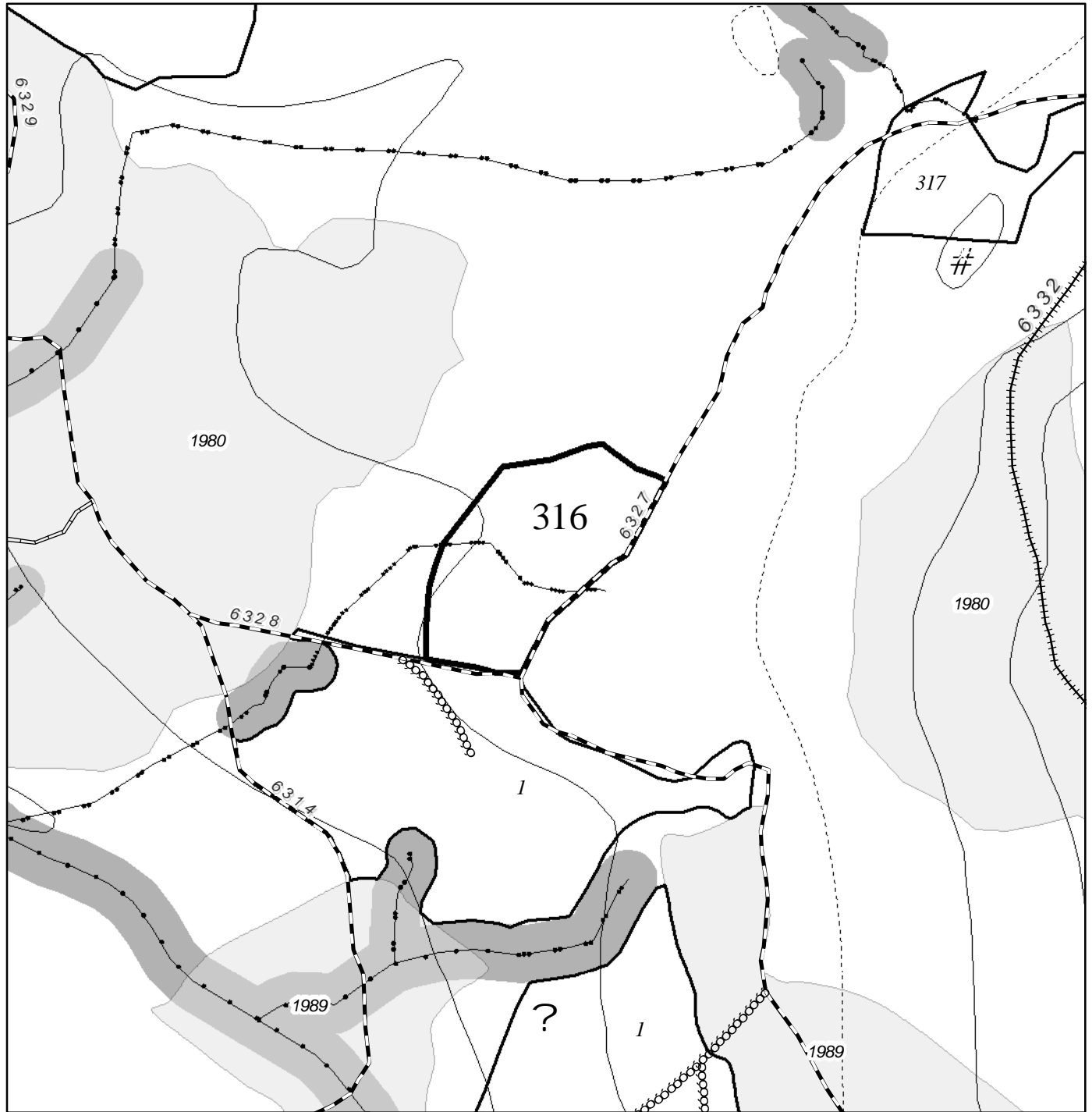
**Resource**      **Watershed/Fisheries**

**Concern:** Stream is Class IV HCO.

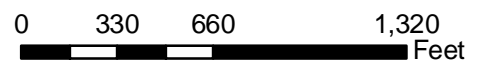
**Response:** "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Soils, Karst, Wetlands, Heritage, Wildlife, Vegetation

# Central Kupreanof Alternative 2,3,4 Unit 316



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 317**

**Unit Size (acres):** 10

**Alternatives:** 2, 3, 4

**Aerial Photo:**

**VCU:** 4260

**Volume (mbf):** 162

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Stream is Class IV MM0

**Response:** "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

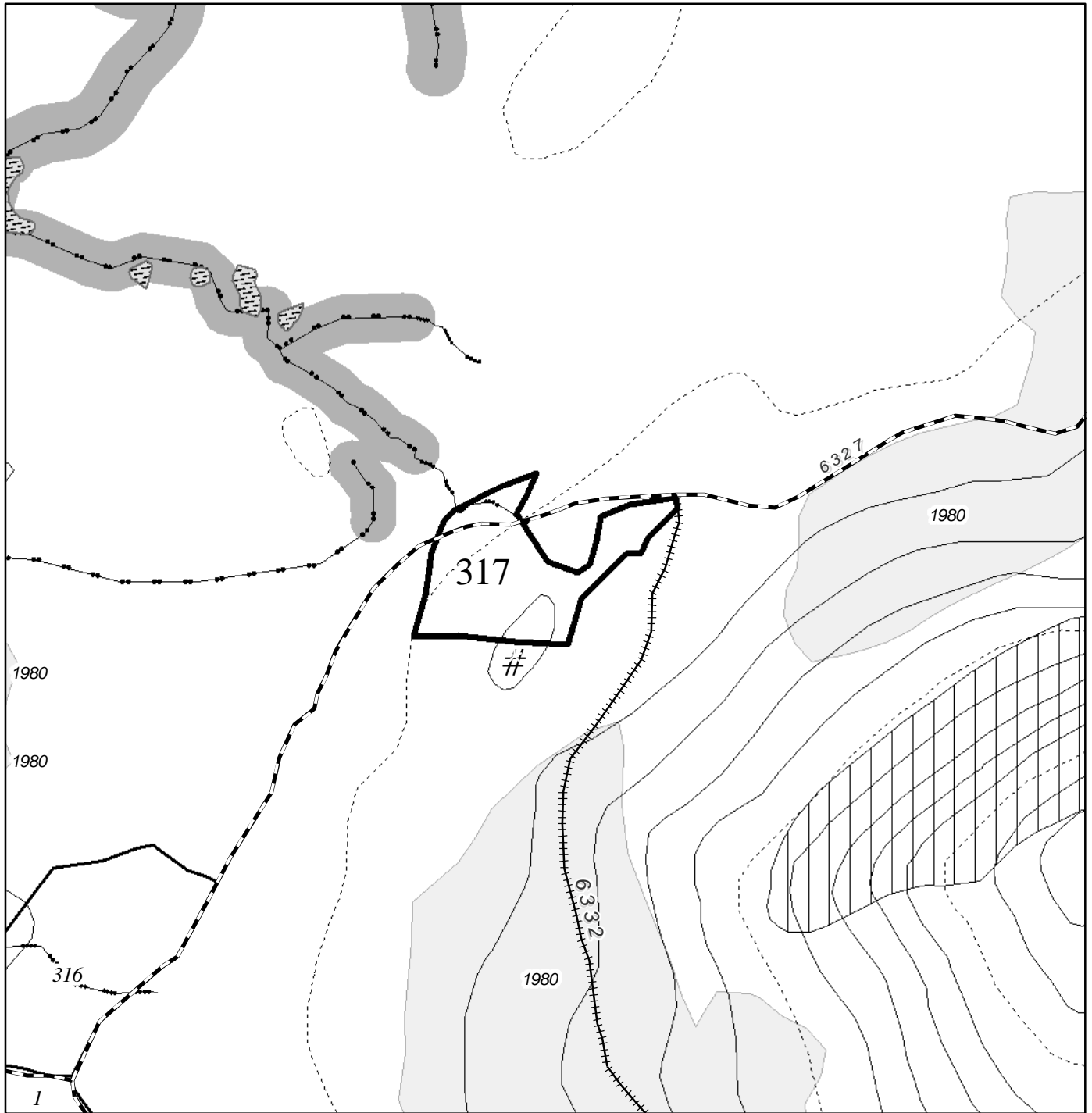
**Resource Sensitive/Rare Plants**

**Concern:** Found rare plant near unit – Broad lipped twayblade (*Listera convallarioides*).

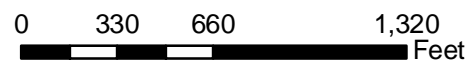
**Response:** Falling timber into unit will protect population.

**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Soils, Wetlands, Karst, Heritage, Wildlife, Vegetation

# Central Kupreanof Alternative 2,3,4 Unit 317



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 318**

**Unit Size (acres): 47**

**Alternatives: 2, 3, 4**

**Aerial Photo:**

**VCU: 4260**

**Volume (mbf): 833**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road and reconstructed NFS road

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Streams 1 and 3 are Class II HC3.

Stream 2 is Class IV HC1.

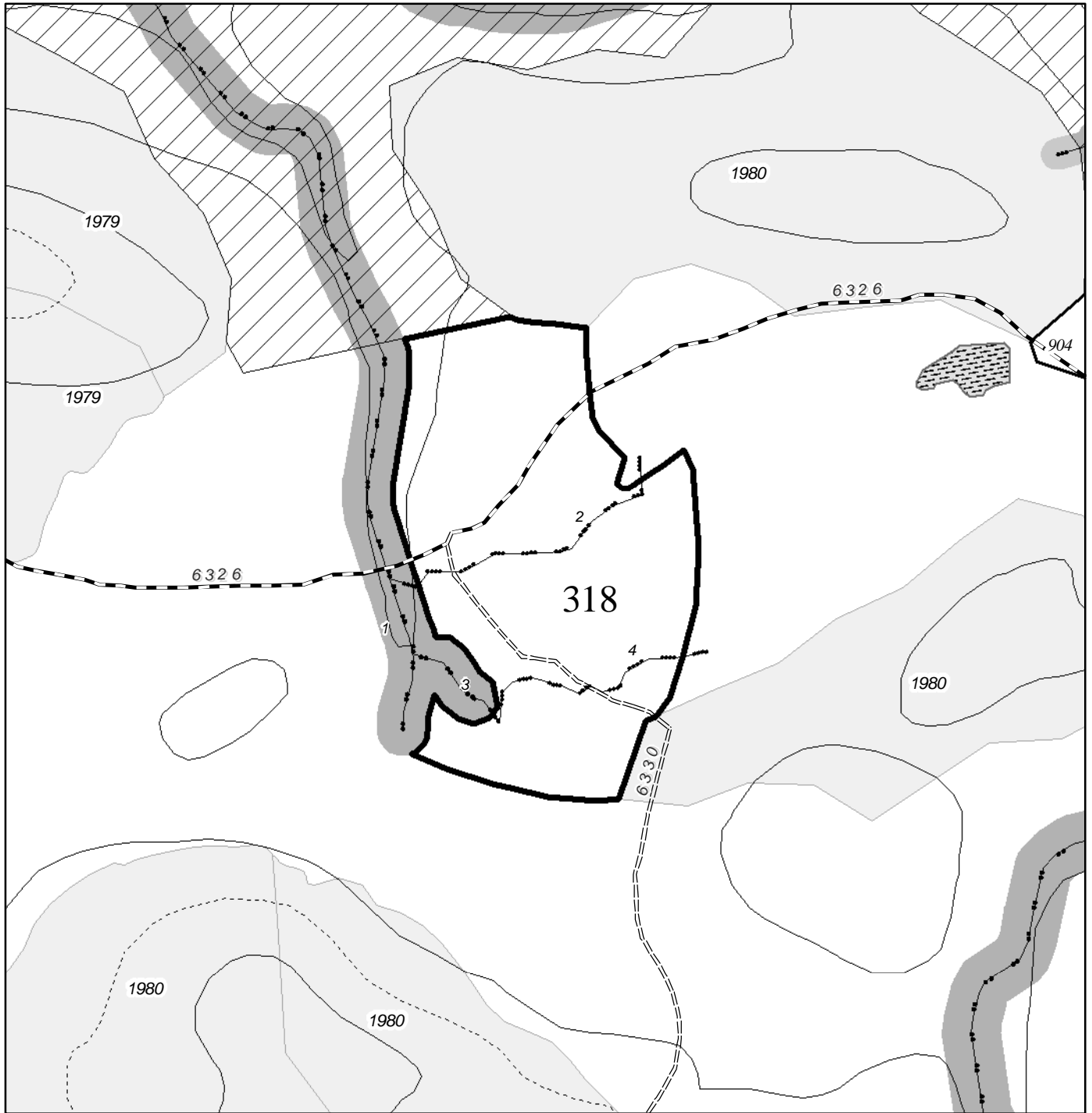
Stream 4 is Class IV HC3.

**Response:** Streams 1 and 3: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).

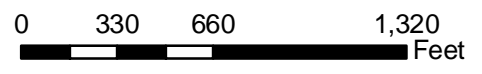
Streams 2 and 4: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Soils, Karst, Wetlands, Vegetation, Wildlife, Heritage

# Central Kupreanof Alternative 2,3,4 Unit 318



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 320**

**Unit Size (acres): 27**

**Alternatives: 2, 3, 4**

**Aerial Photo:**

**VCU: 4260**

**Volume (mbf): 363**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Stream 1 is Class II HC1.  
Streams 2 and 3 are Class IV HC5.  
Stream 4 is Class IV HC3.

**Response:** Stream 1: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).  
Streams 2, 3, and 4: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**Resource Wetlands**

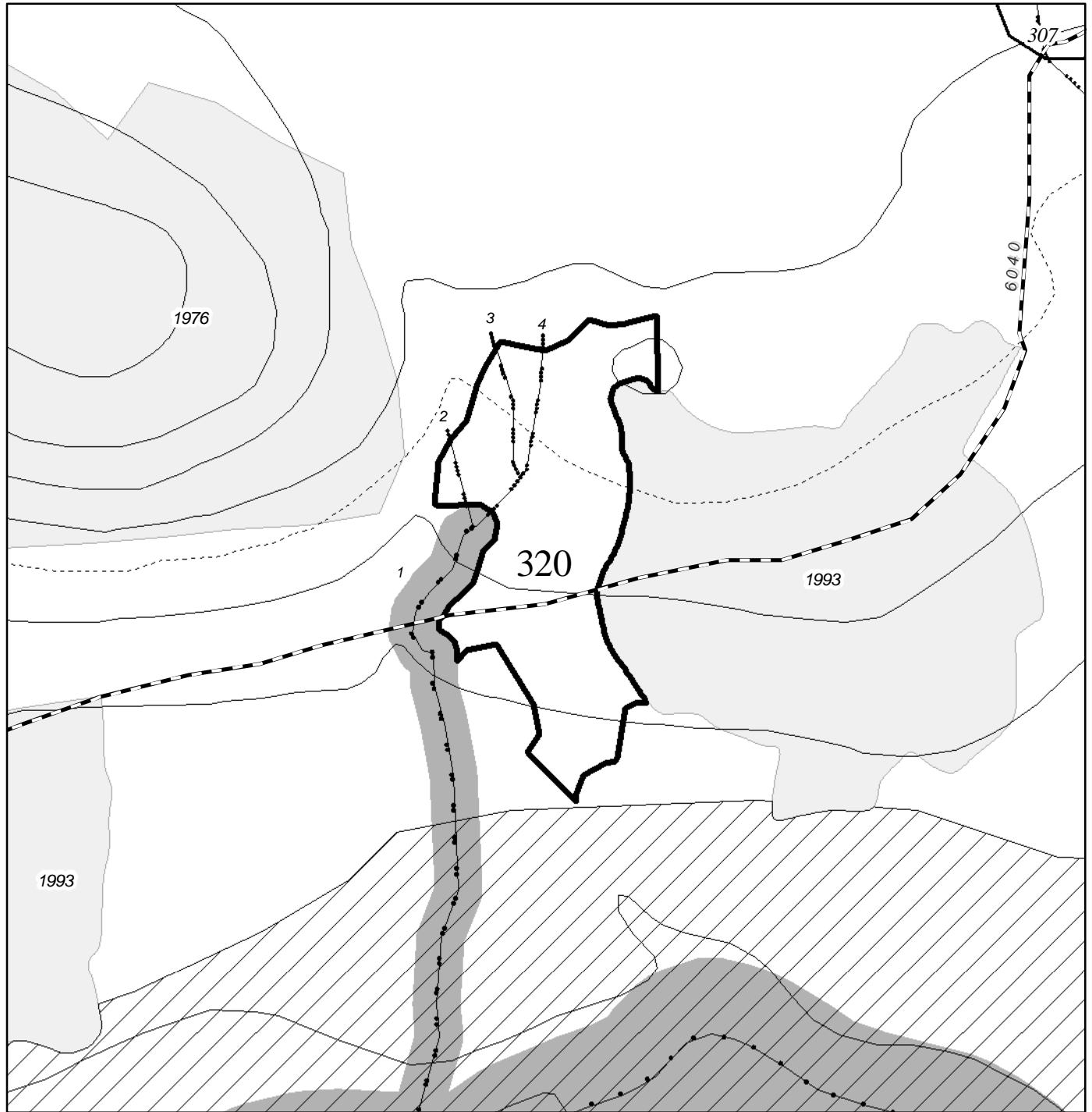
**Concern:** Approximately 7 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

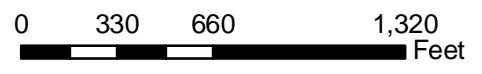
**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Soils, Karst, Wildlife, Heritage, Vegetation



# Central Kupreanof Alternative 2,3,4 Unit 320



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 501**

**Unit Size (acres): 44**

**Alternatives: 2, 3, 4**

**Aerial Photo:**

**VCU: 4260**

**Volume (mbf): 793**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / existing NFS road

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

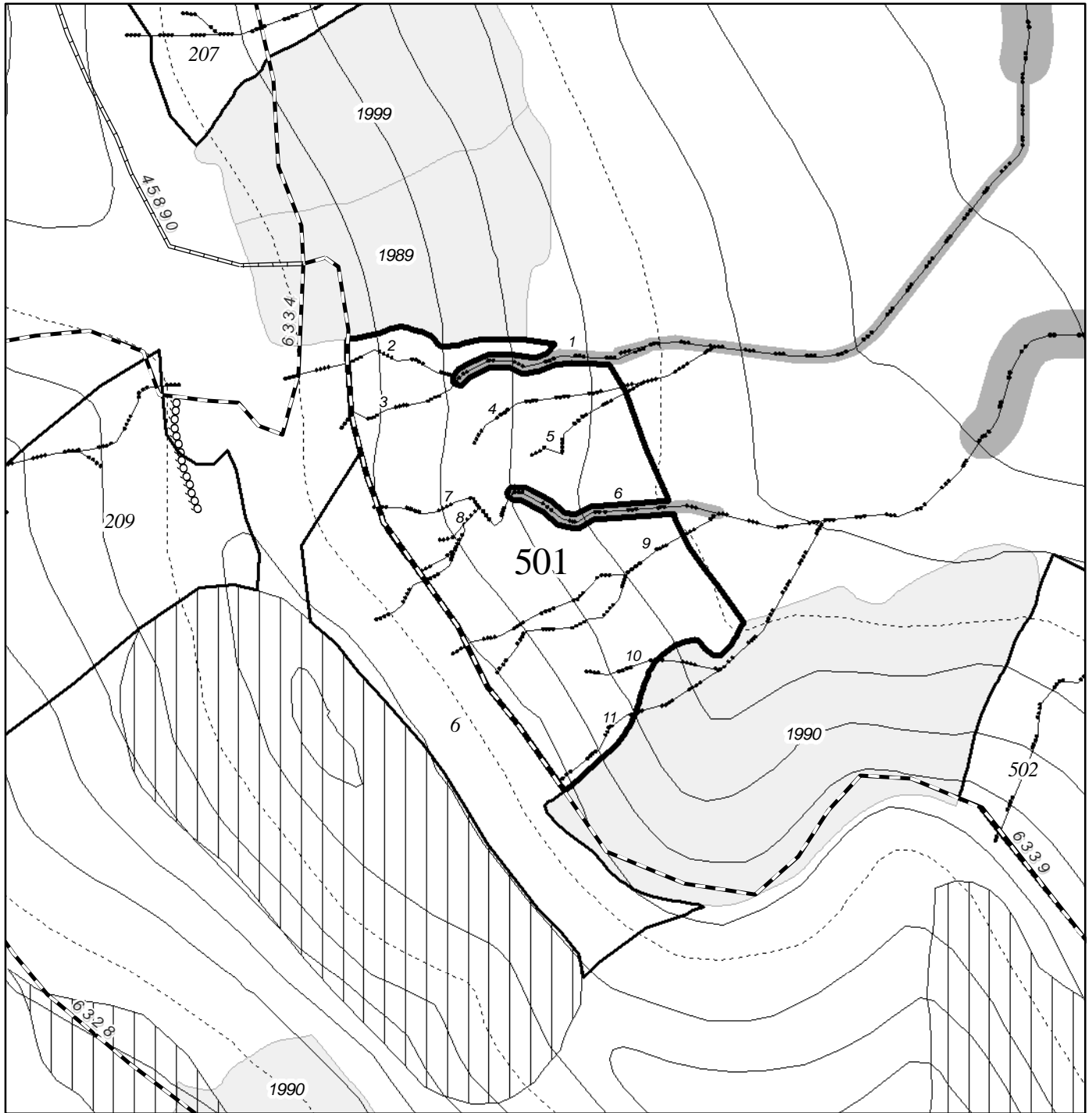
**Concern:** Streams 1 and 6 are Class III HC5.

Streams 2-5 and 7-11 are Class IV HC5.

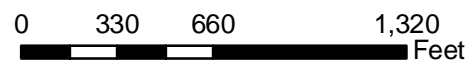
**Response:** Streams 1 and 6: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Streams 2-5 and 7-11: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**No Concerns:** Scenery, Karst, Wetlands, Recreation, Sensitive/Rare Plants, Soils, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 2,3,4 Unit 501



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

**Unit # 502**

**Unit Size (acres): 66**

**Alternatives: 2, 3, 4**

**Aerial Photo:**

**VCU: 4260**

**Volume (mbf): 1,275**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / existing NFS road

**Resource Concerns & Responses**

**Resource Watershed/Fisheries**

**Concern:** Streams 1, 2 and 4 are Class IV HC5.  
Stream 3 is Class III HC5.

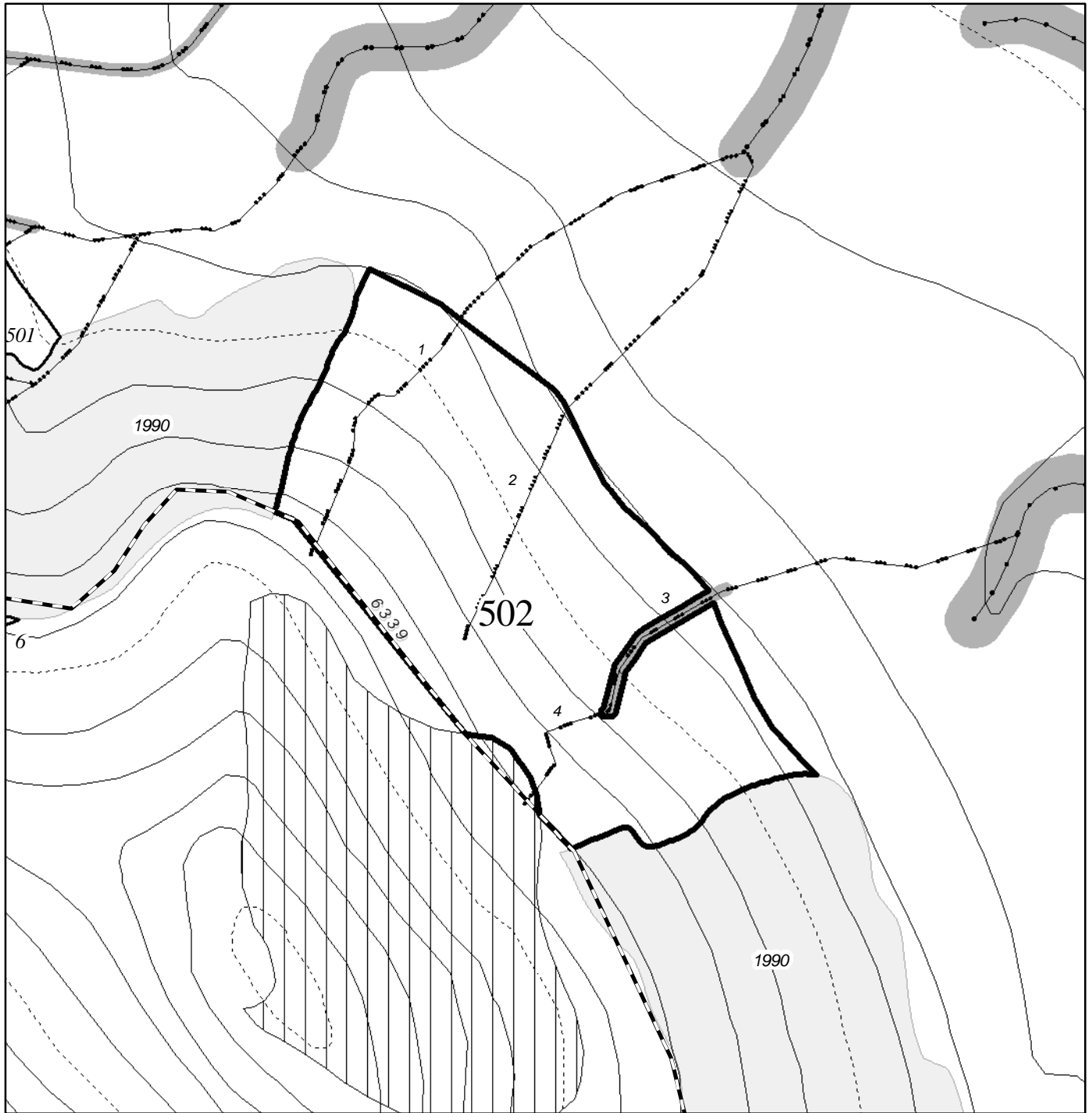
**Response:** Streams 1, 2, and 4: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 3: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

**Resource Soils**

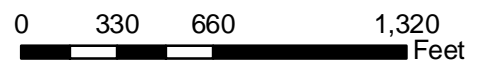
**Concern:** Southwestern portion of originally proposed unit contained MMI-4 soils.  
**Response:** The unit boundary was modified to exclude these soils (BMP 13.5).

**No Concerns:** Scenery, Recreation, Karst, Wetlands, Sensitive/Rare Plants, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 2,3,4 Unit 502



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 900**

**Unit Size (acres): 37**

**Alternatives: 2, 3, 4**

**Aerial Photo:**

**VCU: 4290**

**Volume (mbf): 646**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / existing NFS road and reconstructed NFS road

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Streams 1, 2, 3, and 4 are Class IV HC5.  
Stream 5 is Class I MM1.

**Response:** Streams 1, 2, 3, and 4: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 5: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

**Resource Sensitive/Rare Plants**

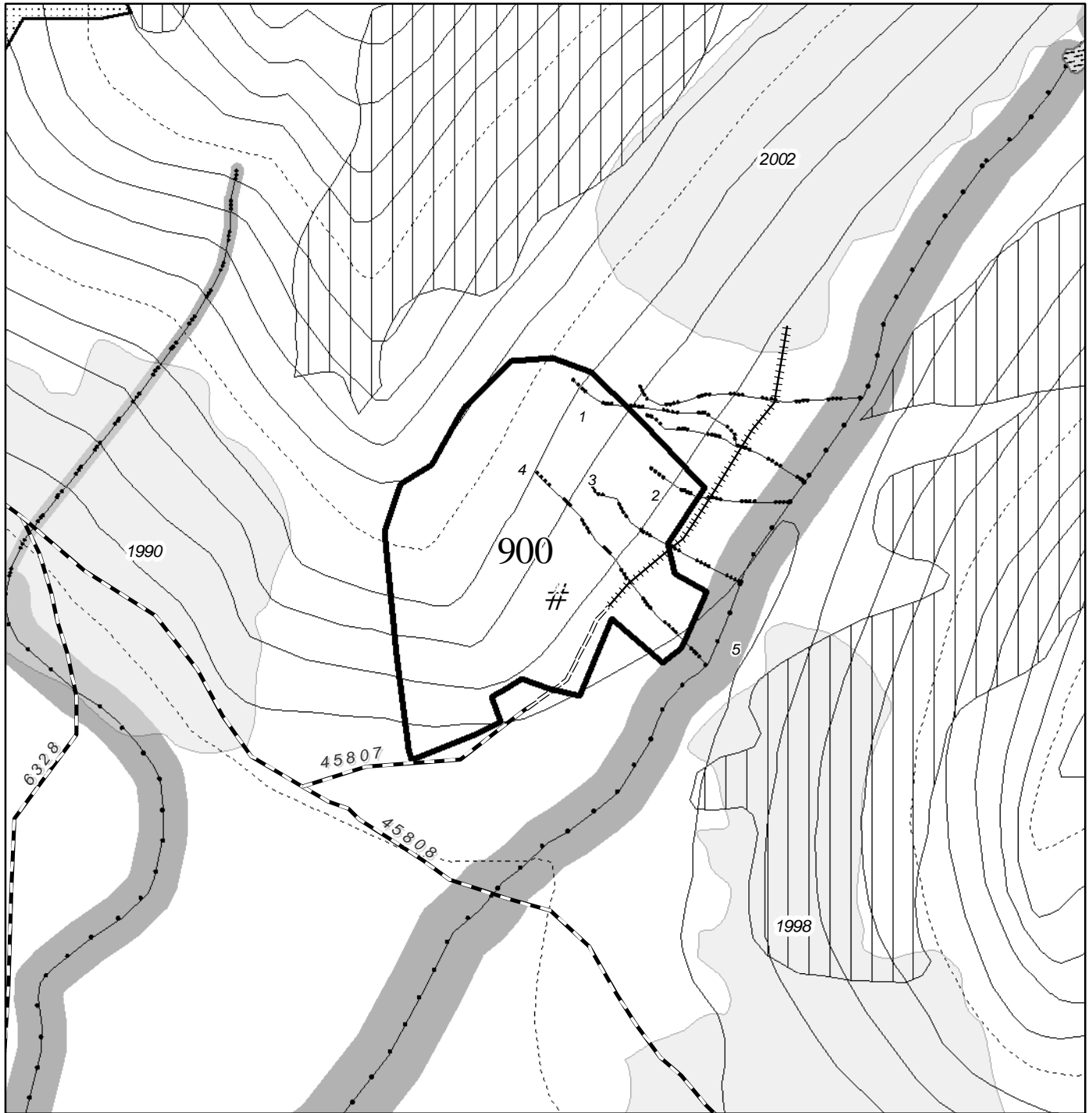
**Concern:** Found rare plant in unit – Broad leaved twayblade (*Listera convallarioides*).  
**Response:** No protection measures proposed.

**Resource Soils**

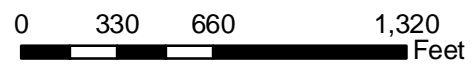
**Concern:** Portions of unit along northwestern and western boundary exceed 72 percent slope.  
**Response:** A Soil Stability Investigation found the area to be suitable forest land. Use partial suspension along northwestern and western boundary to meet soil stability requirements (BMP 13.9).

**No Concerns:** Scenery, Recreation, Wetlands, Karst, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 2,3,4 Unit 900



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



## Central Kupreanof Unit Card Narrative

**Unit # 901**

**Unit Size (acres):** 123

**Alternatives:** 2, 3

**Aerial Photo:**

**VCU:** 4271

**Volume (mbf):** 1,593

**Land Use Designation:** Modified Landscape

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut with reserves (10% area retention) (77 acres); uneven-aged management, single tree selection (46 acres)

**Logging Method/Transportation:** Shovel and cable (77 acres), helicopter (46 acres)/ existing NFS road, new NFS road and temporary road construction

### Resource Concerns & Responses

**Resource**      **Watershed/Fisheries**

**Concern:** Streams 1 and 3-6 are Class IV HC5.

Stream 2 is Class IV HC6.

Stream 7 is Class III HC6.

Stream 8 is Class II HC1.

**Response:** Streams 1-6: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

Stream 7: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

Stream 8: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).

**Resource**      **Scenery**

**Concern:** Unit visible in the middleground distance from Big John Bay.

**Response:** With 10 percent area retention in the even-aged management portion of the unit and 60 percent basal area retention in the uneven-aged management portion of the unit the unit meets Low Scenic Integrity Objective.

**Resource**      **Soils**

**Concern:** MMI-4 soils in the northwestern portion of unit.

**Response:** Soil Stability Investigation Report prescribes partial suspension in the MMI-4 portion of the unit. Area is proposed as full suspension (helicopter) which exceeds the partial suspension requirement (13.9).

**Resource**      **Wetlands**

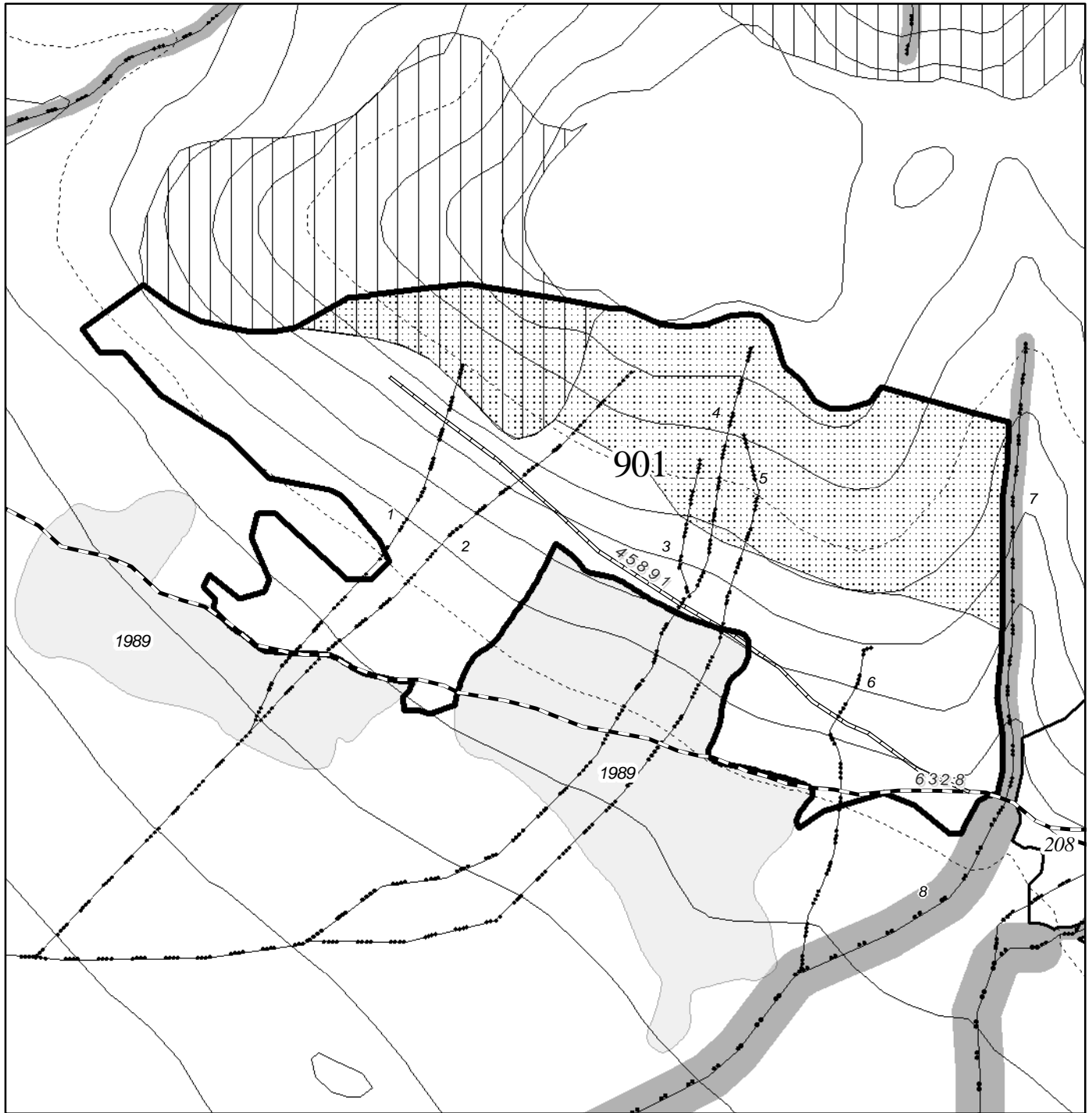
**Concern:** Approximately 3 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

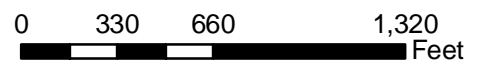
**No concerns:** Recreation, Sensitive/Rare Plants, Karst, Wildlife, Vegetation, Heritage



# Central Kupreanof Alternative 2,3 Unit 901



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 901**

**Unit Size (acres): 26**

**Alternative: 4**

**Aerial Photo:**

**VCU: 4271**

**Volume (mbf): 445**

**Land Use Designation:** Modified Landscape

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut with reserves

**Logging Method/Transportation:** Cable and shovel / existing NFS road

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Streams 1 and 3 are Class IV HC5.  
Stream 2 is Class IV HC6.  
Stream 4 is Class III HC6.  
Stream 5 is Class II HC1.

**Response:** Streams 1-3: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 4: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Stream 5: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).

**Resource Scenery**

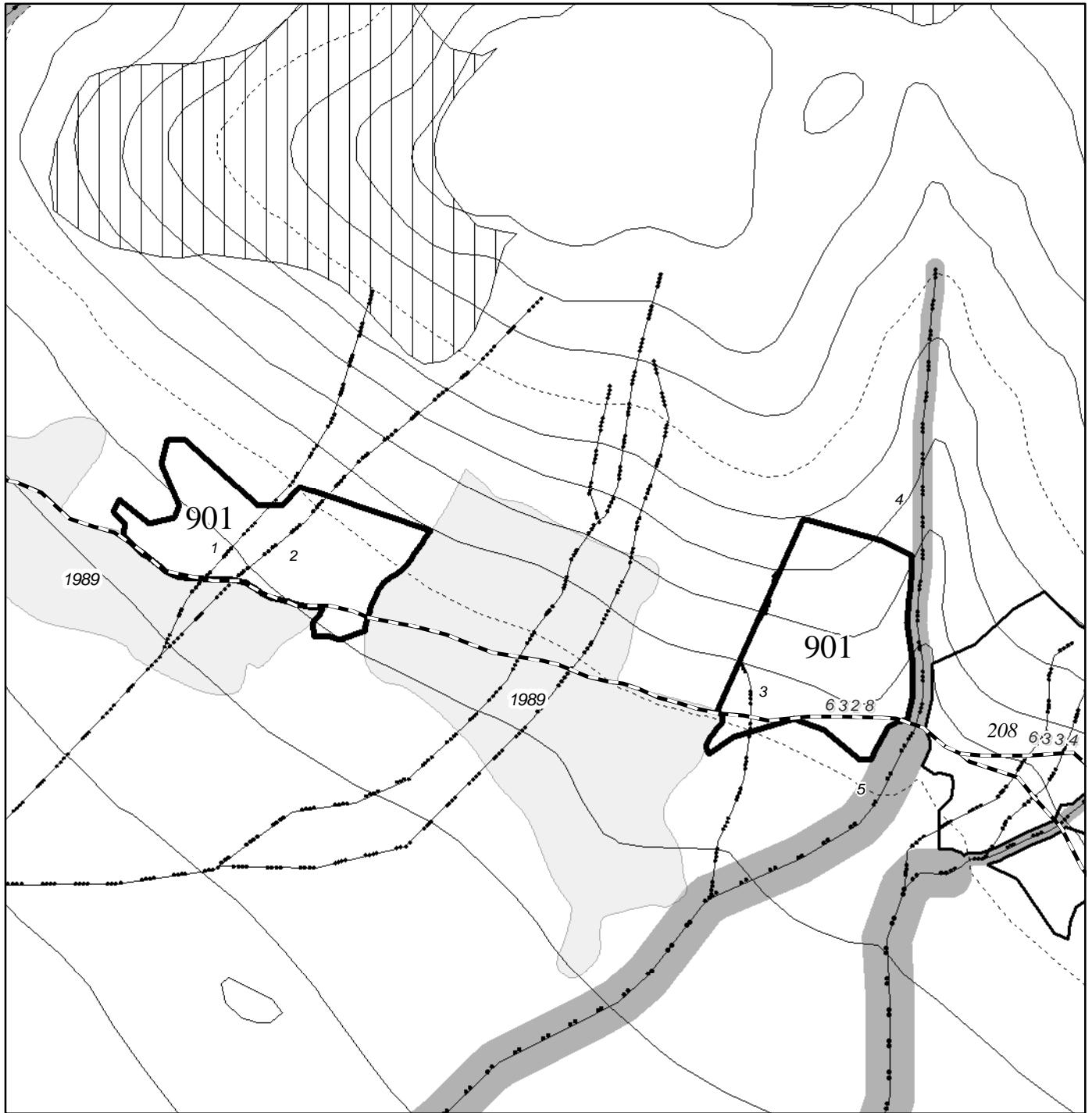
**Concern:** Unit visible in the middleground distance from Big John Bay.  
**Response:** Unit meets Low Scenic Integrity Objective.

**Resource Wetlands**

**Concern:** Approximately 3 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.  
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

**No concerns:** Recreation, Sensitive/Rare Plants, Karst, Wildlife, Vegetation, Heritage, Soils

# Central Kupreanof Alternative 4 Unit 901



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Road      |
| Helicopter Yarding             | Stream Value Class I    |
| Old-growth Reserve             | Stream Value Class II   |
| Riparian Management Area       | Stream Value Class III  |
| Very High Hazard Soils (MMI-4) | Stream Value Class IV   |
| Lakes                          | 100-ft Contour Interval |
| Managed Stands                 | 500-ft Contour Interval |
| Closed Roads                   | Project Area Boundary   |
| Proposed Temporary Roads       | Sensitive Plants        |
| Open NFS Roads                 | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 903**

**Unit Size (acres): 69**

**Alternatives: 2, 3**

**Aerial Photo:**

**VCU: 4260**

**Volume (mbf): 1,175**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel and cable / existing NFS road and new NFS road construction

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Streams 1 and 3 are Class IV HC5.  
Streams 2 and 4 are Class IV HC2.  
Streams 5, 7, 9, and 10 are Class IV HC0.  
Stream 6 is Class III HC6.  
Stream 8 is Class IV HC6.

**Response:** Streams 1-5 and 7-10: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 6: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

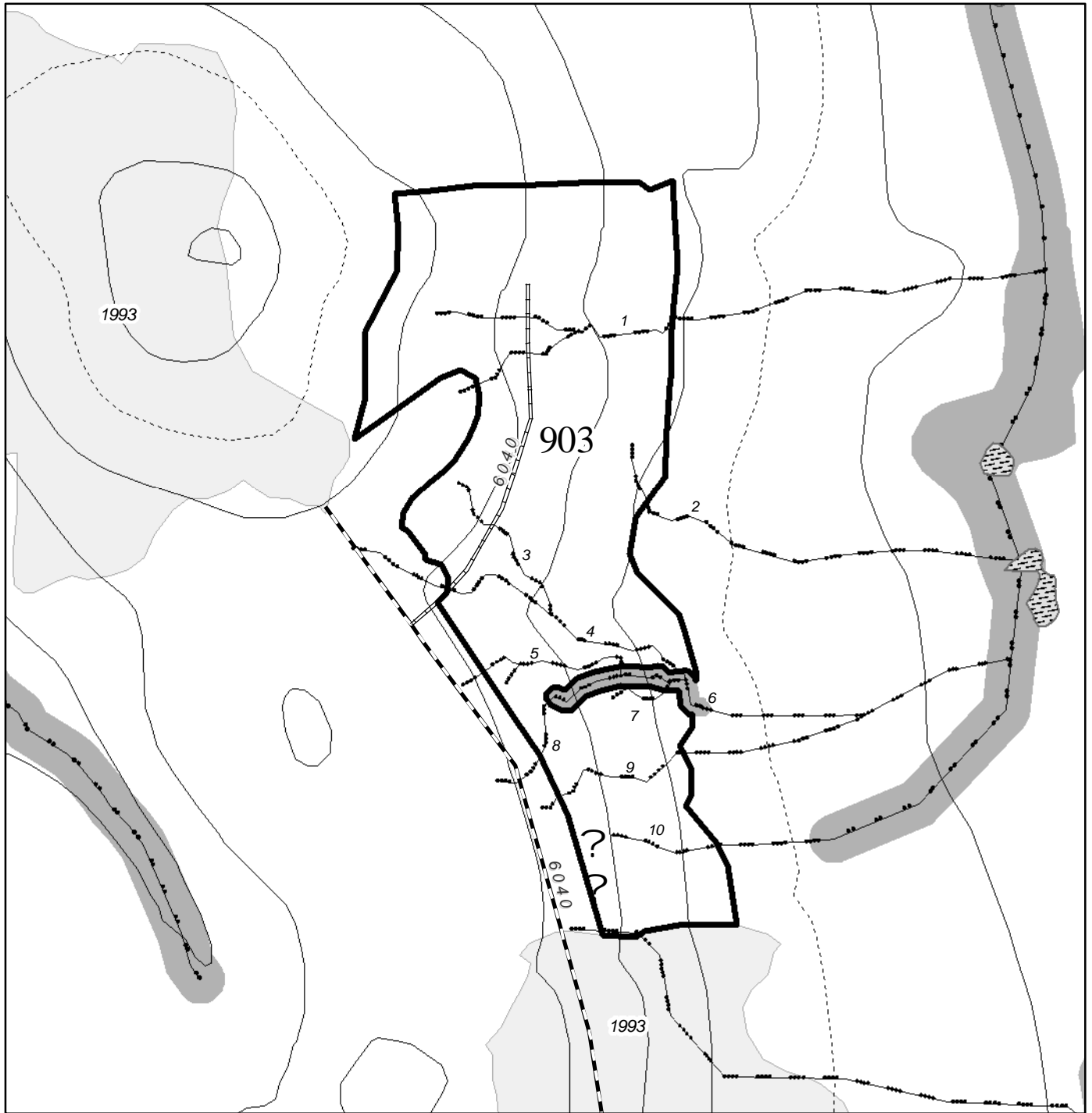
**Resource Sensitive/Rare Plants**

**Concern:** Found two populations of sensitive plant in unit – Wright Filmy Fern (*Hymenophyllum wrightii*).

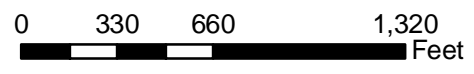
**Response:** No protection measures proposed.

**No Concerns:** Scenery, Recreation, Soils, Wetlands, Karst, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 2,3 Unit 903



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 903**

**Unit Size (acres): 25**

**Alternative: 4**

**Aerial Photo:**

**VCU: 4260**

**Volume (mbf): 412**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel and cable / existing NFS road

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Stream 1 is Class IV HC5.  
Stream 2 is Class IV HC2.  
Streams 3, 5, 7, 8, and 9 are Class IV HC0.  
Stream 4 is Class III HC6.  
Stream 6 is Class IV HC6.

**Response:** Streams 1-3 and 5-9: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Stream 4: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).

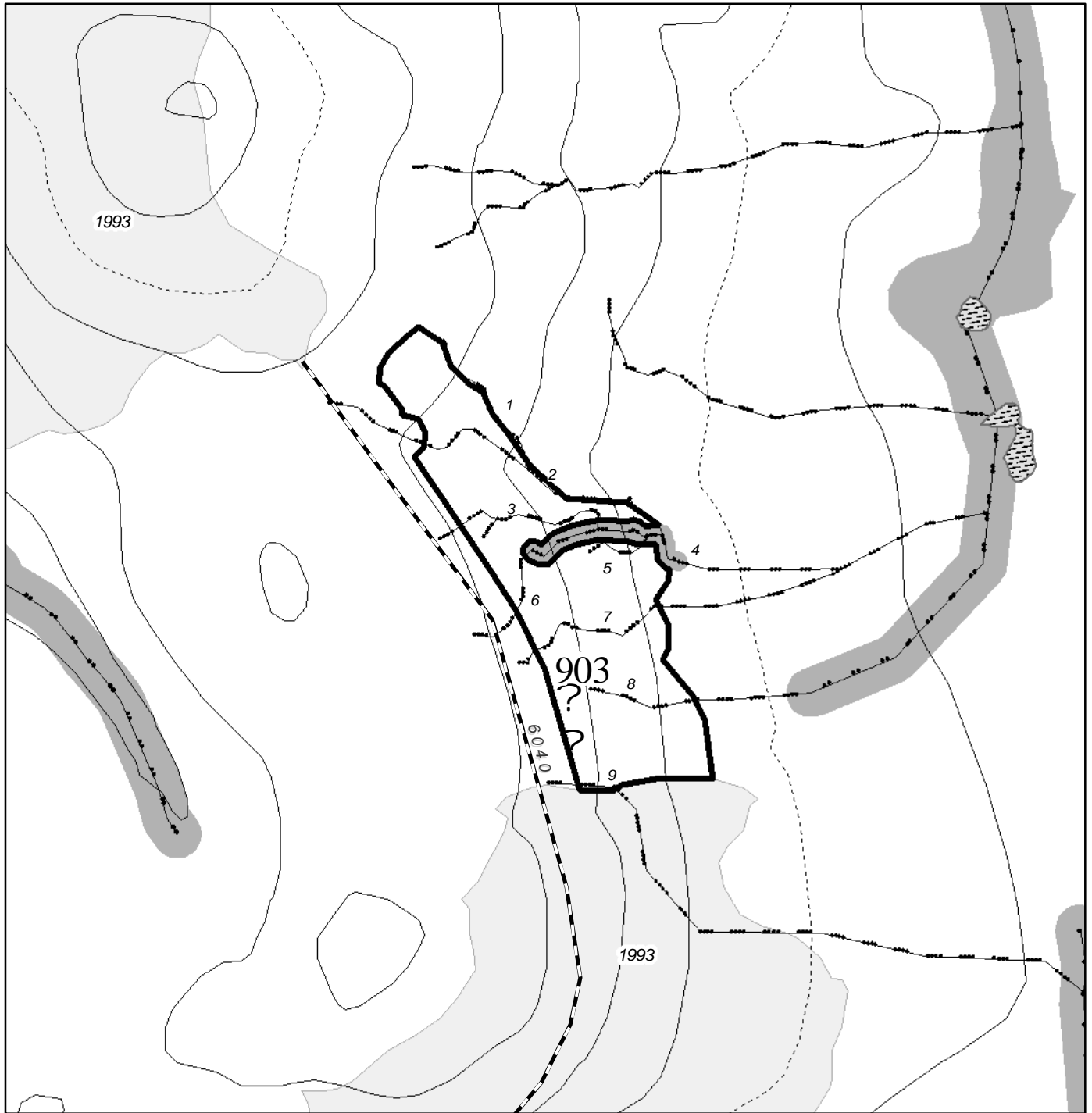
**Resource Sensitive/Rare Plants**

**Concern:** Found sensitive plant in unit – Wright Filmy Fern (*Hymenophyllum wrightii*).  
Two populations found.

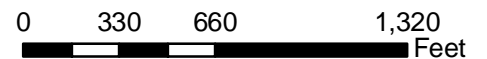
**Response:** No protection measures proposed.

**No Concerns:** Soils, Wetlands, Karst, Wildlife, Heritage, Vegetation

# Central Kupreanof Alternative 4 Unit 903



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 904**

**Unit Size (acres):** 12

**Alternatives:** 2, 3, 4

**Aerial Photo:**

**VCU:** 4260

**Volume (mbf):** 245

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road

#### Resource Concerns & Responses

##### Resource

**Concern:** Stream 1 is Class I HC3.

Stream 2 is Class II MM1.

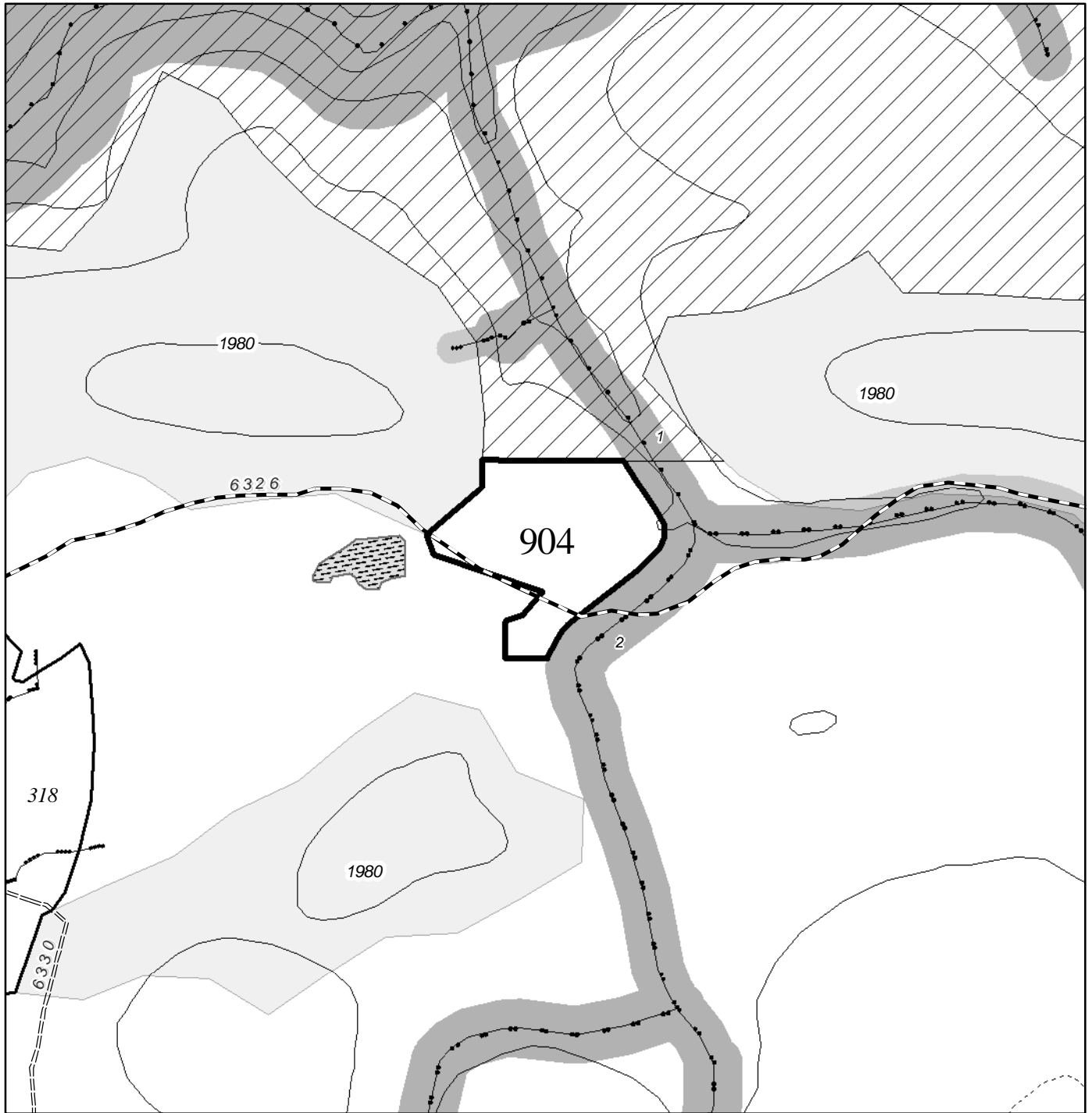
**Response:** Stream 1: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).

Stream 2: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).

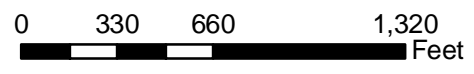
**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Soils, Wetlands, Karst, Wildlife, Vegetation, Heritage



# Central Kupreanof Alternative 2,3,4 Unit 904



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 905**

**Unit Size (acres): 77**

**Alternatives: 3, 4**

**Aerial Photo:**

**VCU: 4260 & 4271**

**Volume (mbf): 1,361**

**Land Use Designation:** Timber Production & Modified Landscape

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / reconstructed NFS road and temporary road construction

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Stream is Class IV HC1.

**Response:** "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

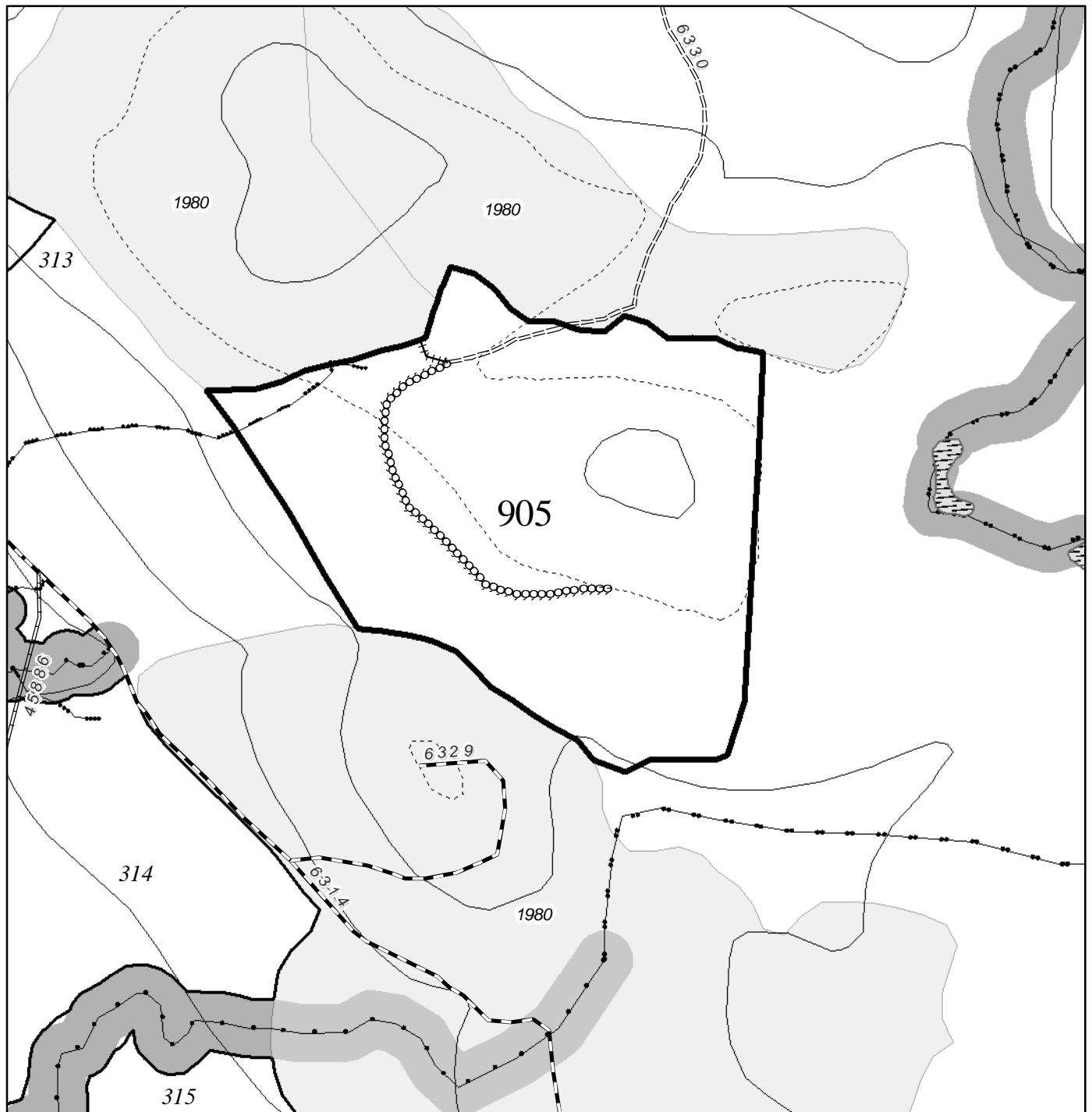
**Resource Scenery**

**Concern:** Unit visible in the middleground distance from Big John Bay.

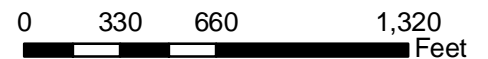
**Response:** Unit meets Low Scenic Integrity Objectives.

**No Concerns:** Recreation, Sensitive/Rare Plants, Soils, Wetlands, Karst, Wildlife, Heritage, Vegetation

# Central Kupreanof Alternative 3,4 Unit 905



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Old-growth Reserve             | Stream Value Class II   |
| Riparian Management Area       | Stream Value Class III  |
| Very High Hazard Soils (MMI-4) | Stream Value Class IV   |
| Lakes                          | Project Area Boundary   |
| Managed Stands                 | 100-ft Contour Interval |
| Proposed Temporary Roads       | 500-ft Contour Interval |
| Open NFS Roads                 | Sensitive Plants        |
| Closed Roads                   | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 1**

**Unit Size (acres): 77**

**Alternatives: 2, 3, 4**

**Aerial Photo:**

**VCU: 4271**

**Volume (mbf): 1,473**

**Land Use Designation:** Modified Landscape

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / temporary road construction, existing NFS road

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Streams 1 and 2 are Class II HC2.  
Stream 3 is Class I and II MM1.  
Stream 4 is Class I MM1.  
Stream 5 is Class III HC2.  
Stream 6 is Class IV HC2.

**Response:** Streams 1 and 2: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).  
Streams 3 and 4: No timber harvest within the greatest of the 100-year flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet of channel. (BMP 12.6, 12.6a, 13.9, 13.16).  
Stream 5: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Stream 4: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).  
Stream 6: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

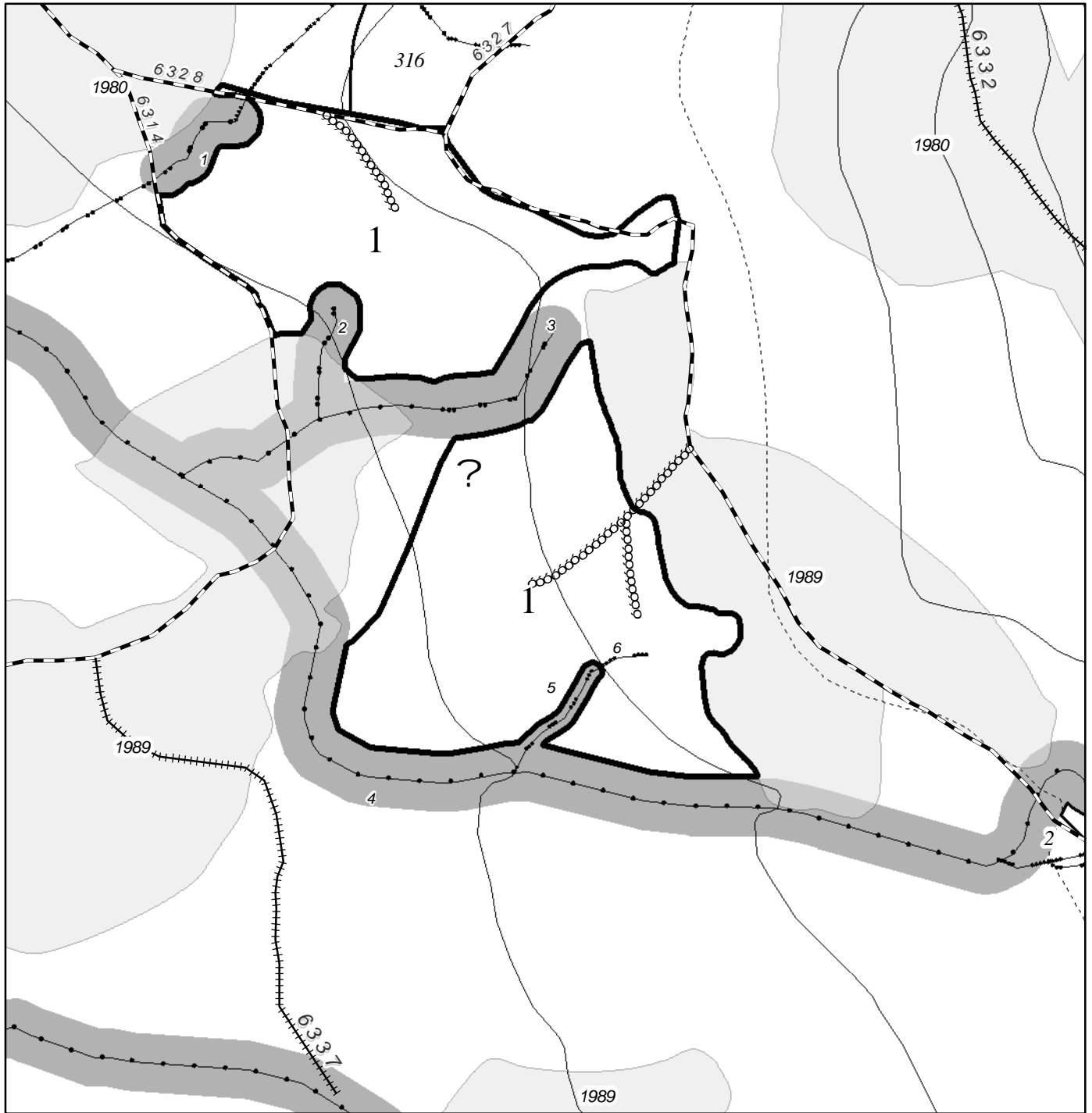
**Resource Sensitive/Rare Plants**

**Concern:** Found sensitive plant in unit – Wright Filmy Fern (*Hymenophyllum wrightii*).

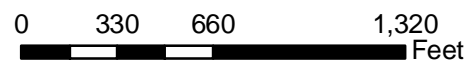
**Response:** No protection measures proposed

**No Concerns:** Scenery, Recreation, Soils, Karst, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 2,3,4 Unit 1



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

<b>Unit # 2</b>	<b>Unit Size (acres): 16</b>	<b>Alternatives: 2, 3, 4</b>
<b>Aerial Photo:</b>	<b>VCU: 4271</b>	<b>Volume (mbf): 203</b>
<b>Land Use Designation: Modified Landscape</b>		

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road

**Resource Concerns & Responses**

**Resource Watershed/Fisheries**

**Concern:** Stream 1 is Class I MM1 and Class II HC2.  
Stream 2 is Class IV MM1.  
Stream 3 is Class IV HC1.  
Stream 4 is Class II MM1.  
Stream 5 is Class IV HC0.  
Stream 6 is Class II HC2 below the road and Class IV HC2 above the road.

**Response:** Streams 1 (MM1 section) and 4: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).  
Streams 2, 3, 5, and 6 (above the road): "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Streams 1 (HC2) and 6: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).

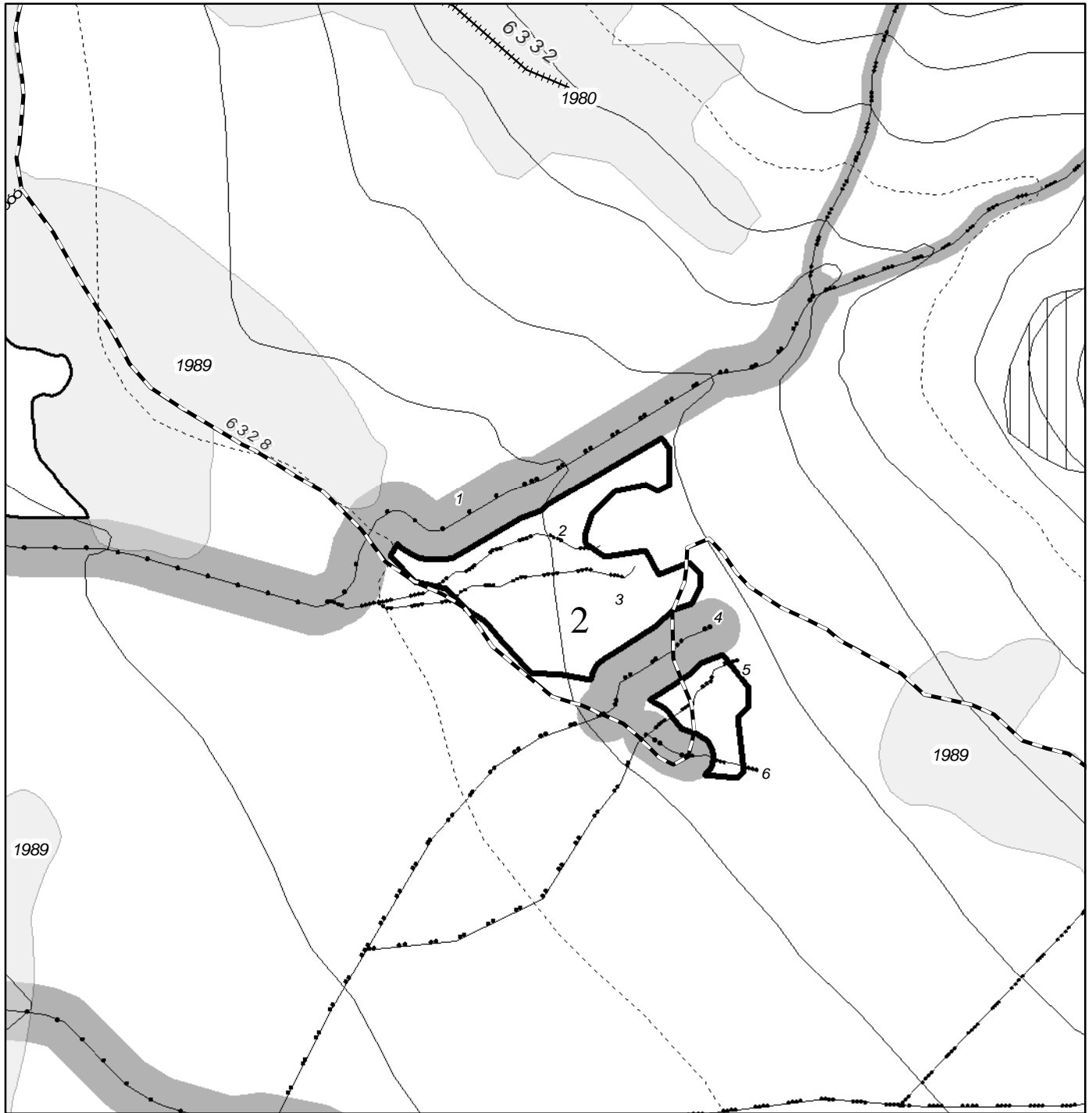
**Resource Wetlands**

**Concern:** Approximately 16 acres of harvest is proposed on forested wetland (BMP12.5). Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils.

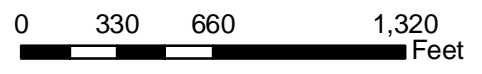
**Response:** Operate shovel on puncheon or slash mattress to provide adequate bearing strength on the higher areas of the unit (BMP 13.2, 13.9).

**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Soils, Wetlands, Karst, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 2,3,4 Unit 2



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 3**

**Unit Size (acres): 22**

**Alternatives: 2, 3, 4**

**Aerial Photo:**

**VCU: 4260**

**Volume (mbf): 382**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel / existing NFS road, and proposed temporary and NFS road construction

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Stream 1 is Class I MM1.  
Stream 2 is Class IV HC0.  
Stream 3 is Class II MM0.  
Streams 4 and 5 are Class II HC2.  
Stream 6 is Class IV HC1.  
Stream 7 is Class IV HC2.  
Stream 8 is Class IV HC5.  
Stream 9 is Class IV MM0.  
Stream 10 is Class I MM2.

**Response:** Streams 1, 3, and 10: No timber harvest within the greatest of the flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet from channel. (BMPs 12.6, 12.6a, 13.9, 13.16).  
Streams 2 and 6-9: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).  
Streams 4 and 5: No timber harvest within 100 feet of the stream or the top of the v-notch, whichever is greater. (BMPs 12.6, 12.6a).

**Resource Sensitive/Rare Plants**

**Concern:** Found sensitive plant in unit – Wright Filmy Fern (*Hymenophyllum wrightii*).

**Response:** May be partially protected with timber falling away from the riparian buffer.

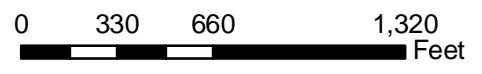
**No Concerns:** Scenery, Recreation, Soils, Wetlands, Karst, Wildlife, Vegetation, Heritage



# Central Kupreanof Alternative 2,3,4 Unit 3



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 5**

**Unit Size (acres): 77**

**Alternatives: 2, 3**

**Aerial Photo:**

**VCU: 4260**

**Volume (mbf): 1,254**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut; uneven-aged management, single tree selection

**Logging Method/Transportation:** Cable (59 acres), helicopter (18 acres) / new NFS road construction

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** Stream 1 is Class II HC3  
Streams 2 and 4 are Class III HC6  
Streams 3, 5, 6, 9, 11, and 12 are Class IV HC5  
Streams 7, 8, and 10 are Class III HC5

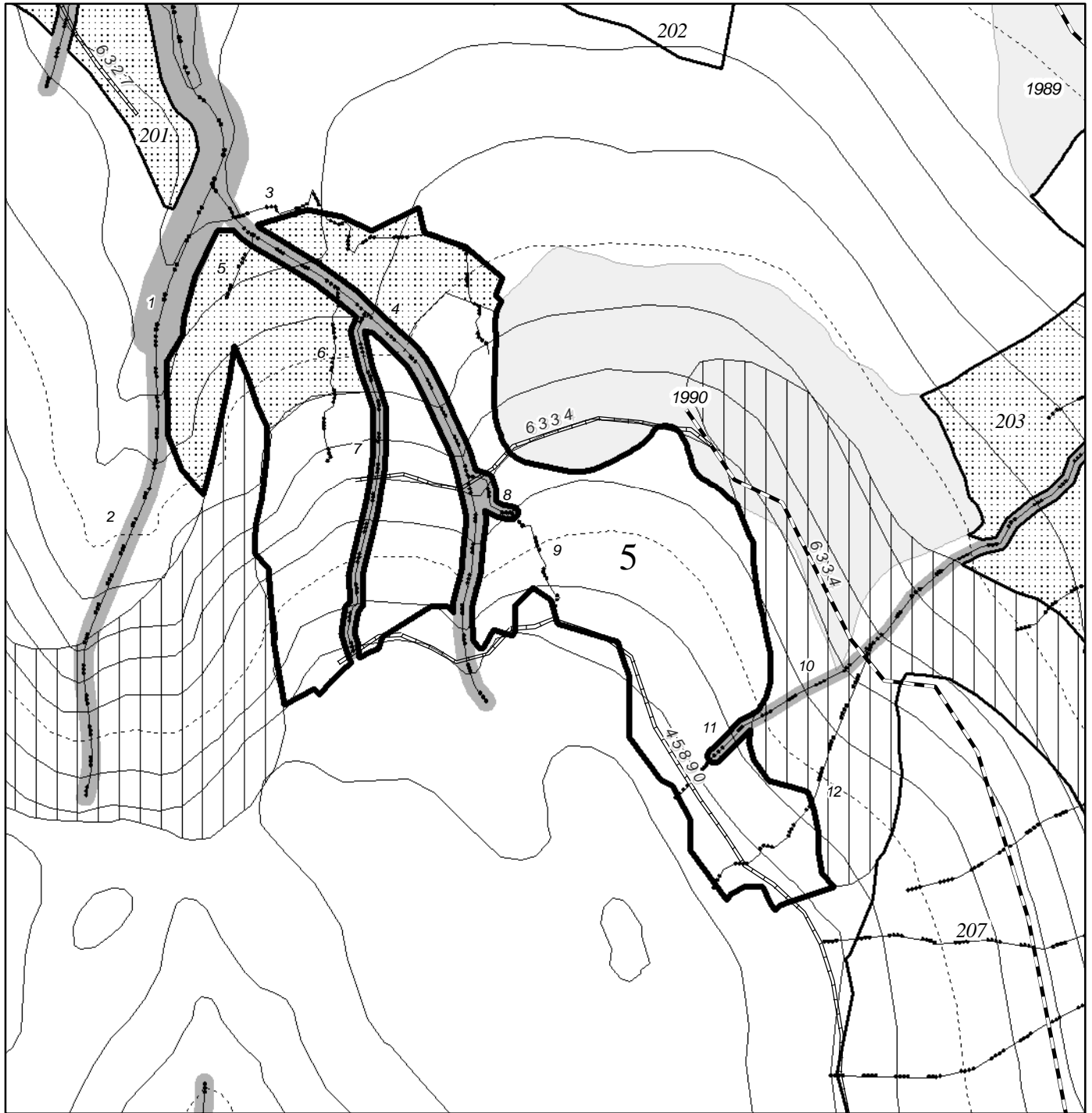
**Response:** Stream 1: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Streams 2, 4, 7, 8, and 10: "B" protection. No harvest within the v-notch, directional felling, full suspension, immediate removal of logging debris. (BMP 13.9, 13.16).  
Streams 3, 5, 6, 9, 11, and 12: "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**Resource Soils**

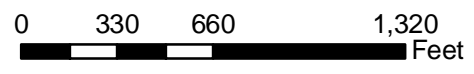
**Concern:** Northwestern portion of unit has slopes over 72 percent.  
**Response:** A soil stability investigation found the soils on slopes greater than 72% to be suitable forest land. A minimum of partial suspension is required in the NW portion of the unit. The prescription, however, offers more protection by proposing helicopter yarding in northwestern portion of unit to protect steeper slopes and retain 60 percent of the basal area to improve helicopter yarding economics (BMP 13.9).

**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Wetlands, Karst, Wildlife, Heritage, Vegetation

# Central Kupreanof Alternative 2,3 Unit 5



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



### Central Kupreanof Unit Card Narrative

**Unit # 6**

**Unit Size (acres): 22**

**Alternatives: 2, 3, 4**

**Aerial Photo:**

**VCU: 4260**

**Volume (mbf): 441**

**Land Use Designation:** Timber Production

**Existing Stand Condition:** Old-growth

**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Cable / existing NFS road

#### Resource Concerns & Responses

**Resource Watershed/Fisheries**

**Concern:** All streams within the unit are Class IV HC5.

**Response:** "C" protection. Directional felling if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from stream. (BMP 13.9, 13.16).

**Resource Soils**

**Concern:** Southwestern portion of the originally proposed unit is on MMI-4 soils.

**Response:** Unit boundary was modified to address stability concerns (BMP 13.5).

**Concern:** Southeastern portion of originally proposed unit is on poorly drained soils with slopes between 60 and 80 percent.

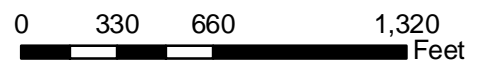
**Response:** Unit boundary was modified to address stability concerns (BMP 13.5).

**No Concerns:** Scenery, Recreation, Sensitive/Rare Plants, Karst, Wetlands, Wildlife, Vegetation, Heritage

# Central Kupreanof Alternative 2,3,4 Unit 6



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |



**Central Kupreanof Unit Card Narrative**

<b>Unit # 7</b>	<b>Unit Size (acres): 39</b>	<b>Alternatives: 2, 3, 4</b>
<b>Aerial Photo:</b>	<b>VCU: 4290</b>	<b>Volume (mbf): 682</b>
<b>Land Use Designation:</b> Timber Production		

Existing Stand Condition: Old-growth

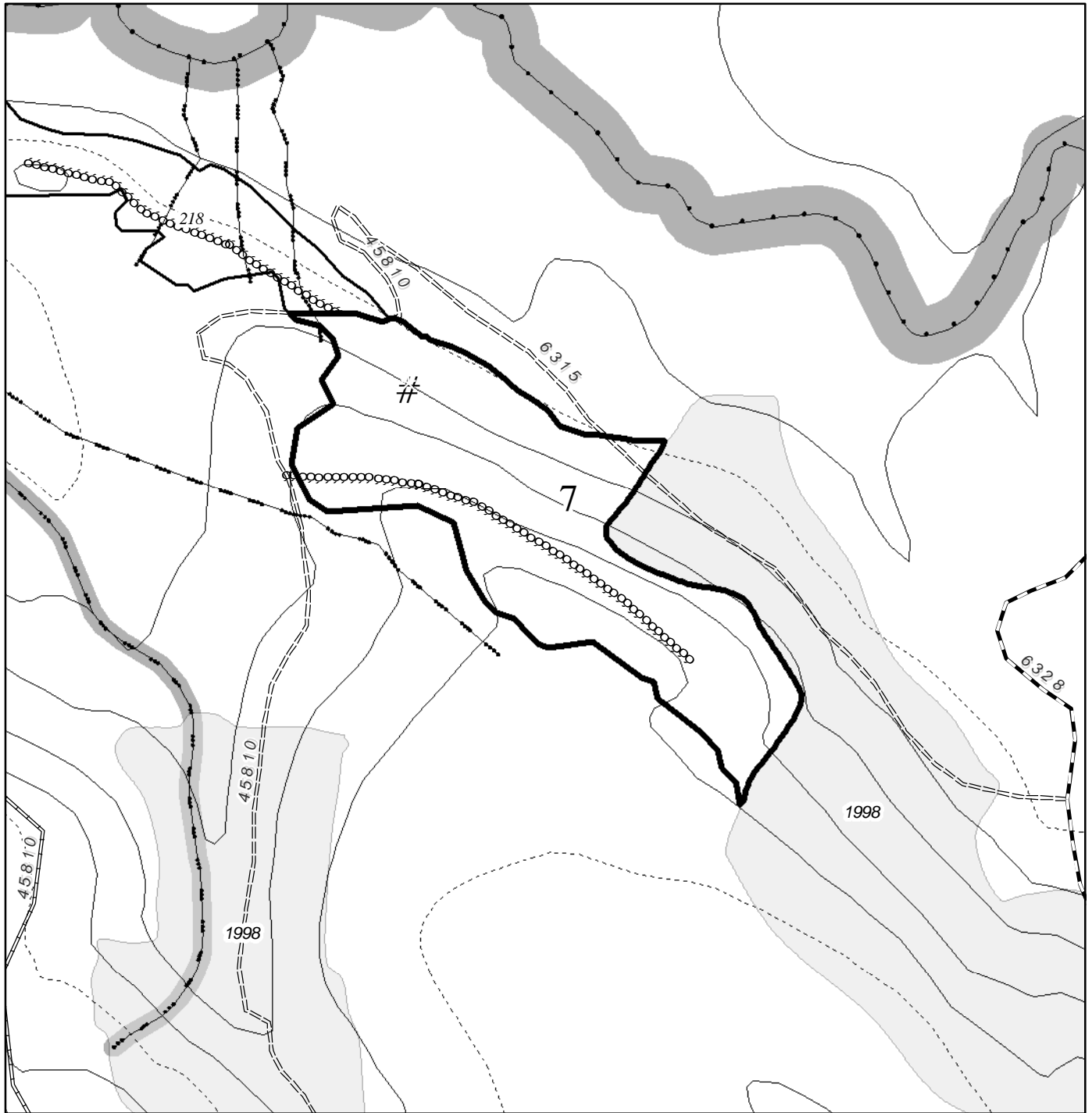
**Silvicultural Prescription:** Even-aged management, clearcut

**Logging Method/Transportation:** Shovel and cable / reconstructed NFS road and temporary road construction

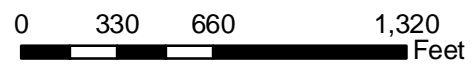
**Resource Concerns & Responses**

<b>Resource</b>	<b>Sensitive/Rare Plants</b>
Concern:	Found rare plant in unit – Broad-leaved twayblade ( <i>Listera convallarioides</i> ).
Response:	No protection measures proposed.
<b>No Concerns:</b>	Watershed, Fisheries, Scenery, Recreation, Soils, Wetlands, Karst, Wildlife, Heritage, Vegetation

# Central Kupreanof Alternative 2,3,4 Unit 7



- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Unit                  | Proposed NFS Roads      |
| Adjacent Proposed Unit         | Reconstructed Roads     |
| Helicopter Yarding             | Stream Value Class I    |
| Very High Hazard Soils (MMI-4) | Stream Value Class II   |
| Old-growth Reserve             | Stream Value Class III  |
| Managed Stands                 | Stream Value Class IV   |
| Riparian Management Area       | 100-ft Contour Interval |
| Lakes                          | 500-ft Contour Interval |
| Open NFS Roads                 | Project Area Boundary   |
| Closed Roads                   | Sensitive Plants        |
| Proposed Temporary Roads       | Rare Plants             |







# Road Cards

# Introduction to Road Management Objectives

## Purpose and Use

The road management objectives (RMOs) presented in this appendix establishes the intended purpose and display design maintenance and operation criteria (as per FSH 7709.55) for each National Forest System road in the Central Kupreanof Timber Harvest project area. The information on the RMO form is part of a permanent database that can be updated periodically as access needs, issues, and budgets change. Proposed new roads and existing roads with planned reconstruction or maintenance have a second section with site specific design criteria that will be used during design, construction, and initial monitoring of any road work proposed in this document. The road segments are described using mileposts (MP) as beginning and ending points (Beginning milepost = Bmp; Ending milepost = Emp). Lengths are given in miles (mi). Road width is given in feet. Culverts are identified as cmp. See Figure B-1 for a map of the Central Kupreanof Timber Harvest project area showing existing road locations.

## General Design Criteria

The general design criteria provide various descriptions of the type of road and the intended purpose and future use of the road. From this information, the maintenance and operation criteria can be developed. All Central Kupreanof Timber Harvest roads are constructed and maintained for silvicultural purposes, and will apply the practices described in BMP 12.5. Therefore, they meet the criteria for a silvicultural exemption from permitting under the Clean Water Act Section 404. General Design Criteria and Elements are shown on the Road Management Objectives portion of the road cards and are defined as follows:

- **Functional Class:** Local (L), Collector (C), and Arterial (A) classifications
- **Service Life:** Long (L) or Short (S), Constant (C) or Intermittent (I)

## Maintenance Criteria

The maintenance criteria include a discussion of how the road is to be maintained, centering on three strategies:

- **Active:** provide frequent cleanout of ditches and catch basins to assure controlled drainage. Control roadside brush to maintain sight distance. Grade as needed to maintain crown and running surface.
- **Storm Proof:** provide water bars, rolling dips, out sloping, etc., to assure controlled runoff until any needed maintenance can be

performed on the primary drainage system. Control roadside brush to maintain passage.

•**Storage:** remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, revegetate.

The active maintenance strategy is applied to roads that are open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities. These roads are assigned Maintenance Level 3. The active maintenance strategy will also at times be applied to roads intended only for use by high clearance vehicles, or Maintenance Level 2 roads. This will usually be the case when log haul is expected in the near future.

An intermediate maintenance strategy is to storm proof, or to stabilize the road by providing roadway features such as drivable water bars and out sloping to control runoff in case the primary drainage system of culverts and ditches is overwhelmed during a storm event. Each culvert will be evaluated as to where the water would go if the culvert were to fail to carry the high flow. A water bar or out slope at this location will minimize the potential for erosion of long stretches of ditch line or roadway. This is intended to be the primary maintenance strategy applied to roads assigned Maintenance Level 2.

Storage is intended to be the primary maintenance strategy on intermittent use roads during their closure cycle. Road storage is defined in FSH 5409.17 as “the process/action of closing a road to vehicle traffic and placing it in a condition that requires minimum maintenance to protect the environment and preserve the facility for future use.” In this strategy, the bridges and culverts on live streams may be completely removed to restore natural drainage patterns. Cross drains and ditch relief culverts will be bypassed with deep water bars but may be left in place to minimize the cost of re-using these roads in the future. Roads in storage are left in a self-maintaining state in order to use more road maintenance funds on the open drivable roads on the island. Maintenance Level 1, closure and basic custodial maintenance, is assigned.

The interdisciplinary team went through a process defining road management considerations leading to the maintenance strategy to be applied to each road in the project area. The Road Cards show the desired future condition of each road in the project area as a result of the process. The work needed to meet the objectives can be accomplished on the roads along the haul route in resultant contracts.

Work needed on other roads to meet the desired objective would be scheduled as funding allows.

**Operations  
Criteria**

The operations criteria include a presentation of each of the five traffic management strategies identified in FSM 7731 (encourage, accept, discourage, prohibit, and eliminate) to be applied to different traffic classes on each road. The traffic management narrative describes what actions will be taken in order to apply each strategy. For example, if the strategy “eliminate” is prescribed for standard passenger and high clearance vehicles, the narrative describes the method to accomplish this, such as removal of stream crossing. Traffic management strategies for the NFS roads are displayed on the Road Management Objectives (Road Cards).

**Site-specific  
Design Criteria**

The site-specific design criteria include road location objectives, wetland information, erosion control, proposed rock borrow sources, and all streams within the project area with proposed construction or rehabilitation of stream crossing structures. Site-specific design criteria for the proposed reconstruction of designated roads include the installation of stream crossing structures. Timing restrictions will be determined before implementation. In accordance with the MOU between the Forest Service and the State of Alaska, Department of Natural Resources, Title 41 consultation will be completed before any in-stream work begins.

**Table B-3 Fish stream crossings on NFS roads proposed for reconstruction<sup>1</sup>**

Road #	Mile Post	Stream Class	Channel Type
45803	.04	2	HC2
45803	.20	2	HC2
45803	.23	2	HC5
45808	2.79	2	HC3
45808	3.49	1	MM1
45808	3.74	1	MM1

<sup>1</sup> The following BMPs will be implemented for all reconstructed and temporary road: 12.17, 14.5, 14.6, 14.8, 14.9, 14.12, 14.14, 14.15, 14.17. See road cards 45803, 45808, 45897, and 45886 for Class I and II stream crossing information on newly constructed NFS road.

# Operational and Objective Maintenance Levels

Operational Maintenance Levels indicate the level of road maintenance, either Maintenance Level 2 or 3, during sale-related activities. Objective Maintenance Levels indicate the long-term maintenance plan for the roads as described in the following definitions. Maintenance Levels (MLs) discussed in the Road Management Objectives (RMOs) includes Maintenance Level 1, 2, and 3. The definitions for maintenance levels are from the Forest Service Handbook 7709.58. The purpose of the ML is to define the level of service provided by, and maintenance required for, a specific road or segment.

## **Maintenance Level 1**

Assigned to intermittent service roads during the time they are closed to vehicular traffic. The closure period must exceed 1 year. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level. Appropriate traffic management strategies are "prohibit" and "eliminate." Roads are closed by barrier, bridge removal or organic encroachment and are monitored for resource protection.

## **Maintenance Level 2**

Assigned to roads open for use by high clearance vehicles. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation, or other specialized uses. Log haul may occur at this level. Appropriate traffic management strategies are either to (1) discourage or prohibit passenger cars or (2) accept or discourage high clearance vehicles.

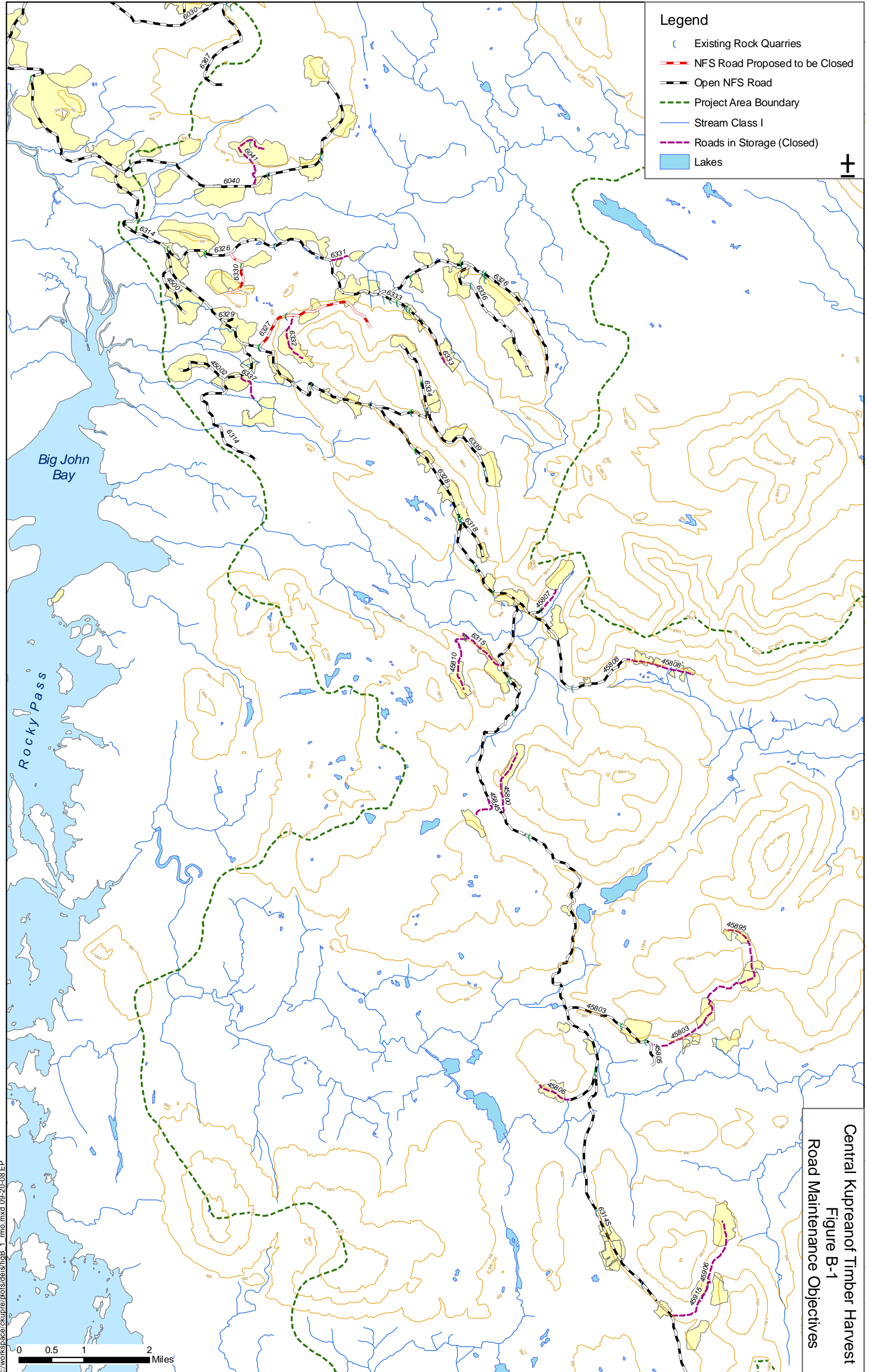
## **Maintenance Level 3**

Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car and are subject to the provisions of the Highway Safety Act. Some roads may be fully surfaced with either native or processed material. Appropriate traffic management strategies are either "encourage" or "accept." "Discourage" or "prohibit" strategies may be employed for certain classes of vehicles or Users.

## **AFRPA Status**

AFRPA Class: Alaska Forest Resources and Practices Act. Under this Act, all roads will be maintained as "Active" during harvest-related activities. After these activities are completed, the AFRPA classes on the road cards will be implemented. These classes include:

- Active** A forest road being actively used for hauling logs, pulpwood, chips, or other major forest products, or rock and other road building materials.
- Inactive** A forest road on which commercial hauling is discontinued for one or more logging seasons, and the forest landowner desires continuation of access for fire control, forest management activities, occasional or incidental use for forest products harvesting, or similar activities.
- Closed** A road is closed when the following activities have been completed: a road is outsloped or waterbarred, or is left in a condition suitable to control erosion. The ditches are also left in a condition suitable to control erosion, and bridges, culverts, and fills are removed from surface waters.



Central Kupreanof Timber Harvest  
 Figure B-1  
 Road Maintenance Objectives

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## Road Management Objective

<b>Project</b>		<b>System</b>		<b>Land Use Designation</b>	
Central Kupreanof EIS		Kake			
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>		<b>End Terminus</b>	
6000	Seal Point	MP 6.21 Road 6040		TTF	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>	
0.00	1.032	Existing	PBGD6		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	16'	20	Log Truck	Log Truck

#### Intended Purpose/Future Use

Access for to TTF.

#### Maintenance Criteria

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Objective Maintenance Level (Desired Future Condition)</b>
0.00	1.032	2	2

#### Maintenance Narrative

Road will be maintained to facilitate travel pickup truck at 20 mph. All culverts, ditches and drainage structures will be serviced, and road brushed.

#### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	N/A	

#### Travel Management Narrative

Road will remain open to high clearance vehicles.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date



## Road Management Objective

<b>Project</b>		<b>System</b>		<b>Land Use Designation</b>	
Central Kupreanof EIS		Kake			
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>		<b>End Terminus</b>	
6328	Jasper High	MP 3.96 Road 6314		Jnct 6314 & 6315	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>	
0.00	7.844	Existing	PBGD5		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	16'	30	Lowboy	Lowboy

#### Intended Purpose/Future Use

Serves as part of mainline road system.

#### Maintenance Criteria

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Objective Maintenance Level (Desired Future Condition)</b>
0.00	7.844	3	3

#### Maintenance Narrative

Road will be maintained to facilitate travel passenger car at 30 mph. All culverts, ditches and drainage structures will be serviced and road brushed.

#### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	All motorized vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	N/A	

#### Travel Management Narrative

Road will remain open to all traffic.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Road Management Objective

<b>Project</b>		<b>System</b>	<b>Land Use Designation</b>	
Central Kupreanof EIS		Kake		
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>	<b>End Terminus</b>	
6333	NICE	MP 4.16 ROAD 6326	SECTION 14	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>
0.00	1.61	Existing		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	I	Shot rock	14'	10	Log Truck	Log Truck

### Intended Purpose/Future Use

Access for silvicultural activities. Road should remain open for the first 1.434 miles.

### Maintenance Criteria

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Objective Maintenance Level (Desired Future Condition)</b>
0.00	1.61	2	1

### Maintenance Narrative

Road will be maintained to facilitate travel pickup truck at 10 mph and all culverts, ditches and drainage structures will be serviced, and road brushed on this portion.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	N/A	

### Travel Management Narrative

Maintain as maintenance level 2. Close road when funds are available. Road closure may include any combination of closure devices at the beginning of the road, pulling some or all drainage structures such as culverts, and/or gating. This road will be further evaluated for the most effective and efficient closure method prior to implementation.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

# Road Management Objective

<b>Project</b>		<b>System</b>		<b>Land Use Designation</b>	
Central Kupreanof EIS		Kake			
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>		<b>End Terminus</b>	
45800		MP 2.85 Road 6314s			
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>	
0.00	1.033	Existing			

## General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log Truck	Log Truck

### Intended Purpose/Future Use

Access for silvicultural activities. Close road until needed in the future.

### Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Future Condition)
0.00	1.033	1	1

### Maintenance Narrative

Road should be properly closed.

### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles when open section	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	Motorized vehicles	
	<b>Eliminate:</b>	Motorized vehicles	

### Travel Management Narrative

This road is currently in storage. Most drainage structures have been removed to restore natural drainage pattern. They have re-vegetated with alder 4" to 8" in diameter. This road needs reconditioning done prior to use, requiring brushing, clearing of alder and drainage structures replaced.

All reconstructed roads will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Road Management Objective

<b>Project</b>		<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS		Kake	
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>	<b>End Terminus</b>
45806		mp 8.813 road 6314S	end of Shamrock unit
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>
0.00	1.140	Existing	
<b>Photo year, roll, photos</b>			

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	I	Shot rock	14'	10	Log Truck	Log Truck

#### Intended Purpose/Future Use

Access for silvicultural activities.

#### Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Future Condition)
0.00	0.555	2	1
0.555	1.140	1	1

#### Maintenance Narrative

Road will be maintained to facilitate travel pickup truck at 10 mph for the first 0.55 mile and all culverts, ditches and drainage structures will be serviced, and road brushed on this portion.

#### Operation Criteria

<b>Highway Safety Act:</b>	NO	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles on open section	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	Motorized vehicles on closed section	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

#### Travel Management Narrative

Close road properly with other funds. Road closure may include any combination of closure devices at the beginning of the road, pulling some or all drainage structures such as culverts, and/or gating. This road will be further evaluated for the most effective and efficient closure method prior to implementation.

Approved \_\_\_\_\_

District Ranger

\_\_\_\_\_

Date

## Road Management Objective

<b>Project</b>		<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS		Kake	
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>	<b>End Terminus</b>
45808	Screwdriver	MP 6.67 Road 6328	Section 1
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>
0.00	3.883	Existing	PBGD5
			<b>Photo year, roll, photos</b>

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log Truck	Log Truck

#### Intended Purpose/Future Use

Access for silvicultural activities. Road should remain open for the first 2.788 miles.

#### Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Future Condition)
0.00	2.788	2	2
2.788	3.883	1	1

#### Maintenance Narrative

Road will be maintained to facilitate travel pickup truck at 10 mph for open part and all culverts, ditches and drainage structures will be serviced, and road brushed on this portion. Remainder of road should be properly closed.

#### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles on open section	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	Motorized vehicles on closed section	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

#### Travel Management Narrative

Part of this road is currently in storage. Most drainage structures have been removed to restore natural drainage pattern. They have re-vegetated with alder 4" to 8" in diameter. This road needs reconditioning done prior to use, requiring brushing, clearing of alder and drainage structures replaced.

All reconstructed roads will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Road Management Objective

<b>Project</b>		<b>System</b>		<b>Land Use Designation</b>	
Central Kupreanof EIS		Kake			
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>		<b>End Terminus</b>	
45915		MP 12.71 Road 6314S			
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>	
0.00	1.089	Existing			

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log Truck	Log Truck

#### Intended Purpose/Future Use

Access for silvicultural activities.

#### Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Future Condition)
0.00	1.089	1	1

#### Maintenance Narrative

Road will be maintained to facilitate travel pickup truck at 10 mph. All culverts, ditches and drainage structures will be serviced, and road brushed.

#### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	N/A	

#### Travel Management Narrative

This road is currently in storage. Most drainage structures have been removed to restore natural drainage pattern. They have re-vegetated with alder 4" to 8" in diameter. This road needs reconditioning done prior to use, requiring brushing, clearing of alder and drainage structures replaced.

All reconstructed roads will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access.. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Road Management Objective

<b>Project</b>		<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS		Kake	
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>	<b>End Terminus</b>
6030	Goose Lake	MP 8.92 Road 6040	Section 8
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>
0.00	13.288	Existing	PBGD6
			<b>Photo year, roll, photos</b>

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	16'	30	Lowboy	Lowboy

#### Intended Purpose/Future Use

Serves as part of mainline road system.

#### Maintenance Criteria

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Objective Maintenance Level (Desired Future Condition)</b>
0.00	13.288	3	3

#### Maintenance Narrative

Road will be maintained to facilitate travel passenger car at 30 mph. All culverts, ditches and drainage structures will be serviced and road brushed.

#### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	All motorized vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	N/A	

#### Travel Management Narrative

Road will remain open to all traffic.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Road Management Objective

<b>Project</b>		<b>System</b>		<b>Land Use Designation</b>	
Central Kupreanof EIS		Kake			
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>		<b>End Terminus</b>	
6314	Jasper High	MP 12.325 Road 6040		Section 20	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>	
0.00	6.767	Existing	PBGD6		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	16'	30	Lowboy	Lowboy

#### Intended Purpose/Future Use

Serves as part of mainline road system to MP 3.96.

#### Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Future Condition)
0.00	3.96	3	3
3.96	4.85	2	2
4.85	6.767	2	decommission

#### Maintenance Narrative

Road will be maintained to facilitate travel passenger car at 30 mph to MP 3.96, high clearance vehicles to 4.85, decommission to end. All culverts, ditches and drainage structures will be serviced and road brushed.

#### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	All motorized vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	N/A	

#### Travel Management Narrative

Road will remain open to all traffic for first 3.96, to high clearance vehicles to 4.85, decommission to end.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date



## Road Management Objective

<b>Project</b> Central Kupreanof EIS		<b>System</b> Kake		<b>Land Use Designation</b> 	
<b>Route No</b> 6326	<b>Route Name</b> Marble Knobs		<b>Begin Terminus</b> MP 1.93 Road 6314		<b>End Terminus</b> Section 18
<b>Begin MP</b> 0.00	<b>Length</b> 8.076	<b>Status</b> Existing	<b>Map Quarter Quad</b> 		<b>Photo year, roll, photos</b> 

### General Design Criteria and Elements

<b>Functional Class</b> Local	<b>Service Life</b> LI	<b>Surface</b> Shot rock	<b>Width</b> 14'	<b>Design Speed</b> 10	<b>Critical Vehicle</b> Log Truck	<b>Design Vehicle</b> Log Truck
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#### Intended Purpose/Future Use

Access for silvicultural activities.

#### Maintenance Criteria

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Objective Maintenance Level (Desired Future Condition)</b>
0.00	8.076	2	2

#### Maintenance Narrative

Road will be maintained to facilitate travel pickup truck at 10 mph. All culverts, ditches and drainage structures will be serviced, and road brushed.

#### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	N/A	

#### Travel Management Narrative

Road will remain open to high clearance vehicles.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Road Management Objective

<b>Project</b>			<b>System</b>		<b>Land Use Designation</b>	
Central Kupreanof EIS			Kake			
<b>Route No</b>	<b>Route Name</b>		<b>Begin Terminus</b>		<b>End Terminus</b>	
6339	Notch		MP 0.92 Road 6334		Section 25	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>		<b>Photo year, roll, photos</b>	
0.00	1.71	Existing				

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log Truck	Log Truck

#### Intended Purpose/Future Use

Access for silvicultural activities.

#### Maintenance Criteria

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Objective Maintenance Level (Desired Future Condition)</b>
0.00	1.71	2	2

#### Maintenance Narrative

Road will be maintained to facilitate travel pickup truck at 10 mph. All culverts, ditches and drainage structures will be serviced, and road brushed.

#### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	N/A	

#### Travel Management Narrative

Road will remain open to high clearance vehicles.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Road Management Objective

<b>Project</b> Central Kupreanof EIS		<b>System</b> Kake		<b>Land Use Designation</b> 	
<b>Route No</b> 45805	<b>Route Name</b> 		<b>Begin Terminus</b> MP 1.42 Road 45803		<b>End Terminus</b> 
<b>Begin MP</b> 0.00	<b>Length</b> 0.387	<b>Status</b> Existing	<b>Map Quarter Quad</b> 		<b>Photo year, roll, photos</b> 

### General Design Criteria and Elements

<b>Functional Class</b> Local	<b>Service Life</b> LI	<b>Surface</b> Shot rock	<b>Width</b> 14'	<b>Design Speed</b> 10	<b>Critical Vehicle</b> Log Truck	<b>Design Vehicle</b> Log Truck
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#### Intended Purpose/Future Use

Access for silvicultural activities.

#### Maintenance Criteria

<b>Bmp</b> 0.00	<b>Emp</b> 0.387	<b>Operational Maintenance Level (Current Condition)</b> 2	<b>Objective Maintenance Level (Desired Future Condition)</b> 1
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#### Maintenance Narrative

Road will be maintained to facilitate travel pickup truck at 10 mph. All culverts, ditches and drainage structures will be serviced, and road brushed.

#### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	N/A	

#### Travel Management Narrative

Maintain open during project activities close after project complete. Road closure may include any combination of tanktraps at the beginning of the road, pulling some or all drainage structures such as culverts, and/or gating. This road will be further evaluated for the most effective and efficient closure method prior to implementation.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Road Management Objective

<b>Project</b>		<b>System</b>		<b>Land Use Designation</b>	
Central Kupreanof EIS		Kake			
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>		<b>End Terminus</b>	
45810		MP 0.82 Road 6315			
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>	
0.00	1.190	Existing			

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log Truck	Log Truck

### Intended Purpose/Future Use

Access for silvicultural activities. Close road until needed in the future.

### Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Future Condition)
0.00	1.190	1	1

### Maintenance Narrative

Check if verify if road is properly closed.

### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles when open section	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	Motorized vehicles	
	<b>Eliminate:</b>	Motorized vehicles	

### Travel Management Narrative

This road is currently in storage. Most drainage structures have been removed to restore natural drainage pattern. They have re-vegetated with alder 4" to 8" in diameter. This road needs reconditioning done prior to use, requiring brushing, clearing of alder and drainage structures replaced.

All reconstructed roads will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access.. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Road Management Objective

<b>Project</b>		<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS		Kake	
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>	<b>End Terminus</b>
45803		MP 6.99 Road 6314S	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>
0.00	4.608	Existing	
			<b>Photo year, roll, photos</b>

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log Truck	Log Truck

### Intended Purpose/Future Use

Access for silvicultural activities. Road should remain open for the first 1.42 miles.

### Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Future Condition)
0.00	1.42	2	2
1.42	4.608	1	1

### Maintenance Narrative

Road will be maintained to facilitate travel pickup truck at 10 mph for open part and all culverts, ditches and drainage structures will be serviced, and road brushed on this portion. Remainder of road should be properly closed.

### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles on open section	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	Motorized vehicles on closed section	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

Part of this road is currently in storage. Most drainage structures have been removed to restore natural drainage pattern. They have re-vegetated with alder 4" to 8" in diameter. This road needs reconditioning done prior to use, requiring brushing, clearing of alder and drainage structures replaced.

All reconstructed roads will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access.. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Road Management Objective

<b>Project</b>		<b>System</b>		<b>Land Use Designation</b>	
Central Kupreanof EIS		Kake			
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>		<b>End Terminus</b>	
6040	Kake Road	Kake Portage Jct		Section 27	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>	
0.00	17.138	Existing	PBGD6		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	16'	30	Lowboy	Lowboy

#### Intended Purpose/Future Use

Serves as part of mainline road system to MP 12.33

#### Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Future Condition)
0.00	12.33	3	3
12.33	17.138	2	2

#### Maintenance Narrative

Road will be maintained to facilitate travel passenger car at 30 mph to MP 12.33, high clearance vehicles to end. All culverts, ditches and drainage structures will be serviced and road brushed.

#### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	All motorized vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	N/A	

#### Travel Management Narrative

Road will remain open to all traffic for first 12.33, to high clearance vehicles to end.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Road Management Objective

<b>Project</b>		<b>System</b>		<b>Land Use Designation</b>	
Central Kupreanof EIS		Kake			
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>		<b>End Terminus</b>	
6314s	Keku Strait	Jnct 6328			
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>	
0.00	14.11	Existing	PBGD6		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	16'	30	Lowboy	Lowboy

#### Intended Purpose/Future Use

Serves as part of mainline road system.

#### Maintenance Criteria

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Objective Maintenance Level (Desired Future Condition)</b>
0.00	14.11	3	3

#### Maintenance Narrative

Road will be maintained to facilitate travel passenger car at 30 mph. All culverts, ditches and drainage structures will be serviced and road brushed.

#### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	All motorized vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	N/A	

#### Travel Management Narrative

Road will remain open to all traffic.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Road Management Objective

<b>Project</b>		<b>System</b>		<b>Land Use Designation</b>	
Central Kupreanof EIS		Kake			
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>		<b>End Terminus</b>	
6327	Grebberg Mountain	MP 0.27 Road 6326		Section 9	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>	
0.00	1.12	Existing			

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log Truck	Log Truck

#### Intended Purpose/Future Use

Access for silvicultural activities. Close road until needed in the future.

#### Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Future Condition)
0.00	1.121	2	1

#### Maintenance Narrative

Road will be maintained to facilitate travel pickup truck at 10 mph. All culverts, ditches and drainage structures will be serviced, and road brushed.

#### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	N/A	

#### Travel Management Narrative

This road will be closed and placed in storage within 10 years of timber sale activities. This closure will remove all culverts on live streams, helping restore natural drainage patterns. Cross drains and ditch relief culverts would be bypassed with deep water bars to minimize the cost of re-using these roads in the future. This road would remain in a self-maintaining state. Intermittent service road during the time of closed to vehicular traffic. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level. Maybe open and suitable for non-motorized uses.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date



## Road Management Objective

<b>Project</b>		<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS		Kake	
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>	<b>End Terminus</b>
6330	Marble Knobs South	MP 1.22 Road 6326	Section 8
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>
0.00	0.88	Existing	PBGD5
			<b>Photo year, roll, photos</b>

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log Truck	Log Truck

#### Intended Purpose/Future Use

Access for silvicultural activities. Close road until needed in the future.

#### Maintenance Criteria

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Objective Maintenance Level (Desired Future Condition)</b>
0.00	0.880	2	1

#### Maintenance Narrative

Road will be maintained to facilitate travel pickup truck at 10 mph. All culverts, ditches and drainage structures will be serviced, and road brushed.

#### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles when open section	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	Motorized vehicles	
	<b>Eliminate:</b>	Motorized vehicles	

#### Travel Management Narrative

This road will be closed and placed in storage within 10 years of timber sale activities. This closure will remove all culverts on live streams, helping restore natural drainage patterns. Cross drains and ditch relief culverts would be bypassed with deep water bars to minimize the cost of re-using these roads in the future. This road would remain in a self-maintaining state.

Intermittent service road during the time of closed to vehicular traffic. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level. Maybe open and suitable for non-motorized uses.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Road Management Objective

<b>Project</b>		<b>System</b>		<b>Land Use Designation</b>	
Central Kupreanof EIS		Kake			
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>		<b>End Terminus</b>	
6334	Grebberg Ridge	MP 2.92 Road 6328		Section 14	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>	
0.00	2.142	Existing	PBGD5		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log Truck	Log Truck

#### Intended Purpose/Future Use

Access for silvicultural activities.

#### Maintenance Criteria

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Objective Maintenance Level (Desired Future Condition)</b>
0.00	2.142	2	2

#### Maintenance Narrative

Road will be maintained to facilitate travel pickup truck at 10 mph. All culverts, ditches and drainage structures will be serviced, and road brushed.

#### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	N/A	

#### Travel Management Narrative

Road will remain open to high clearance vehicles.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Road Management Objective

<b>Project</b>		<b>System</b>		<b>Land Use Designation</b>	
Central Kupreanof EIS		Kake			
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>		<b>End Terminus</b>	
6336	Crash Ridge	MP 5.76 Road 6326		Section 13	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>	
0.00	2.196	Existing	PBGD5		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log Truck	Log Truck

#### Intended Purpose/Future Use

Access for silvicultural activities.

#### Maintenance Criteria

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Objective Maintenance Level (Desired Future Condition)</b>
0.00	2.196	2	2

#### Maintenance Narrative

Road will be maintained to facilitate travel pickup truck at 10 mph. All culverts, ditches and drainage structures will be serviced, and road brushed.

#### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	N/A	

#### Travel Management Narrative

Road will remain open to high clearance vehicles.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Road Management Objective

<b>Project</b>			<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS			Kake	
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>		<b>End Terminus</b>
45807		MP 0.15 Road 45808		
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>
0.00	0.594	Existing		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log Truck	Log Truck

#### Intended Purpose/Future Use

Access for silvicultural activities. Close road until needed in the future.

#### Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Future Condition)
0.00	0.2	2	1
0.21	0.594	1	1

#### Maintenance Narrative

Verify that road is properly closed.

#### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles when open section	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	Motorized vehicles	
	<b>Eliminate:</b>	Motorized vehicles	

#### Travel Management Narrative

Part of this road is currently in storage. Most drainage structures have been removed to restore natural drainage pattern. They have re-vegetated with alder 4" to 8" in diameter. This road needs reconditioning done prior to use, requiring brushing, clearing of alder and drainage structures replaced.

All reconstructed roads will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access.. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

# Road Management Objective

<b>Project</b>		<b>System</b>		<b>Land Use Designation</b>	
Central Kupreanof EIS		Kake			
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>		<b>End Terminus</b>	
6315		MP 7.44 Road 6328			
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>	
0.00	0.849	Existing			

## General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log Truck	Log Truck

### Intended Purpose/Future Use

Access for silvicultural activities. Close road until needed in the future.

### Maintenance Criteria

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Objective Maintenance Level (Desired Future Condition)</b>
0.00	0.849	1	1

### Maintenance Narrative

Verify that road is properly closed.

### Operation Criteria

<b>Highway Safety Act:</b>	Yes	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles when open section	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	Motorized vehicles	
	<b>Eliminate:</b>	Motorized vehicles	

### Travel Management Narrative

This road is currently in storage. Most drainage structures have been removed to restore natural drainage pattern. They have re-vegetated with alder 4" to 8" in diameter. This road needs reconditioning done prior to use, requiring brushing, clearing of alder and drainage structures replaced.

All reconstructed roads will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access.. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Road Management Objective

<b>Project</b>		<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS		Kake	
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>	<b>End Terminus</b>
45810		45810 MP 1.19	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>
1.19	1.49	Planned	
		<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

### Maintenance Criteria

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Objective Maintenance Level (Desired Future Condition)</b>
1.19	2.68	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Site Specific Design Criteria

### *Road 45810*

**ROAD LOCATION:** The road steadily gains elevation between the beginning point at the existing Road 45810. The first 14+00 feet is a steady climb @ 10% to 15% through timber with 20% sideslopes. From 1400 feet to 3500 feet is steady climb @ 10% to 15% with timber sideslopes of 40 to 60%. At 35+00 feet enter edge of muskeg to 4300 feet. At 4300 feet climb @ 15% along steepside slope of 80 to 110% to gain bench at top. At 5500 feet cross stream needing 60" diameter pipe. Road ends at steep cliffs at 74+00 feet.

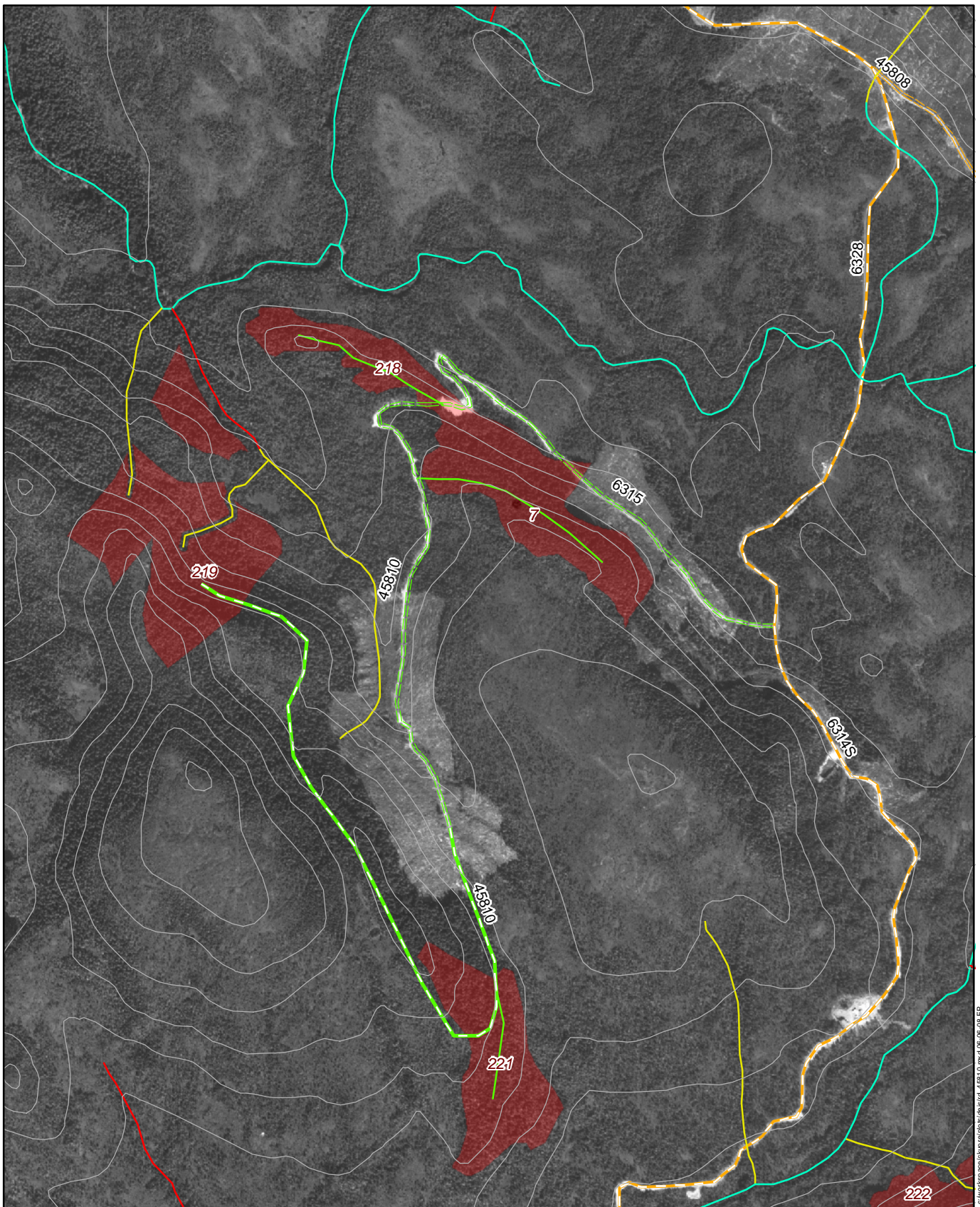
**WETLANDS:** The proposed road crosses about 454 feet of wetland in Alternative 3. The wetland type is muskeg/forested mosaic. Minimize the road footprint through the wetlands and provide adequate hillslope drainage (33 CFR BMPs 1, 3). Wetlands were unavoidable on some portions of the location due to safety, engineering design constraints and consideration for other resources. Alternatives to the location on wetlands would mean longer higher cost roads that may have impacted similar areas of wetlands (BMP 14.2). Overlay construction is recommended to minimize disturbance to the wetland and ensure hydraulic connectivity of the roaded wetland with the surrounding areas (BMPs 12.5 and 14.17). This road meets silviculture exemption for 404 permitting through Army Corps of Engineers.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit @ station 4+00. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:** There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.



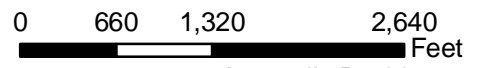


**Legend**

- Proposed Unit
- Contours 100 ft.
- Road Suitable for Passenger Vehicles (ML3)
- High Clearance Vehicle Road (ML2)
- Basic Custodial Care (Closed Road) (ML1)
- New NFS Designated Road Construction (ML2)
- Reconstructed Road
- New Temporary Road Construction
- Stream Class I
- Stream Class II
- Stream Class III

Central Kupreanof Timber Harvest DEIS

**Road 45810**



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## Road Management Objective

<b>Project</b>		<b>System</b>		<b>Land Use Designation</b>	
Central Kupreanof EIS		Kake			
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>		<b>End Terminus</b>	
6327		6327 MP 1.12			
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>	
1.12	1.07	Planned			

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Maintenance Criteria Objective Maintenance Level (Desired Future Condition)</b>
1.12	2.19	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Site Specific Design Criteria

### *Road 6327*

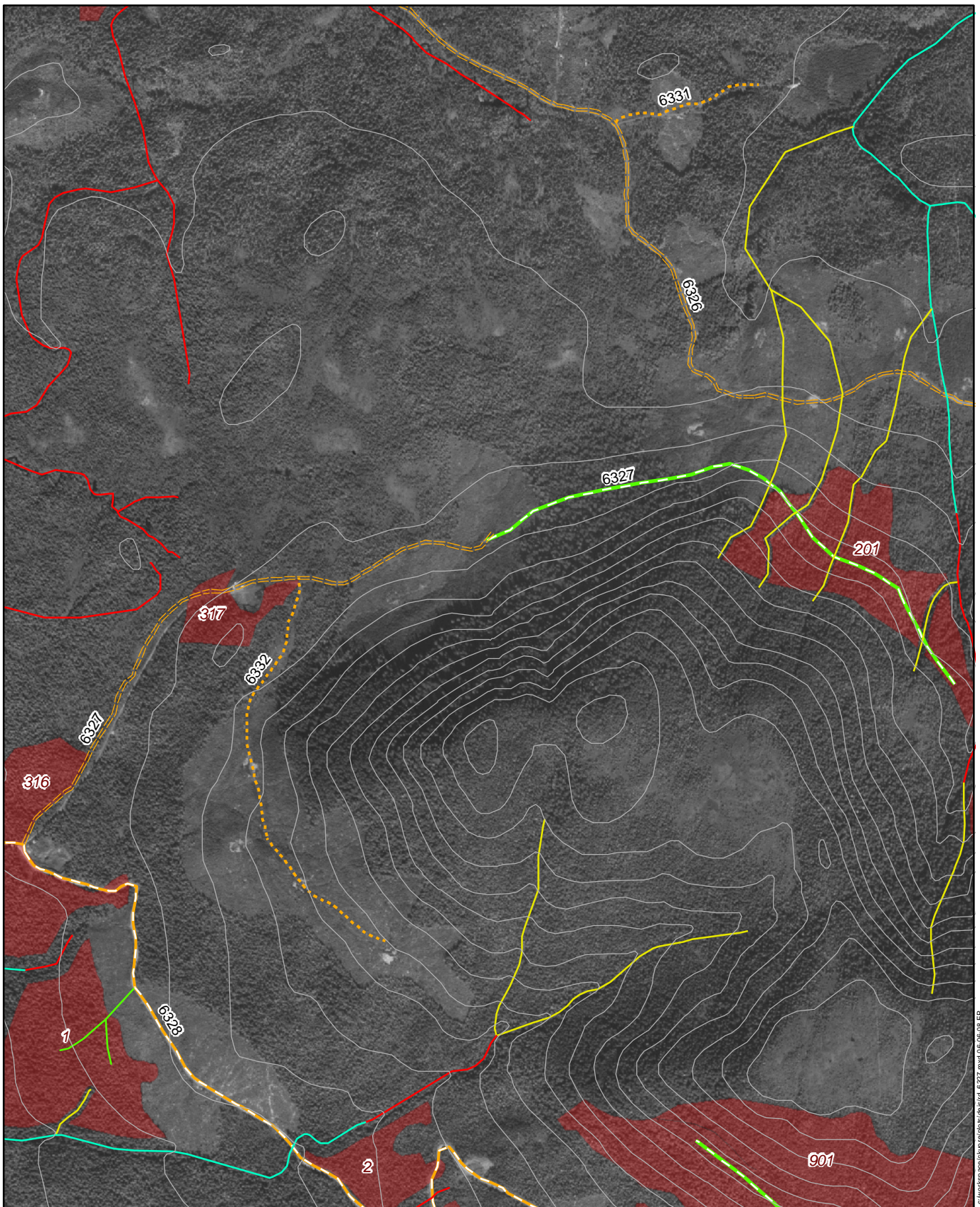
**ROAD LOCATION:** The road begins and traverses a new thinning unit for the first 11+00 feet. The road location rise at about 5% with sideslopes of 10%. From 11+00 feet to 21+00 feet the area is timbered with sideslopes of 10 – 15 %. At 26+00 feet the location enters a 20 year old clearcut with 20 – 30% sideslopes. A 30 foot deep V- notch is crossed at 36+50 feet a 60 foot bridge may be required. The old clearcut ends at 4050 feet. A 30 foot deep V- notch is crossed at 42+00 feet a 60 foot bridge may be required. The road continues through timber with 5% rise and 10 – 20% sideslopes to the end.

**WETLANDS:** The proposed road does not cross any wetland.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit @ station 23+00 and 34+00. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:** There are two stream crossings over V-notches at 36+50 and 42+00 that may require 60 foot log stringer bridges. These may require site-specific design consideration for volume of flow, fish habitat, or other design complexity.

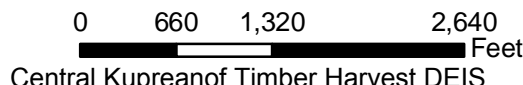


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**Legend**

- Proposed Unit
- Road Suitable for Passenger Vehicles (ML3)
- - - High Clearance Vehicle Road (ML2)
- · · Basic Custodial Care (Closed Road) (ML1)
- New NFS Designated Road Construction (ML2)
- - - Reconstructed Road
- New Temporary Road Construction
- Contours 100 ft.
- Stream Class I
- Stream Class II
- Stream Class III

**Road 6327**



## Road Management Objective

<b>Project</b>		<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS		Kake	
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>	<b>End Terminus</b>
45885		6326 MP 7.04	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>
0.00	0.06	Planned	
		<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Maintenance Criteria Objective Maintenance Level (Desired Future Condition)</b>
0.00	0.06	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber sale activities and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Site Specific Design Criteria

### *Road 45885*

**ROAD LOCATION:** The road is located on fairly flat ground which slopes down hill at approximately 5% grade through timber.

**WETLANDS:** The proposed road does not cross wetland.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located on 6326 at MP 5.63. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

#### **STREAM CROSSINGS:**

There are no major stream crossings on the section of road.





## Road Management Objective

<b>Project</b>			<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS			Kake	
<b>Route No</b>	<b>Route Name</b>		<b>Begin Terminus</b>	<b>End Terminus</b>
45891			6328 MP 2.70	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>
0.00	0.60	Planned		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Maintenance Criteria Objective Maintenance Level (Desired Future Condition)</b>
0.00	0.60	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_

District Ranger

\_\_\_\_\_

Date

## Site Specific Design Criteria

### *Road 45891*

**ROAD LOCATION:** The road steadily gains elevation between the beginning point at the existing Road 6328. The first 23+00 feet is a steady climb @ 15% through timber with 50% sideslopes. A 20 foot deep V- notch is crossed at 10+50 feet a 36 inch pipe may be required. At 12+00 a stream is crossed, a 36 inch pipe may be required. At 20+80 feet a stream is crossed, a 36 inch pipe may be required. From 21+00 to end the road continues to climb @ 15% through timber with 70% sideslopes.

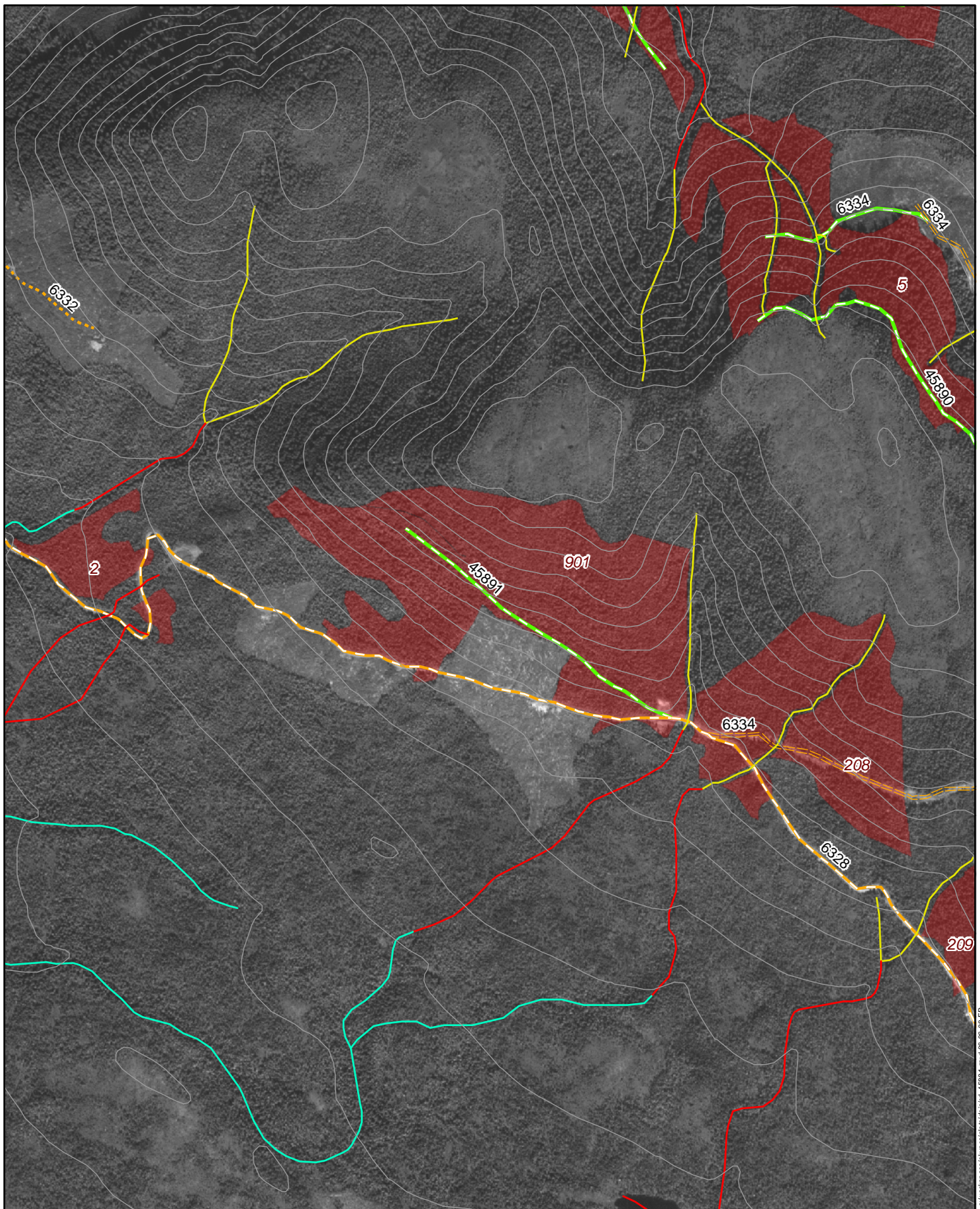
**WETLANDS:** The proposed road does not cross any wetland.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at beginning of road at intersection of 6328. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6).

**STREAM CROSSINGS:** There are three stream crossings at stations 10+50, 12+00, and 20+80 that may require site-specific design consideration for volume of flow, fish habitat, or other design complexity.



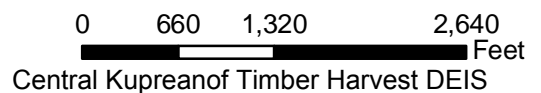


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**Legend**

- |  |  |
|--|--|
| <span style="color: red;">■</span> Proposed Unit                                 | <span style="color: green;">—</span> New Temporary Road Construction |
| <span style="color: orange;">—</span> Road Suitable for Passenger Vehicles (ML3) | <span style="color: gray;">—</span> Contours 100 ft.                 |
| <span style="color: yellow;">—</span> High Clearance Vehicle Road (ML2)          | <span style="color: cyan;">—</span> Stream Class I                   |
| <span style="color: brown;">—</span> Basic Custodial Care (Closed Road) (ML1)    | <span style="color: red;">—</span> Stream Class II                   |
| <span style="color: green;">—</span> New NFS Designated Road Construction (ML2)  | <span style="color: yellow;">—</span> Stream Class III               |
| <span style="color: green;">—</span> Reconstructed Road                          |  |

**Road 45891**



## Road Management Objective

<b>Project</b>			<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS			Kake	
<b>Route No</b>	<b>Route Name</b>		<b>Begin Terminus</b>	<b>End Terminus</b>
6339			6339 MP 1.71	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>
1.71	0.70	Planned		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

### Maintenance Criteria

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Objective Maintenance Level (Desired Future Condition)</b>
1.71	2.41	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Site Specific Design Criteria

### *Road 6339*

**ROAD LOCATION:** The road steadily gains elevation between the beginning point at the existing Road 6328. The first 13+00 feet is a steady climb @ 10 - 15% through timber with 30 to 50% sideslopes. The remainder of the road location is rolling along the contour with no appreciable gain in elevation with 30 to 50% sideslopes, also going through timber.

**WETLANDS:** The proposed road does not cross any wetland.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at beginning of road at start of this new section of 6339. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:** There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.



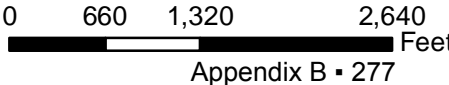


**Legend**

- Proposed Unit
- Road Suitable for Passenger Vehicles (ML3)
- High Clearance Vehicle Road (ML2)
- Basic Custodial Care (Closed Road) (ML1)
- New NFS Designated Road Construction (ML2)
- Reconstructed Road
- New Temporary Road Construction
- Contours 100 ft.
- Stream Class I
- Stream Class II
- Stream Class III

Central Kupreanof Timber Harvest DEIS

**Road 6339**



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## Road Management Objective

<b>Project</b>			<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS			Kake	
<b>Route No</b>	<b>Route Name</b>		<b>Begin Terminus</b>	<b>End Terminus</b>
6326			6339 MP 8.08	8.46
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>
8.08	0.50	Planned		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Maintenance Criteria Objective Maintenance Level (Desired Future Condition)</b>
8.08	8.58	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Site Specific Design Criteria

### *Road 6326*

**ROAD LOCATION:** The road location is rolling along the contour with no appreciable gain in elevation with 30 to 50% sideslopes, also going through timber.

**WETLANDS:** The proposed road does not cross any wetland.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at 5.60 of existing road 6326. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:** There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.





## Road Management Objective

<b>Project</b>			<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS			Kake	
<b>Route No</b>	<b>Route Name</b>		<b>Begin Terminus</b>	<b>End Terminus</b>
45890			Intersection 6334 & 6339	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>
0.00	1.25	Planned		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Maintenance Criteria Objective Maintenance Level (Desired Future Condition)</b>
0.00	1.25	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_ Date



## Site Specific Design Criteria

### *Road 45890*

**ROAD LOCATION:** The road steadily gains elevation between the beginning point at the existing Road 6334. The first 20+00 feet is a steady climb @ 10 - 15% through timber with 30 to 50% sideslopes. The remainder of the road location is rolling along the contour with no appreciable gain in elevation with 30 to 50% sideslopes, also going through timber.

**WETLANDS:** The proposed road crosses about 674 feet of wetland in Alternatives 2 and 3. The wetland type is muskeg. Minimize the road footprint through the wetlands and provide adequate hillslope drainage (33 CFR BMPs 1, 3). Wetlands were unavoidable on some portions of the location due to safety, engineering design constraints and consideration for other resources. Alternatives to the location on wetlands would mean longer higher cost roads that may have impacted similar areas of wetlands (BMP 14.2). Overlay construction is recommended to minimize disturbance to the wetland and ensure hydraulic connectivity of the roaded wetland with the surrounding areas (BMPs 12.5 and 14.17). This road meets silviculture exemption for 404 permitting through Army Corps of Engineers.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at 0.4 miles south of road at intersection of 6334. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:** There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.



## Road Management Objective

<b>Project</b>			<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS			Kake	
<b>Route No</b>	<b>Route Name</b>		<b>Begin Terminus</b>	<b>End Terminus</b>
45888			6040 MP 13.60	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>
0.00	0.40	Planned		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

Bmp	Emp	Operational Maintenance Level (Current Condition)	Maintenance Criteria Objective Maintenance Level (Desired Future Condition)
0.00	0.40	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Site Specific Design Criteria

### *Road 45888*

**ROAD LOCATION:** The road located on flat timbered area between the beginning point at the existing Road 6040. The first 13+00 feet is flat and no sideslope through timber. The remainder of the road location is rolling along the contour with no appreciable gain in elevation with 20 to 30% sideslopes, also going through timber.

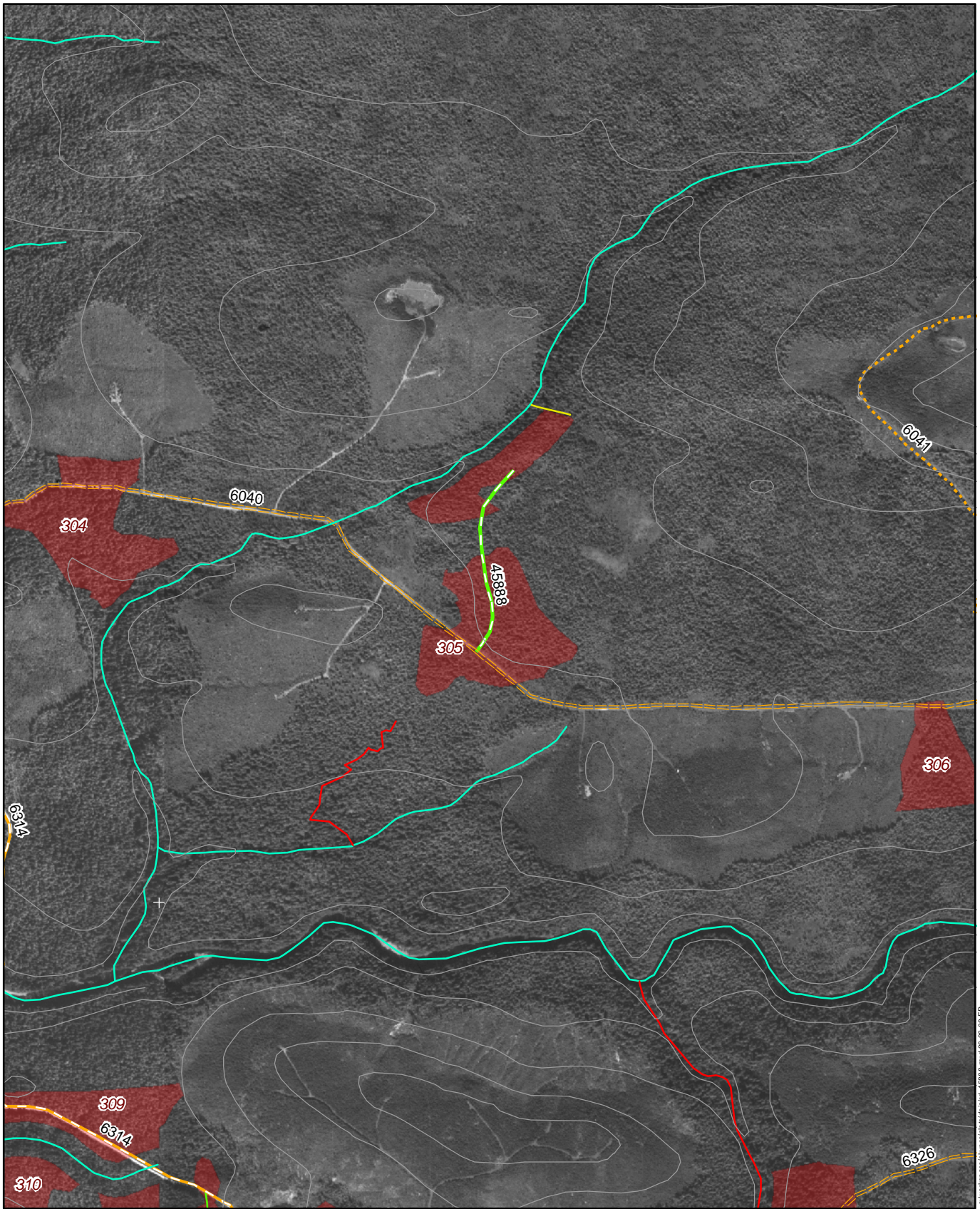
**WETLANDS:** The proposed road crosses about 137 feet of forested wetland in Alternatives 2 and 3. Minimize the road footprint through the wetlands and provide adequate hillslope drainage (33 CFR BMPs 1, 3). Wetlands were unavoidable on some portions of the location due to safety, engineering design constraints and consideration for other resources. Alternatives to the location on wetlands would mean longer higher cost roads that may have impacted similar areas of wetlands (BMP 14.2). Overlay construction is recommended to minimize disturbance to the wetland and ensure hydraulic connectivity of the roaded wetland with the surrounding areas (BMPs 12.5 and 14.17). This road meets silviculture exemption for 404 permitting through Army Corps of Engineers.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at west of road intersection 6040 @ MP 12.40 road 6040. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:** There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.



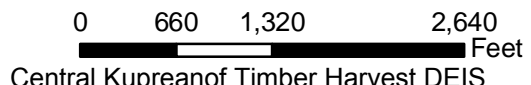


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**Legend**

- Proposed Unit
- Road Suitable for Passenger Vehicles (ML3)
- High Clearance Vehicle Road (ML2)
- Basic Custodial Care (Closed Road) (ML1)
- New NFS Designated Road Construction (ML2)
- Reconstructed Road
- New Temporary Road Construction
- Contours 100 ft.
- Stream Class I
- Stream Class II
- Stream Class III

**Road 45888**



## Road Management Objective

<b>Project</b>			<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS			Kake	
<b>Route No</b>	<b>Route Name</b>		<b>Begin Terminus</b>	<b>End Terminus</b>
6334			6334 MP 2.14	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>
2.14	0.35	Planned		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

Bmp	Emp	Operational Maintenance Level (Current Condition)	Maintenance Criteria Objective Maintenance Level (Desired Future Condition)
2.14	2.49	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Site Specific Design Criteria

### *Road 6334*

**ROAD LOCATION:** The road location is rolling along the contour with no appreciable gain in elevation with 40 to 60% sideslopes, skirting along old clearcut.

**WETLANDS:** The proposed road does not cross wetlands.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at MP 1.40 of road 6334. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:** There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.







## Road Management Objective

<b>Project</b>			<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS			Kake	
<b>Route No</b>	<b>Route Name</b>		<b>Begin Terminus</b>	<b>End Terminus</b>
45889			MP 4.15 Road 6326	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>
0.00	0.63	Planned		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

Bmp	Emp	Operational Maintenance Level (Current Condition)	Maintenance Criteria Objective Maintenance Level (Desired Future Condition)
0.00	0.63	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Site Specific Design Criteria

### *Road 45889*

**ROAD LOCATION:** The road steadily gains elevation between the beginning point at the existing Road 6326. The first 20+00 feet is a steady climb @ 15% through timber with 40 to 50% sideslopes. The remainder of the road location is rolling along the contour with no appreciable gain in elevation with 40 to 50% sideslopes, also going through timber.

**WETLANDS:** The proposed road crosses about 779 acres of wetland in Alternatives 2 and 3. The wetland is both muskeg/forested mosaic wetland and forested wetland. Minimize the road footprint through the wetlands and provide adequate hillslope drainage (33 CFR BMPs 1, 3). Wetlands were unavoidable on some portions of the location due to safety, engineering design constraints and consideration for other resources. Alternatives to the location on wetlands would mean longer higher cost roads that may have impacted similar areas of wetlands (BMP 14.2). Overlay construction is recommended to minimize disturbance to the wetland and ensure hydraulic connectivity of the roaded wetland with the surrounding areas (BMPs 12.5 and 14.17). This road meets silviculture exemption for 404 permitting through Army Corps of Engineers.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located about 0.3 mile up road 6333. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:** There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.



## Road Management Objective

<b>Project</b>		<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS		Kake	
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>	<b>End Terminus</b>
6040		6040 MP 17.14	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>
17.14	0.35	Planned	
		<b>Photo year, roll, photos</b>	

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

### Maintenance Criteria

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Objective Maintenance Level (Desired Future Condition)</b>
17.14	17.49	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Site Specific Design Criteria

### *Road 6040*

**ROAD LOCATION:** The road location is rolling along the contour with no appreciable gain in elevation with 40 to 60% sideslopes, area is timbered

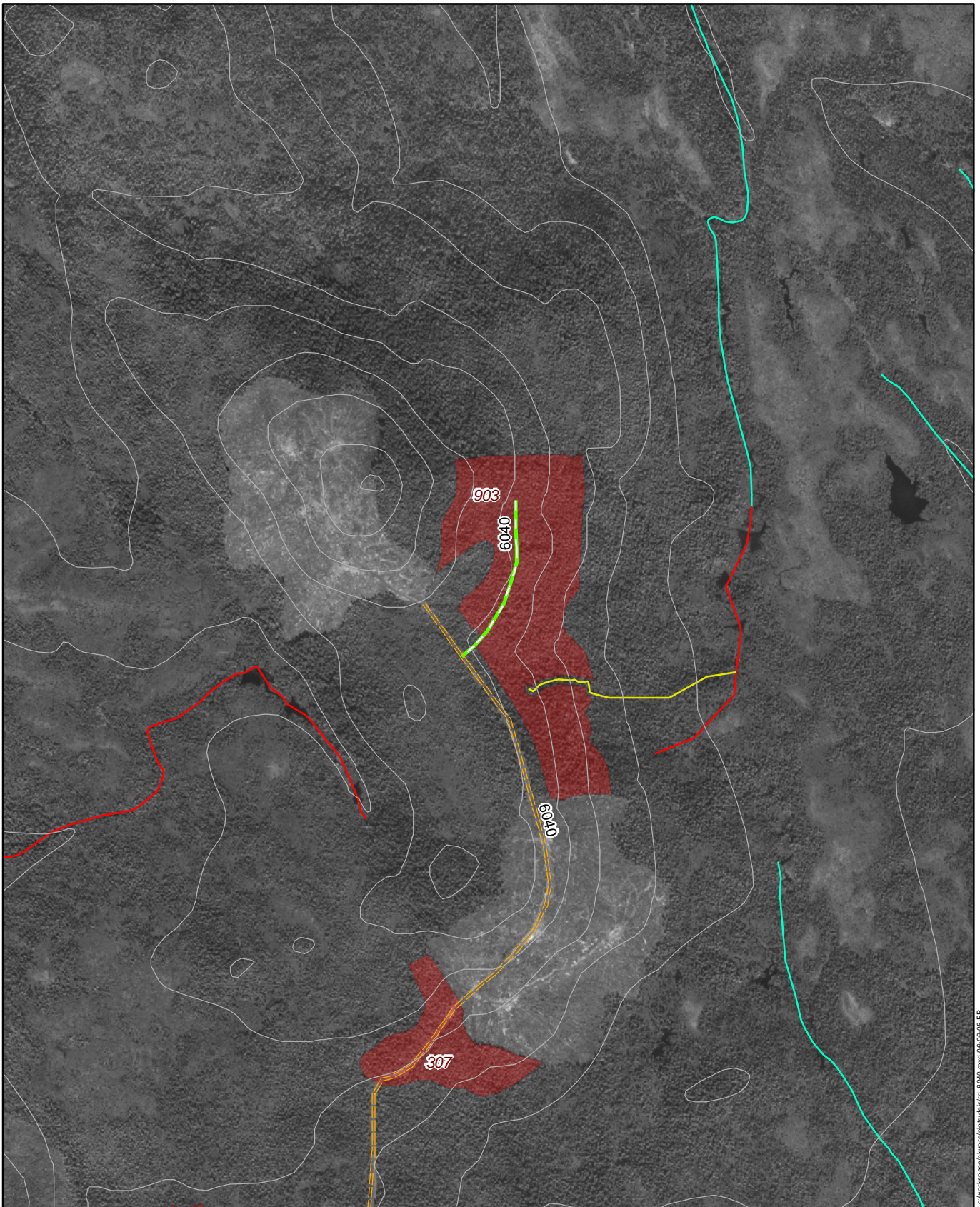
**WETLANDS:** The proposed road crosses about 23 feet of wetland in Alternatives 2 and 3. The wetland type is muskeg/forested mosaic. Minimize the road footprint through the wetlands and provide adequate hillslope drainage (33 CFR BMPs 1, 3). Wetlands were unavoidable on some portions of the location due to safety, engineering design constraints and consideration for other resources. Alternatives to the location on wetlands would mean longer higher cost roads that may have impacted similar areas of wetlands (BMP 14.2). Overlay construction is recommended to minimize disturbance to the wetland and ensure hydraulic connectivity of the roaded wetland with the surrounding areas (BMPs 12.5 and 14.17). This road meets silviculture exemption for 404 permitting through Army Corps of Engineers.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at MP 15.80 of road 6040. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:** There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.



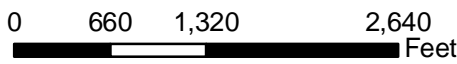


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**Legend**

- Proposed Unit
- Road Suitable for Passenger Vehicles (ML3)
- High Clearance Vehicle Road (ML2)
- Basic Custodial Care (Closed Road) (ML1)
- New NFS Designated Road Construction (ML2)
- Reconstructed Road
- New Temporary Road Construction
- Contours 100 ft.
- Stream Class I
- Stream Class II
- Stream Class III

**Road 6040**



## Road Management Objective

<b>Project</b>		<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS		Kake	
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>	<b>End Terminus</b>
45800		45800 MP 1.033	2.093
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>
1.033	1.06	Planned	

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

### Maintenance Criteria

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Objective Maintenance Level (Desired Future Condition)</b>
1.033	2.093	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Site Specific Design Criteria

### *Road 45800*

**ROAD LOCATION:** The road location from beginning to 0+400 is in a 8 year old clearcut with 20% sideslope. Location enters timber with 20 - 50% sideslope and is rolling along the contour with no appreciable gain in elevation. Enter muskeg @ 25+00, need 48" culvert @ 28+00, @ 35+00 12' deep "V" notch, need 48" culvert, @ 38+00 10' deep "V" notch, need 48" culvert. Area is timbered rolling along the contour with no appreciable gain in elevation. @ 43+00 15' deep "V" notch, 48" culvert, @ 48+00 6' "V" notch, 36" culvert, 50% sideslope, timbered. Road end this 60% sideslope and timbered area.

**WETLANDS:** The proposed road crosses about 370 feet of wetland in Alternative 3. The wetland type is moss muskeg. Minimize the road footprint through the wetlands and provide adequate hillslope drainage (33 CFR BMPs 1, 3). Wetlands were unavoidable on some portions of the location due to safety, engineering design constraints and consideration for other resources. Alternatives to the location on wetlands would mean longer higher cost roads that may have impacted similar areas of wetlands (BMP 14.2). Overlay construction is recommended to minimize disturbance to the wetland and ensure hydraulic connectivity of the roaded wetland with the surrounding areas (BMPs 12.5 and 14.17). This road meets silviculture exemption for 404 permitting through Army Corps of Engineers.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at 40+00. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:** There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.





## Road Management Objective

<b>Project</b>		<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS		Kake	
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>	<b>End Terminus</b>
45803		45803 MP 4.608	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>
4.608	3.74	Planned	
		<b>Photo year, roll, photos</b>	

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

#### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Maintenance Criteria Objective Maintenance Level (Desired Future Condition)</b>
4.608	8.348	2	1

#### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

#### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

#### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Site Specific Design Criteria

### *Road 45803*

**ROAD LOCATION:** The road location is rolling along the contour with no appreciable gain in elevation with 20 to 50% sideslopes, area is timbered.

**WETLANDS:** The proposed road crosses about 328 feet of wetland in Alternative 3. The wetland is both muskeg/forested mosaic wetland and forested wetland. Minimize the road footprint through the wetlands and provide adequate hillslope drainage (33 CFR BMPs 1, 3). Wetlands were unavoidable on some portions of the location due to safety, engineering design constraints and consideration for other resources. Alternatives to the location on wetlands would mean longer higher cost roads that may have impacted similar areas of wetlands (BMP 14.2). Overlay construction is recommended to minimize disturbance to the wetland and ensure hydraulic connectivity of the roaded wetland with the surrounding areas (BMPs 12.5 and 14.17). This road meets silviculture exemption for 404 permitting through Army Corps of Engineers.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at MP 4.02 of road 45803. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

#### STREAM CROSSINGS:

**1) Mile: AHMU: II Channel Type: MM2 BF Width: >33ft Incision: <13ft Substrate: Gravel Gradient: 2-6% Structure: log stringer Narrative: Maintain fish migration and avoid diverting surface drainage channels. No timing restriction necessary. (BMPs 14.6, 14.14, 14.17)**





## Road Management Objective

<b>Project</b>			<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS			Kake	
<b>Route No</b>	<b>Route Name</b>		<b>Begin Terminus</b>	<b>End Terminus</b>
45805			45805 MP 0.387	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>
0.387	0.50	Planned		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

Bmp	Emp	Operational Maintenance Level (Current Condition)	Maintenance Criteria Objective Maintenance Level (Desired Future Condition)
0.387	0.887	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_

District Ranger

\_\_\_\_\_

Date

## Site Specific Design Criteria

### *Road 45805*

**ROAD LOCATION:** The road location is rolling along the contour with no appreciable gain in elevation with 20 to 50% sideslopes, area is timbered

**WETLANDS:** The proposed road does not cross wetlands.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at MP 0.05 of road 45805. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:** There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.





## Road Management Objective

<b>Project</b>			<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS			Kake	
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>		<b>End Terminus</b>
45808	Screwdriver	45808 MP 3.883		
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>
3.883	0.29	Planned		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Maintenance Criteria Objective Maintenance Level (Desired Future Condition)</b>
3.883	4.173	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_ Date



## Site Specific Design Criteria

### *Road 45808*

**ROAD LOCATION:** The road location is rolling along the contour with no appreciable gain in elevation with 20% sideslopes, area is timbered. Need a 108" culvert @ 2+00.

**WETLANDS:** The proposed road does not cross wetlands.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at MP 3.05 of road 45808. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:**

**1) Mile: AHMU: II Channel Type: HC2 BF Width: 7ft Incision: 6ft Substrate: cobble Gradient: 6-15% Structure: 84in culvert**

**Narrative:** The crossing will be designed for fish passage and to minimize soil runoff to the channel, retain natural drainage pattern, and minimize changes to the natural sediment transport. No timing restriction necessary. (BMPs 14.6, 14.14, 14.17)



## Road Management Objective

<b>Project</b>		<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS		Kake	
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>	<b>End Terminus</b>
45892		MP 4.55 Road 6314S	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>
0.00	4.13	Planned	
		<b>Photo year, roll, photos</b>	

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Maintenance Criteria Objective Maintenance Level (Desired Future Condition)</b>
0.00	4.13	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Site Specific Design Criteria

### *Road 45892*

**ROAD LOCATION:** The road location is steep 12 – 18% to gain the elevation @ 53+00 the area is timbered with sideslopes of 40-60%. Once on the ridge, road follows contour with no appreciable gain in elevation. There are numerous “V” notches with will require large culverts.

**WETLANDS:** The proposed road crosses about 1,125 feet of wetland in Alternative 3. The wetland is both muskeg/forested mosaic wetland and forested wetland. Minimize the road footprint through the wetlands and provide adequate hillslope drainage (33 CFR BMPs 1, 3). Wetlands were unavoidable on some portions of the location due to safety, engineering design constraints and consideration for other resources. Alternatives to the location on wetlands would mean longer higher cost roads that may have impacted similar areas of wetlands (BMP 14.2). Overlay construction is recommended to minimize disturbance to the wetland and ensure hydraulic connectivity of the roaded wetland with the surrounding areas (BMPs 12.5 and 14.17). This road meets silviculture exemption for 404 permitting through Army Corps of Engineers.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at MP 17+00. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:** There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.





## Road Management Objective

<b>Project</b>			<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS			Kake	
<b>Route No</b>	<b>Route Name</b>		<b>Begin Terminus</b>	<b>End Terminus</b>
45893			MP 5.05 Road 6314S	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>
0.00	0.50	Planned		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

#### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Maintenance Criteria Objective Maintenance Level (Desired Future Condition)</b>
0.00	0.50	2	1

#### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

#### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

#### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Site Specific Design Criteria

### *Road 45893*

**ROAD LOCATION:** The road location begins climbing at start @ 10% through timber with 30-50% sideslopes.

**WETLANDS:** The proposed road does not cross wetland.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at MP 4.95 of road 6314S. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:** There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.







## Road Management Objective

<b>Project</b>			<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS			Kake	
<b>Route No</b>	<b>Route Name</b>		<b>Begin Terminus</b>	<b>End Terminus</b>
45894			MP 5.05 Road 6314S	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>
0.00	0.90	Planned		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

Bmp	Emp	Operational Maintenance Level (Current Condition)	Maintenance Criteria Objective Maintenance Level (Desired Future Condition)
0.00	0.90	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_

District Ranger

\_\_\_\_\_

Date

## Site Specific Design Criteria

### *Road 45894*

**ROAD LOCATION:** The road location begins climbing at start @ 10% through timber with 30-50% sideslopes.

**WETLANDS:** The proposed road crosses about 115 feet of wetland in Alternatives 2 and 3. The wetland is both muskeg/forested mosaic wetland and moss muskeg wetland. Minimize the road footprint through the wetlands and provide adequate hillslope drainage (33 CFR BMPs 1, 3). Wetlands were unavoidable on some portions of the location due to safety, engineering design constraints and consideration for other resources. Alternatives to the location on wetlands would mean longer higher cost roads that may have impacted similar areas of wetlands (BMP 14.2). Overlay construction is recommended to minimize disturbance to the wetland and ensure hydraulic connectivity of the roaded wetland with the surrounding areas (BMPs 12.5 and 14.17). This road meets silviculture exemption for 404 permitting through Army Corps of Engineers.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at MP 4.95 of road 6314S. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:** There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.



## Road Management Objective

<b>Project</b>		<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS		Kake	
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>	<b>End Terminus</b>
45895		MP 4.608 Road 45803	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>
0.00	1.22	Planned	
		<b>Photo year, roll, photos</b>	

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

### Maintenance Criteria

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Objective Maintenance Level (Desired Future Condition)</b>
0.00	1.22	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Site Specific Design Criteria

### *Road 45895*

**ROAD LOCATION:** The road location starts in 10 year old clear cut and follows contour to end of clearcut @ 4+00 and enters timber. @ 5+00 cross streams that needs a 50' bridge. Road progress through timber @ 10-15% grade with 30% sideslopes to 24+00 and enter muskeg area for several hundred feet. Road location continues to climb @ 10% through timber with 30% sideslopes to reach muskeg area @ 48+00 for several hundred feet. The road then continues through timber to end.

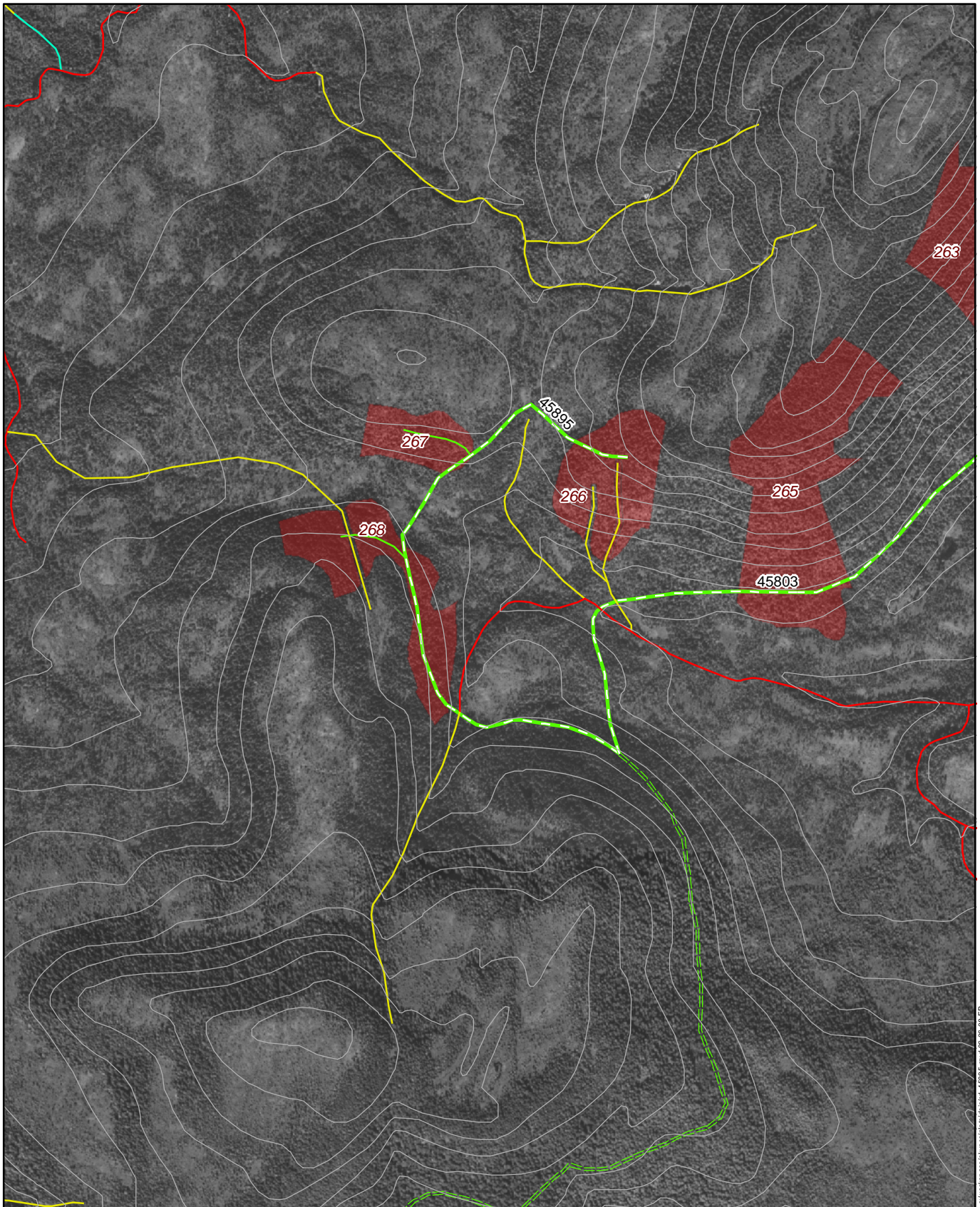
**WETLANDS:** The proposed road crosses about 605 feet of wetland in Alternative 3. The wetland is both muskeg/forested mosaic wetland and forested wetland. Minimize the road footprint through the wetlands and provide adequate hillslope drainage (33 CFR BMPs 1, 3). Wetlands were unavoidable on some portions of the location due to safety, engineering design constraints and consideration for other resources. Alternatives to the location on wetlands would mean longer higher cost roads that may have impacted similar areas of wetlands (BMP 14.2). Overlay construction is recommended to minimize disturbance to the wetland and ensure hydraulic connectivity of the roaded wetland with the surrounding areas (BMPs 12.5 and 14.17). This road meets silviculture exemption for 404 permitting through Army Corps of Engineers.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at 18+00. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:** There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.



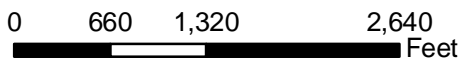


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**Legend**

- Proposed Unit
- Contours 100 ft.
- Road Suitable for Passenger Vehicles (ML3)
- High Clearance Vehicle Road (ML2)
- Basic Custodial Care (Closed Road) (ML1)
- New NFS Designated Road Construction (ML2)
- Reconstructed Road
- New Temporary Road Construction
- Stream Class I
- Stream Class II
- Stream Class III

**Road 45895**



## Road Management Objective

<b>Project</b>			<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS			Kake	
<b>Route No</b>	<b>Route Name</b>		<b>Begin Terminus</b>	<b>End Terminus</b>
45896			MP 1.60 Road 45803	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>
0.00	1.71	Planned		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

Bmp	Emp	Operational Maintenance Level (Current Condition)	Maintenance Criteria Objective Maintenance Level (Desired Future Condition)
0.00	1.71	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_

District Ranger

\_\_\_\_\_

Date

## Site Specific Design Criteria

### *Road 45896*

**ROAD LOCATION:** The road location gains elevation @ a 10% through timber to 50+00 then it is rolling along the contour with no appreciable gain in elevation with 20% sideslopes, area is timbered.

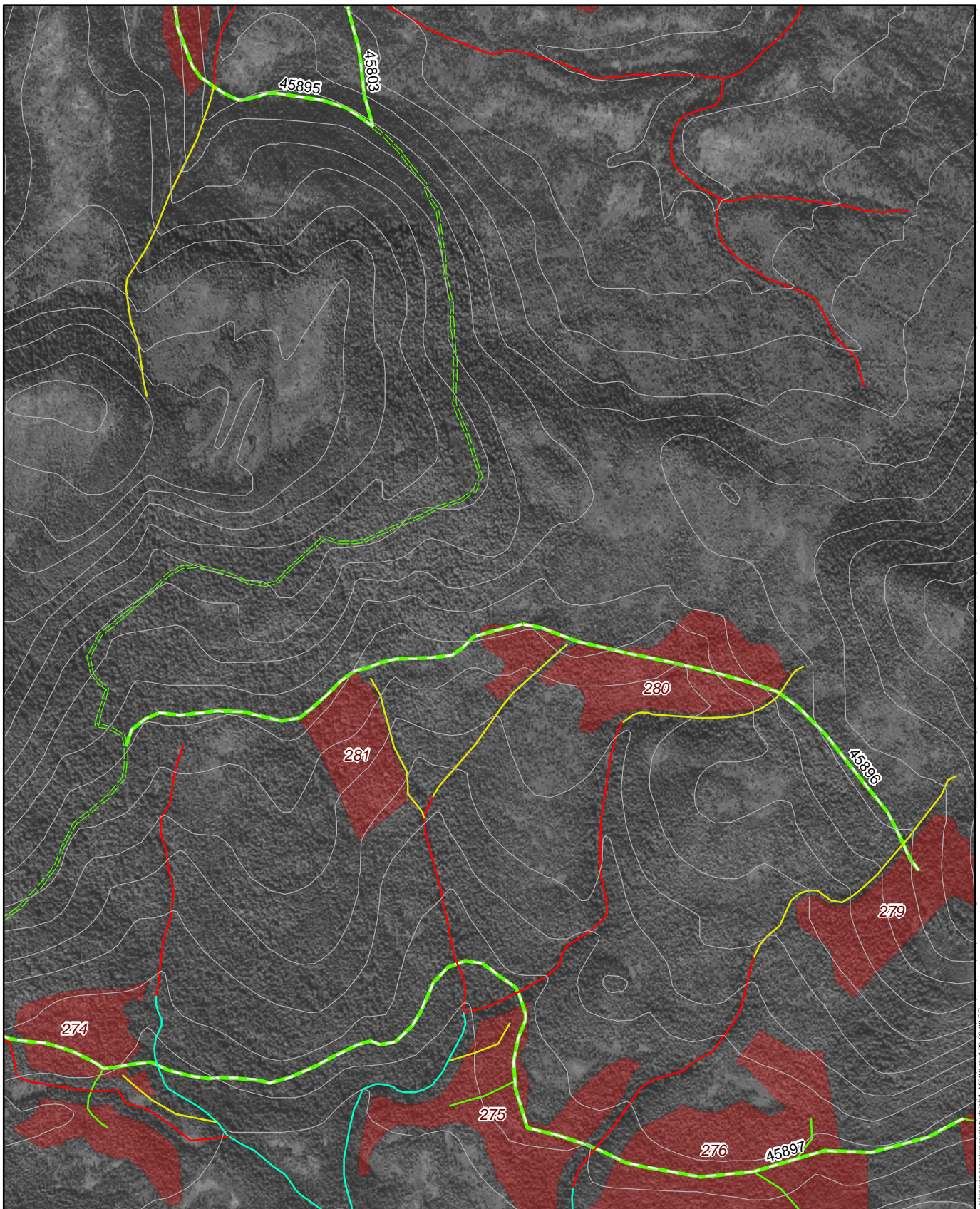
**WETLANDS:** The proposed road crosses about 496 feet of wetland in Alternative 3. The wetland type is muskeg/forested mosaic. Minimize the road footprint through the wetlands and provide adequate hillslope drainage (33 CFR BMPs 1, 3). Wetlands were unavoidable on some portions of the location due to safety, engineering design constraints and consideration for other resources. Alternatives to the location on wetlands would mean longer higher cost roads that may have impacted similar areas of wetlands (BMP 14.2). Overlay construction is recommended to minimize disturbance to the wetland and ensure hydraulic connectivity of the roaded wetland with the surrounding areas (BMPs 12.5 and 14.17). This road meets silviculture exemption for 404 permitting through Army Corps of Engineers.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at MP 1.30 of road 45803. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:** There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.



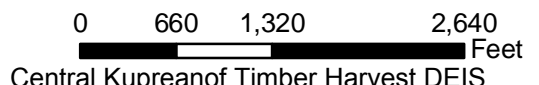


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**Legend**

- Proposed Unit
- Contours 100 ft.
- Road Suitable for Passenger Vehicles (ML3)
- High Clearance Vehicle Road (ML2)
- Basic Custodial Care (Closed Road) (ML1)
- New NFS Designated Road Construction (ML2)
- Reconstructed Road
- New Temporary Road Construction
- Stream Class I
- Stream Class II
- Stream Class III

**Road 45896**



## Road Management Objective

<b>Project</b>			<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS			Kake	
<b>Route No</b>	<b>Route Name</b>		<b>Begin Terminus</b>	<b>End Terminus</b>
45897			MP 0.44 Road 45803	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>
0.00	2.60	Planned		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Maintenance Criteria Objective Maintenance Level (Desired Future Condition)</b>
0.00	2.60	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

# Site Specific Design Criteria

## *Road 45897*

**ROAD LOCATION:** The road location is rolling along the contour with no appreciable gain in elevation with 20% sideslopes, area is timbered.

**WETLANDS:** The proposed road crosses about 350 feet of wetland in Alternative 3. The wetland is both muskeg/forested mosaic wetland and forested wetland. Minimize the road footprint through the wetlands and provide adequate hillslope drainage (33 CFR BMPs 1, 3). Wetlands were unavoidable on some portions of the location due to safety, engineering design constraints and consideration for other resources. Alternatives to the location on wetlands would mean longer higher cost roads that may have impacted similar areas of wetlands (BMP 14.2). Overlay construction is recommended to minimize disturbance to the wetland and ensure hydraulic connectivity of the roaded wetland with the surrounding areas (BMPs 12.5 and 14.17). This road meets silviculture exemption for 404 permitting through Army Corps of Engineers.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at MP 0.91 of road 45803. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

### STREAM CROSSINGS:

**1) Mile:** 0.79 **AHMU:** I **Channel Type:** MM1 **BF Width:** <33ft **Incision:** <13ft **Substrate:** fine gravel, large cobble  
**Gradient:** 2-6% **Structure:** log stringer

**Narrative:** Maintain fish migration and avoid diverting surface drainage channels. Timing restriction will be determined before implementation. (BMPs 14.6, 14.14, 14.17)

**2) Mile:** 1.44 **AHMU:** II **Channel Type:** HC2 **BF Width:** 3-50ft **Incision:** 3-33ft **Substrate:** coarse gravel **Gradient:** 6-15% **Structure:** 48in culverts

**Narrative:** The crossing will be designed for fish passage and to minimize soil runoff to the channel, retain natural drainage pattern, and minimize changes to the natural sediment transport. No timing restriction necessary. (BMPs 14.6, 14.14, 14.17)

**3) Mile:** 1.58 **AHMU:** II **Channel Type:** HC4 **BF Width:** 13-50ft **Incision:** 20-66ft **Substrate:** cobble and bedrock **Gradient:** >6% **Structure:** 48in culverts

**Narrative:** The crossing will be designed for fish passage and to minimize soil runoff to the channel, retain natural drainage pattern, and minimize changes to the natural sediment transport. No timing restriction necessary. (BMPs 14.6, 14.14, 14.17)

**4) Mile:** 1.98 **AHMU:** II **Channel Type:** HC3 **BF Width:** 23ft **Incision:** 56ft **Substrate:** cobble and bedrock **Gradient:** 6-15% **Structure:** 48in culverts

**Narrative:** The crossing will be designed for fish passage and to minimize soil runoff to the channel, retain natural drainage pattern, and minimize changes to the natural sediment transport. No timing restriction necessary. (BMPs 14.6, 14.14, 14.17)

**5) Mile:** 2.83 **AHMU:** II **Channel Type:** AF0 **BF Width:** 3.4ft **Incision:** 2.5ft **Substrate:** **Gradient:** 18% **Structure:** 48in culverts

**Narrative:** The crossing will be designed for fish passage and to minimize soil runoff to the channel, retain natural drainage pattern, and minimize changes to the natural sediment transport. No timing restriction necessary. (BMPs 14.6, 14.14, 14.17)





## Road Management Objective

<b>Project</b>		<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS		Kake	
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>	<b>End Terminus</b>
45898		MP 10.50 Road 6314S	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>
0.00	0.42	Planned	
		<b>Photo year, roll, photos</b>	

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

### Maintenance Criteria

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Objective Maintenance Level (Desired Future Condition)</b>
0.00	0.42	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Site Specific Design Criteria

### *Road 45898*

**ROAD LOCATION:** The road location climbs @ 15% through timber with sideslopes 30-50%.

**WETLANDS:** The proposed road crosses about 91 feet of wetland in Alternatives 2 and 3. The wetland type is muskeg/forested mosaic. Minimize the road footprint through the wetlands and provide adequate hillslope drainage (33 CFR BMPs 1, 3). Wetlands were unavoidable on some portions of the location due to safety, engineering design constraints and consideration for other resources. Alternatives to the location on wetlands would mean longer higher cost roads that may have impacted similar areas of wetlands (BMP 14.2). Overlay construction is recommended to minimize disturbance to the wetland and ensure hydraulic connectivity of the roaded wetland with the surrounding areas (BMPs 12.5 and 14.17). This road meets silviculture exemption for 404 permitting through Army Corps of Engineers.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at MP 10.05 of road 6314S. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:** There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.





## Road Management Objective

<b>Project</b>		<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS		Kake	
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>	<b>End Terminus</b>
45899		MP 0.63 Road 45803	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>
0.00	0.70	Planned	
		<b>Photo year, roll, photos</b>	

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Maintenance Criteria Objective Maintenance Level (Desired Future Condition)</b>
0.00	0.70	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date



## Site Specific Design Criteria

### *Road 45899*

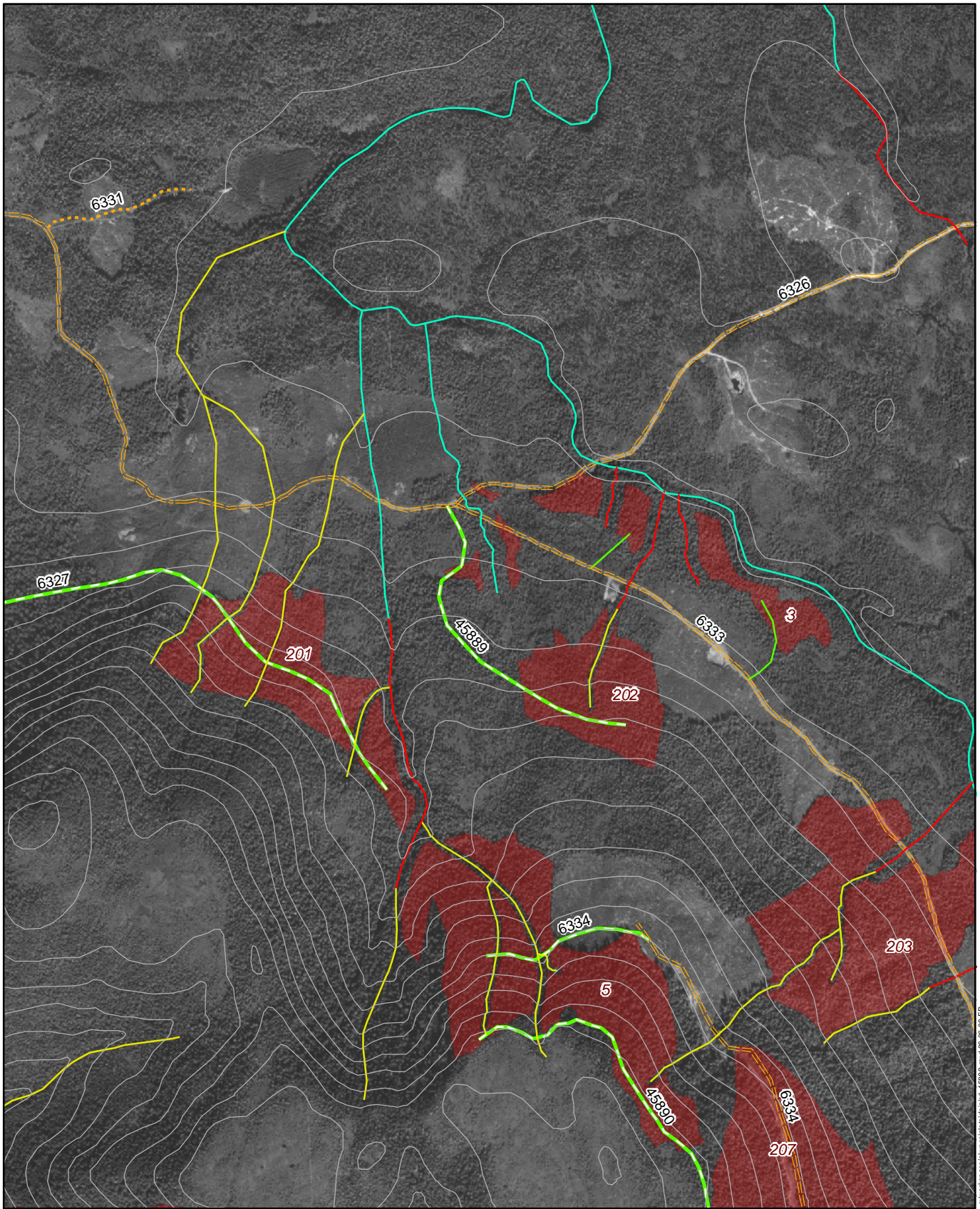
**ROAD LOCATION:** The road location climbs @ 15% through timber with sideslopes 30-60%.

**WETLANDS:** The proposed road crosses about 25 feet of wetland in Alternatives 2 and 3. The wetland type is muskeg/forested mosaic. Minimize the road footprint through the wetlands and provide adequate hillslope drainage (33 CFR BMPs 1, 3). Wetlands were unavoidable on some portions of the location due to safety, engineering design constraints and consideration for other resources. Alternatives to the location on wetlands would mean longer higher cost roads that may have impacted similar areas of wetlands (BMP 14.2). Overlay construction is recommended to minimize disturbance to the wetland and ensure hydraulic connectivity of the roaded wetland with the surrounding areas (BMPs 12.5 and 14.17). This road meets silviculture exemption for 404 permitting through Army Corps of Engineers.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located at MP 1.55 of road 45803. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

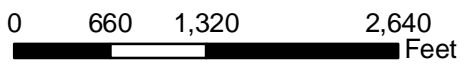
**STREAM CROSSINGS:** There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.



**Legend**

- Proposed Unit
- Road Suitable for Passenger Vehicles (ML3)
- High Clearance Vehicle Road (ML2)
- Basic Custodial Care (Closed Road) (ML1)
- New NFS Designated Road Construction (ML2)
- Reconstructed Road
- New Temporary Road Construction
- Contours 100 ft.
- Stream Class I
- Stream Class II
- Stream Class III

**Road 45899**



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## Road Management Objective

<b>Project</b>		<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS		Kake	
<b>Route No</b>	<b>Route Name</b>	<b>Begin Terminus</b>	<b>End Terminus</b>
45886		6314 MP 3.15	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>
0.00	0.09	Planned	
		<b>Photo year, roll, photos</b>	

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Maintenance Criteria Objective Maintenance Level (Desired Future Condition)</b>
0.00	0.09	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Site Specific Design Criteria

### *Road 45886*

**ROAD LOCATION:** The road is located on fairly flat ground which slopes down hill at approximately 5% grade through timber.

**WETLANDS:** The proposed road does not cross wetland.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located near the beginning of road at intersection of 6314 at MP 3.40. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:**

**1) Mile:** 0.09 **AHMU:** I **Channel Type:** MM1 **BF Width:** 2.9ft **Incision:** 1.5ft **Substrate:** gravel  
**Gradient:** 2-6% **Structure:** 48in. culvert

**Narrative:** Maintain fish migration and avoid diverting surface drainage channels. Timing restriction will be determined before implementation. (BMPs 14.6, 14.14, 14.17)





## Road Management Objective

<b>Project</b>			<b>System</b>	<b>Land Use Designation</b>
Central Kupreanof EIS			Kake	
<b>Route No</b>	<b>Route Name</b>		<b>Begin Terminus</b>	<b>End Terminus</b>
45887			6314 MP 3.65	
<b>Begin MP</b>	<b>Length</b>	<b>Status</b>	<b>Map Quarter Quad</b>	<b>Photo year, roll, photos</b>
0.00	0.10	Planned		

### General Design Criteria and Elements

<b>Functional Class</b>	<b>Service Life</b>	<b>Surface</b>	<b>Width</b>	<b>Design Speed</b>	<b>Critical Vehicle</b>	<b>Design Vehicle</b>
Local	LI	Shot rock	14'	10	Log truck	Log truck

### Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

<b>Bmp</b>	<b>Emp</b>	<b>Operational Maintenance Level (Current Condition)</b>	<b>Maintenance Criteria Objective Maintenance Level (Desired Future Condition)</b>
0.00	0.10	2	1

### Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

**AFR&P Regs. "Active" status:** Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

**AFR&P Regs. "Inactive" status:** Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

### Operation Criteria

<b>Highway Safety Act:</b>	No	<b>Jurisdiction:</b>	National Forest ownership
<b>Traffic Management Strategies</b>	<b>Encourage:</b>	Hikers, bicycles	
	<b>Accept:</b>	High clearance vehicles	
	<b>Discourage:</b>	N/A	
	<b>Prohibit:</b>	N/A	
	<b>Eliminate:</b>	Motorized vehicles on closed section	

### Travel Management Narrative

All newly constructed NFS road will be managed as a maintenance level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open from five to ten years after this timber sale for other activities including fire wood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These roads would be intermittent service roads (maintenance level one) within ten years of timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures would remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved \_\_\_\_\_  
District Ranger

\_\_\_\_\_  
Date

## Site Specific Design Criteria

### *Road 45887*

**ROAD LOCATION:** The start of the road follows an old decommissioned temporary road that is grown over. The road is located on fairly flat ground which slopes down hill at approximately 5% grade through timber.

**WETLANDS:** The proposed road does not cross wetland.

**EROSION CONTROL:** An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

**ROCK PITS:** Possible rock pit is located near the beginning of road at intersection of 6314 at MP 3.40. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

**STREAM CROSSINGS:** There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.



