

Appendix ROD-1

Unit Cards

Appendix ROD-1, Unit Cards, is used to explain site-specific information about each unit and any resource concerns and mitigations. Narrative cards and maps for each unit are in numerical order and describe the silvicultural prescription, resource concerns, and protection or mitigation measures for each unit in the Selected Alternative.

The section Harvest Treatments, below, explains the stand description and harvest treatments for this entry. The next section, Resource Concerns and Responses, summarizes how protection measures can be used for resource concerns. These protection measures can be either from the Forest Plan or project-specific.

The introduction to Appendix ROD-1 is followed by a map and a narrative card for each harvest unit.

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. Each unit may be comprised of one or more settings, identified on the map; each setting has one harvest method and one prescription assigned to it. However, when units are referred to in the text, we simply refer to the number. Unless otherwise stated, it is to be understood that the unit implies all the sections selected for harvest.

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

Net Harvest Volume (Saw): This is an estimated volume (in thousand board feet, or MBF) to be harvested. This is initially derived from field estimates and the stand exam program. A timber cruise is done prior to or during implementation to determine an accurate volume before the timber is sold.

Land Use Designation (LUD): This lists which of the following LUDs the unit is located in: Modified Landscape (ML), Scenic Viewshed (SV) and Timber Production (TM).

Logging Systems: This lists whether the unit is to be yarded using cable, shovel or helicopter system.

Harvest Treatments

Silvicultural Narrative

Existing Stand Condition: This is the developmental stage of the physical and temporal distribution of trees and other plants in a forested area. **Site Index**, listed under this section, is a measure of site productivity. This value is the height growth in feet that will occur over 50 years, with an indicator species (Sitka spruce). William Farr established plots and developed site index tables. For example, a site index of 90 (Sitka spruce, Farr 50) means a Sitka spruce is capable of growing 90 feet in 50 years. **Basal Area (BA)** is the cross-sectional area of a tree trunk measured in square inches, usually at the DBH. On the unit cards, this measurement is in square feet per acre.

Silvicultural Prescription: This provides detailed direction about the methods, techniques, timing, and monitoring of vegetative treatments. **Precommercial Thinning (PCT)** is the removal of some trees from a stand that are too small to be sold for lumber or house logs, so the remaining trees will grow faster.

Silvicultural Systems

Silvicultural systems refer to a complete set of treatments used to manage forest stands and forest landscapes over long periods of time. This process includes the harvest or regeneration of the stand, intermediate cuttings, and other treatments necessary for the development and replacement of the forest stand.

Silvicultural systems are applied through prescriptions, the written records of the examination, diagnosis, and treatment regimes prescribed for the stand.

A silvicultural prescription has been written for each unit in the Selected Alternative when the Navy Timber Sale Record of Decision (ROD) was signed. Silvicultural prescriptions include these unit cards plus the sale layout and marking guidelines that will be completed for each of the timber harvest units included in the ROD. These provide guidance for treatments following this proposed timber harvest, including regeneration and thinning through the entire rotation.

These unit cards and silvicultural prescriptions will be used during the implementation process to assure that all aspects of the project are implemented within applicable standards and guidelines. 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.

The harvest treatments found on the unit cards are descriptions of what will occur under the silvicultural systems.

Even-aged Systems

Even-aged systems result in the conversion of mature stands to faster-growing stands of a single age by removing most merchantable trees in one entry. Where this treatment is recommended, it has been determined that it is

optimum for the site. No openings in excess of 100 acres will be created. Reserve areas between openings must be of sufficient size and composition to be managed as a separate stand, which is a minimum of 10 acres.

The following prescriptions can be used to achieve the desired results.

Clearcut: Essentially all trees in a harvest unit are removed in a single operation that regenerates into a single-aged stand. In the Navy project area, clearcutting is prescribed to reduce levels of mistletoe infections, decay fungi, ensure regeneration desired tree species, and/or to minimize losses to and risk of windthrow. Natural regeneration is expected to fully stock the stand with desirable trees by year 5. Regeneration monitoring will be done in the third year following harvest to certify the stocking level.

Seed trees will be left in several units, as specified on the unit cards. In these units, one co-dominant or dominant cedar tree will be left as a seed tree for every 5 acres harvested to provide a seed source for the future stand. Trees will be distributed throughout the unit in areas that have a cedar component in the overstory and will be partially girdled to provide a stress crop of cones. Leaving cedar seed trees would maintain or increase the cedar component in regenerated stands, thus minimizing future porcupine damage as cedar trees are not preferred as a browse species by porcupine. Unit 37 may be planted with western red and Alaskan yellow-cedar, if necessary, to ensure stocking levels are achieved in the regenerating stand. Plantation (survival) surveys will be conducted after the first and third full growing season following completion of planting.

Clearcut with reserves: Even-aged systems of clearcut with reserves results in most of the trees removed in a single operation with some trees retained for purposes other than regeneration. Reserve trees are scattered or clumped, and are normally retained throughout a rotation to serve a purpose. Depending on the individual unit prescription, 15 percent or 50 percent of the original stand acres will be retained. In the Navy project area, reserve trees would be retained for wildlife habitat, to reduce visual impact of timber harvest and/or to further enhance windfirmness of leave areas (i.e. RAWs, high-hazard soils, visual retention patches, etc.). Natural regeneration is expected to fully stock the stand with desirable trees by year 5. Regeneration monitoring will be done in the third year following harvest to certify the stocking level.

All stands that are prescribed under an even-aged system will be evaluated for a precommercial thinning treatment at 15-35 years of age to promote stand growth, health, and desired species composition.

Uneven-aged Systems

An uneven-aged system is implemented to maintain high forest cover, regeneration of desirable species, and development of trees through a range of diameter or age classes. Prescriptions to obtain this structure include single-tree selection.

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Single-tree Selection (STS): An uneven-aged stand contains trees of three or more distinct age classes, intermixed throughout the stand. Uneven-aged stands are created through silvicultural pathways that include uneven-aged systems or small-scale periodic disturbance (gap phased) that allows for recruitment/release of trees resulting in a multi-storied stand structure. Harvest trees are either selected through individually tree marking or designated by description. No more than 30 percent of the total original stand basal area will be removed and no more that 50 percent of the original stand basal area of spruce or cedar will be removed in this entry. No opening will be created that is greater than 2 acres. These stands will continue to develop, and be available for additional future entries (recommended in 40 years). This system is not expected to appreciably increase the likelihood of windthrow in these stands. Natural regeneration is expected to fully stock the stand with desirable trees by year 5. Regeneration monitoring will be done in the third year following harvest to certify the stocking level.

Engineering/Roads

Temporary roads

Temporary roads are described in the unit cards and maps. These roads are decommissioned after harvest. This involves pulling any culverts that were installed, and activities result that in the stabilization and restoration of unneeded roads to a more natural state. While not drivable by motorized vehicles, they may be accessible to non-motorized users. Road drainage structures will be removed and stream channels restored to their original contours.

Resource Concerns and Responses

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 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 ROD1-2) and stream value class (Table ROD1-1).

Unit card maps show the location of all streams and the associated RMAs. Unit card narratives also prescribe the location and width of reasonable assurance of windfirmness (RAW) buffers for protecting RMAs, except where windthrow potential is low (BMP 12.6a).

Reasonable Assurance of Windfirmness (RAW) Buffers

Streams requiring RAW buffers are noted under the Fish/Watershed section of the unit cards. The exact marking guide for retention for the RAW buffer will be determine during layout. When establishing the RAW buffers, look for evidence of past wind events. If trees with windfirm characteristics are present, use a RAW buffer width of one site potential tree height. If windfirm trees are

not present or there is strong evidence of past stand-replacing wind events, then consider two site potential tree heights as a maximum width. High-value trees susceptible to windthrow within the RAW buffer may be marked for removal if their removal is not expected to appreciably increase the windthrow risk of the remaining trees. For Alluvial Fan (AF), Floodplain (FP), High Gradient Contained (HC), Large Contained (LC), Moderate Gradient Contained (MC), Moderate Gradient/Mixed Control (MM), and Palustrian (PA) areas, manage an appropriate distance beyond the no-harvest zone to provide for a reasonable assurance of windfirmness of the RMA. Site-potential tree heights vary according to the channel type as follows:

AF – 140 feet

FP - 130 feet

HC - 120 feet

LC - 100 feet

MC - 100 feet

MM - 120 feet

PA - 85 feet or less

Best Management Practices

The Forest Service recently issued National Core BMPs (USFS 2012). Directives for using these BMPs are currently in development. The Navy Timber Sale will implement the most up-to-date BMP guidance. Currently, this ROD cites the Alaska Region BMPs, which are fully described in FSH 2509.22 (USFS 2006). A crosswalk between the Alaska Region BMPs and the national BMPs has been placed in the project planning file for reference.

Some BMPs are implemented through the location and design of harvest units and temporary roads; others are translated into timber harvest and road contract provisions to ensure implementation.

Log yarding practices are based on slope stability, soil disturbance, and stream class. Additional measures are taken to protect streams from possible disturbance associated with tree falling and yarding according to BMP 13.16. Timber contract provisions guide tree falling and yarding near stream courses. Trees near Class IV streams are felled away from the stream whenever feasible and logging debris introduced into Class IV streams is removed. Suspension requirements are used to minimize soil erosion, mass movement, and formation of new channels (BMP 13.9)

Temporary roads and associated erosion control, including decommissioning practices, are subject to timber sale contract provisions (BMP 13.14, 13.16, 14.7, 14.18).

Process Groups and Stream Classes

The Tongass National Forest defines stream channel types according to the Channel Type User Guide (USDA Forest Service, 1992), the foundation upon

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which aquatic habitat management prescriptions are developed. Table ROD 1-2 shows the Forest Plan codes used on the unit card narratives. Only the channel types found in timber harvest units are listed.

Stream classes are also used to define appropriate RMAs and protection measures. Stream classes are defined in Table ROD 1-1.

Table Appendix ROD 1-1
Stream Value Classes

Stream Value Class	Criteria
Class I	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.
Class II	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.
Class III	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.
Class IV	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).

Table ROD 1-2
Channel Types In or Adjacent to Harvest Units

Process Group	Channel Type Code	Channel Type Description
Alluvial Fan	AF1	Moderate Gradient Alluvial Fan Channel
	AF2	High Gradient Alluvial Cone Channel
Floodplain	FP4	Low Gradient Flood Plain Channel
High Gradient Contained	HC1	Shallowly Incised Muskeg Channel
	HC3	Deeply Incised Upper Valley Channel
	HC5	Shallowly Incised Very High Gradient Channel
	HC6	Deeply Incised Mountain Slope Channel
Moderate Gradient Contained	MC1	Narrow Shallow Contained Channel
	MC2	Moderate Width and Incision Contained Channel
Moderate Gradient Mixed Control	MM1	Narrow Mixed Control Channel
Large Contained	LC1	Low Gradient Contained Channel
Palustrine	PA1	Narrow Placid Flow Channel
	PA5	Beaver Dam/Pond Channel

Soils

Forest Plan Standards and Guidelines for Soil and Water (p. 4-65) require that project analysis “evaluate soil stability (BMP 13.5) potential soil mass wasting effects, and stability of Class IV channels and minor drainageways (“non-streams”).” At the Forest Plan level, slopes of 72 percent or more are removed from the tentatively suitable timber base. However, at a project level, the Forest Supervisor may approve timber harvest on slopes of 72 percent or more on a case-by-case basis, based on the results of an on-site analysis of slope and Class IV channel stability, and an assessment of potential erosion.

Road and landing locations will avoid slopes greater than 67 percent, unstable slopes, and slide-prone areas, where feasible (BMP 14.7).

Shovel yarding will follow BMPs 12.5, 13.2 and 13.9. Slopes over 25 percent gradient may not be suitable for shovel yarding depending on soil conditions. Use care when approving shovel yarding on slopes over 25 percent gradient; avoid track slippage and rutting. Puncture or a slash mat may be necessary to provide adequate bearing strength to prevent rutting. Material should be scattered upon completion of the yarding activities.

Scenery

The following Scenic Integrity Objectives (SIOs) from the Forest Plan provide standards for management based on the landscape’s scenic characteristics and public viewing concern.

High: Changes in the landscape are not visually evident to the average forest visitor.

Moderate: Changes in the landscape may be evident to the casual observer but appear as natural occurrences when contrasted with the appearance of the surrounding landscape.

Low: Changes in the landscape appear very evident but incorporate natural patterns of form, line, color, and texture when contrasted with the appearance of the surrounding landscape.

Very Low: Changes in the landscape appear highly evident and may visually dominate the surrounding landscape, yet when viewed in the background distance these activities appear to be a natural occurrence.

Visual Absorption Capability¹ (VAC) is used to estimate the relative ability of a landscape to visually absorb management activities. High, Intermediate, and Low VAC ratings are used, and reflect the degree of landscape variety in an area, viewing distance, and topographic characteristics. A Low VAC setting may be highly visible, have steep slopes, or little landscape variety, while a High VAC setting may be unseen, relatively flat, or have a high degree of landscape variety.

Heritage Resources

¹ Visual Absorption Capacity is the estimate of the relative ability of a landscape to accept management manipulations such as timber harvest, without significantly affecting its visual character, a measure of the relative capacity of the land to absorb visual change.

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All identified heritage resources are not in the vicinity of the timber harvest unit's and proposed roads. If any sites are discovered during implementation, the Forest Service will fulfill its consultation requirements as described in Chapter 3 of the Final EIS.

Botany

Forest Plan Standards and Guidelines for Plants (p. 4-41) require that project planning avoid, minimize, or mitigate adverse effects to rare plants and populations. When rare or sensitive plant species are identified in a proposed road corridor or harvest unit, a botanist will recommend mitigations. Roads, MAFs, landings, staging yards, sortyards and other hardened sites will have more permanent effects than timber harvest. Mitigation measures include re-routes of roads to avoid populations, modification of unit boundaries, and directional felling and yarding away from populations. In most cases, a 100-foot avoidance buffer around the population is required to ensure protection. In some cases, such as very small populations, or where other populations of the same species exist nearby outside of the influence of the proposed action, no action may be necessary.

To reduce the spread of invasive plants into new areas, the following project-specific mitigation measures will apply:

- Off-road equipment will be cleaned to remove seeds, vegetative matter and other debris, according to the timber sale contract, to help reduce the spread of invasive plant species.
- Use of hay or straw bales for erosion control will not be allowed. Materials that comply with Tongass National Forest standard seed mixture (FSM 2080 TNF supplement R10 2000-2007-1) will be used for erosion control where necessary.

Prior to closing or storing NFS roads that were newly constructed for this project, the roads will be surveyed for high-priority invasive plants. If any new infestations are detected, a treatment strategy will be developed and implemented.

Wildlife

Bald eagle nest protection requirements are now found in 50 CFR Part 22.26. They have changed slightly from what was in the former Bald Eagle MOU and the Navy Final EIS. Variances no longer exist; permits allowing "take" in accordance with the Bald and Golden Eagle Protection Act would have to be obtained if disturbance to nesting bald eagles would occur. The required distances to avoid disturbance to nesting eagles (March 1 through August 31) are as follows:

- Avoid clear-cutting or removal of overstory trees within 330 feet (100 meters) of both active and alternate nests at any time (same as MOU).
- Avoid timber harvesting operations, including road construction and chain saw and yarding operations, during the nesting season within 660 feet (200 meters) of the nest.

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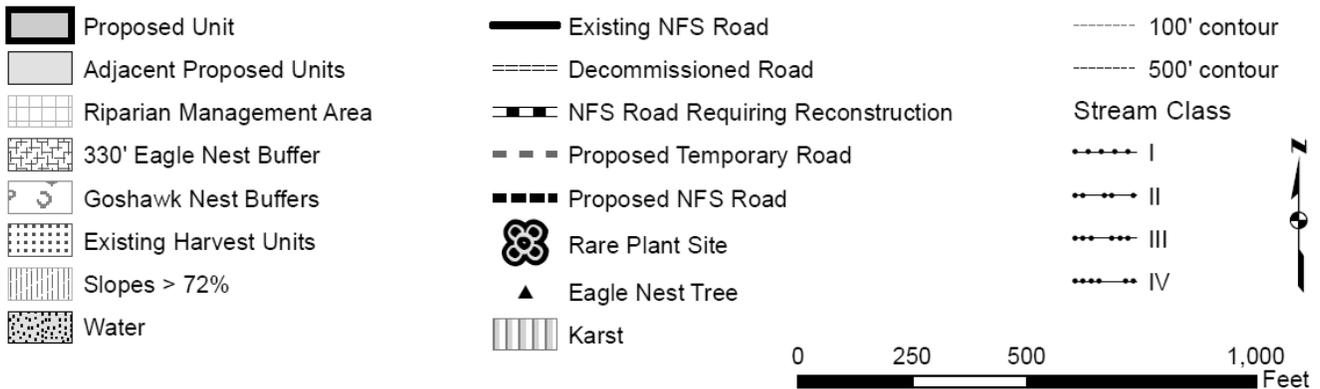
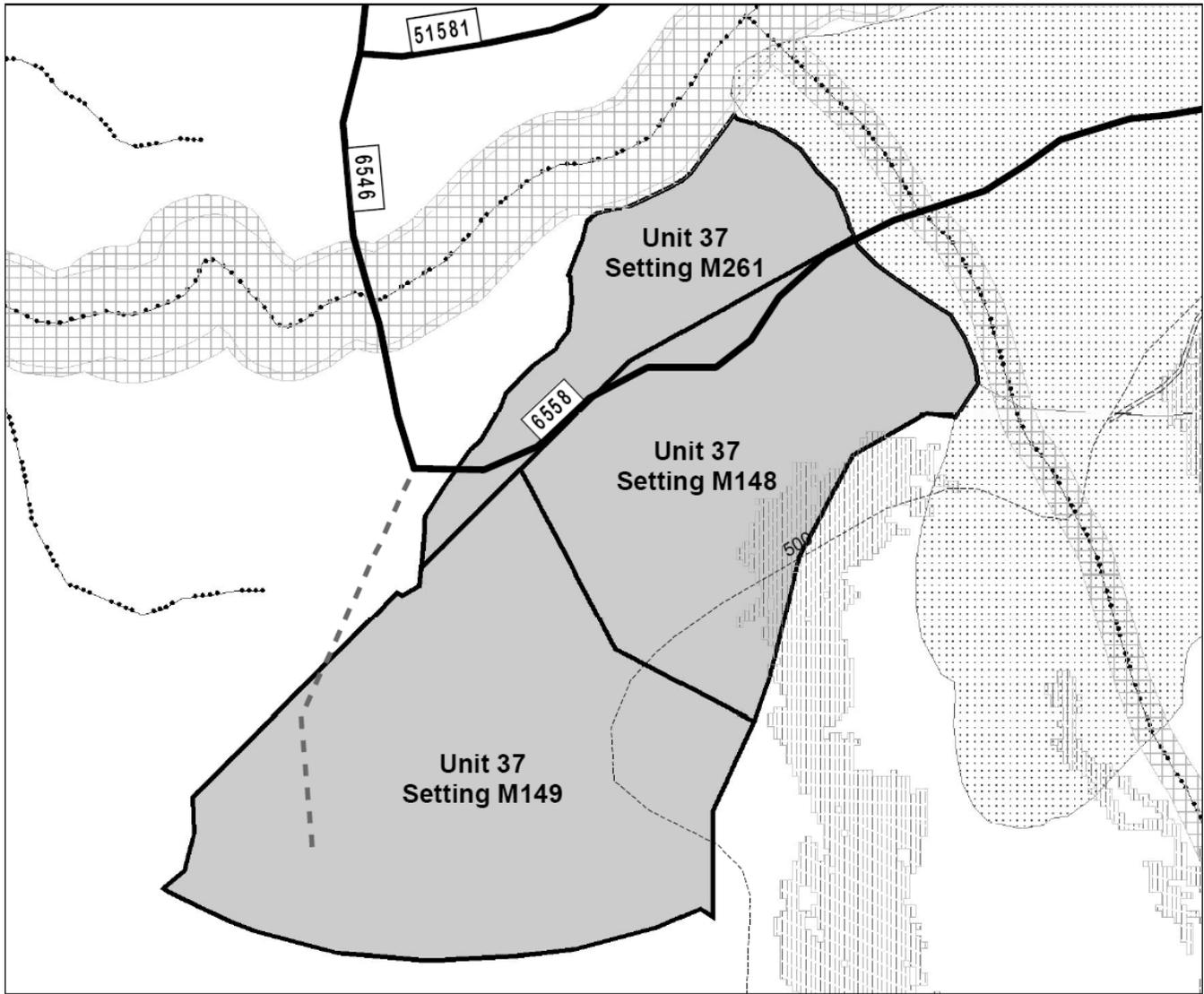
- Avoid construction of log transfer facilities and in-water log storage areas within 330 feet (100 meters) of active and alternate nests.
- Avoid operating helicopters or fixed-wing aircraft within 1,000 feet (305 meters) of the nest during the breeding season, except where eagles have demonstrated tolerance for such activity.
- Avoid blasting and other activities that produce extremely loud noises within 1/2 mile of nests (or within 1 mile in open areas).

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Unit 37

Navy Timber Sale Selected Alternative

45 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: TM,SV	Logging Systems: Cable & Shovel	Total Unit Acres: 45	Unit Number: 37
		Harvest Acres: 41	Net Harvest Volume (Saw) MBF: 682

SILVICULTURE:

Existing Stand Condition/Vegetation: This unit has old-growth stand structure. The mistletoe, stem decay and windthrow risk rating for the stand is moderate.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm, stand grown for timber management that retains residual trees as needed to meet standards and guides or other objectives.

Silvicultural Prescription: This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with moderately severe mistletoe infections, stem decay and defect resulting in a situation where stand growth is being offset or exceeded by decay and mistletoe is affecting stand vigor. Even-aged clearcutting is being prescribed to preclude or minimize the risk of windthrow post-harvest, promote natural regeneration by opening up the canopy, improve site productivity through increased soil temperature and minimize defect and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.

Planting of red and yellow cedar may be prescribed to minimize the effects of porcupine damage on the young stand. Treat settings M148 and M261 with a clearcut with leave trees (leaving one dominant or co-dominant cedar per 5 acres for future seed source), and treat setting M149 with a clearcut with reserves for visuals (15 percent of acres located in upper portion of unit).

TIMBER/LOGGING: Setting M149 is designed for both cable and shovel yarding to the temporary road extension of the 6546 road. Locate retention in the seen portion of setting M149.

ENGINEERING/ROADS: 0.19 mile of temporary road will be constructed. The road will be decommissioned after the timber sale. The most likely material source is located on Road 6558 mp 0.07.

FISH/WATERSHED:

There is a Class II, channel type MM1 stream (Wetbeck Creek) on the north end of unit. No harvest within 120 feet of the channel. RMA buffer has been built into unit design (BMP 12.6, 12.6a, 13.16). Limit harvest below the 6558 road to protect the RMA of Wetbeck Creek.

There is a Class III, channel type HC6 stream on the east side of the unit. Do not harvest in the v-notch. (BMP 13.9, 13.16). RAW buffers may be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.

SCENERY: Setting M261 is not seen. The other settings are visible from the Mosman Inlet viewshed, where the adopted SIOs range from moderate to very low and VAC rating is intermediate. The proposed prescription will meet an SIO of moderate to low for setting M149. Setting M148 will meet the prescribed very low SIO.

SOILS: Unit includes 4 acres with slopes over 72 percent gradient. A slope stability assessment will be conducted during project implementation. (BMP 13.5) Harvest on unstable slopes will be avoided. 2 acres of wetlands are included on southwest side of the unit. Shovel yarding will follow BMPs 12.5, 13.2 and 13.9; shovel tracks may need to be supported by slash (BMP 13.9) to minimize soil disturbance.

WILDLIFE: The temporary road in this unit is within one half mile of one or more bald eagle nests and may be subject to timing restrictions for blasting under 50 CFR Part 22.26. Setting M149 breaks the only old-growth corridor connecting the South Mosman Small Old-growth Reserve to the other reserves on the island.

ROADLESS AREAS: Part of this unit is adjacent to the Mosman Inventoried Roadless Area (#233).

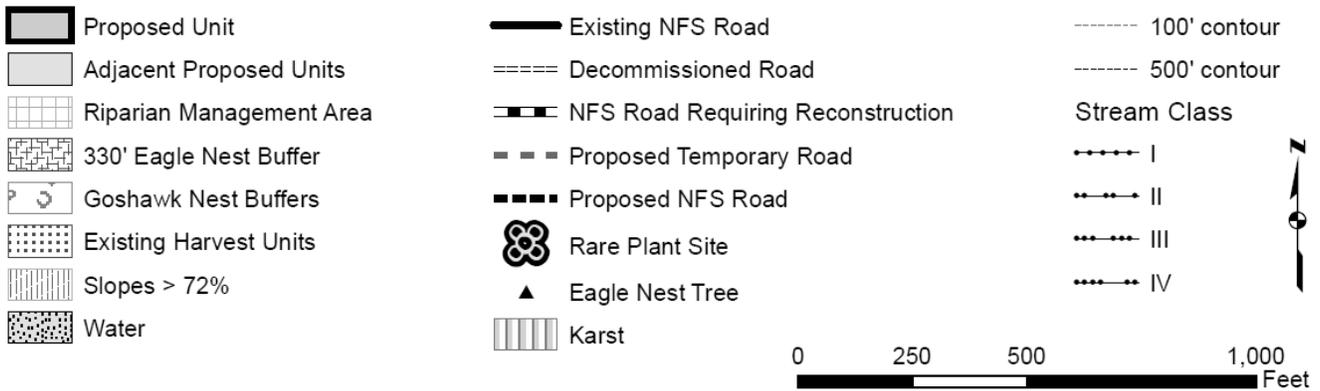
No resource concerns were identified for Botany, Geology, Heritage and Recreation.

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Unit 38

Navy Timber Sale Selected Alternative

19 Acres



Unit Data Card – Navy Timber Sale Record of Decision

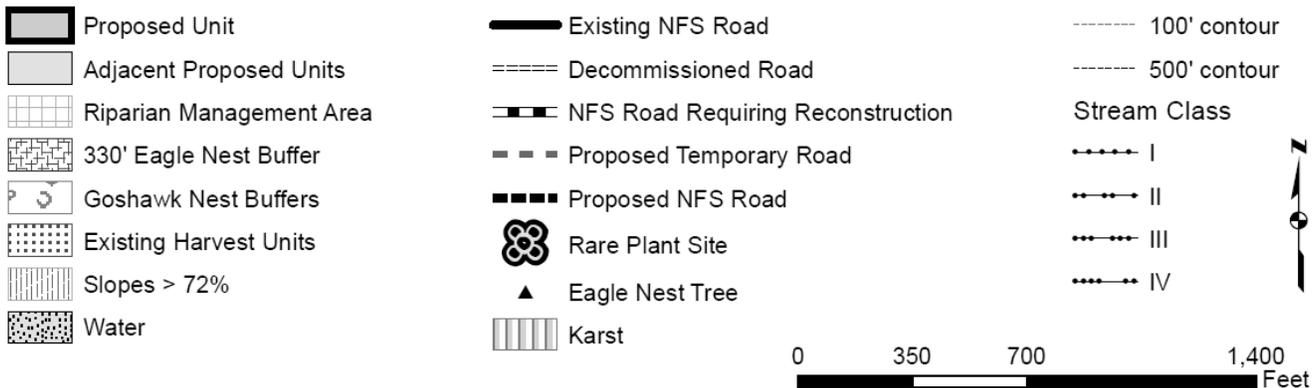
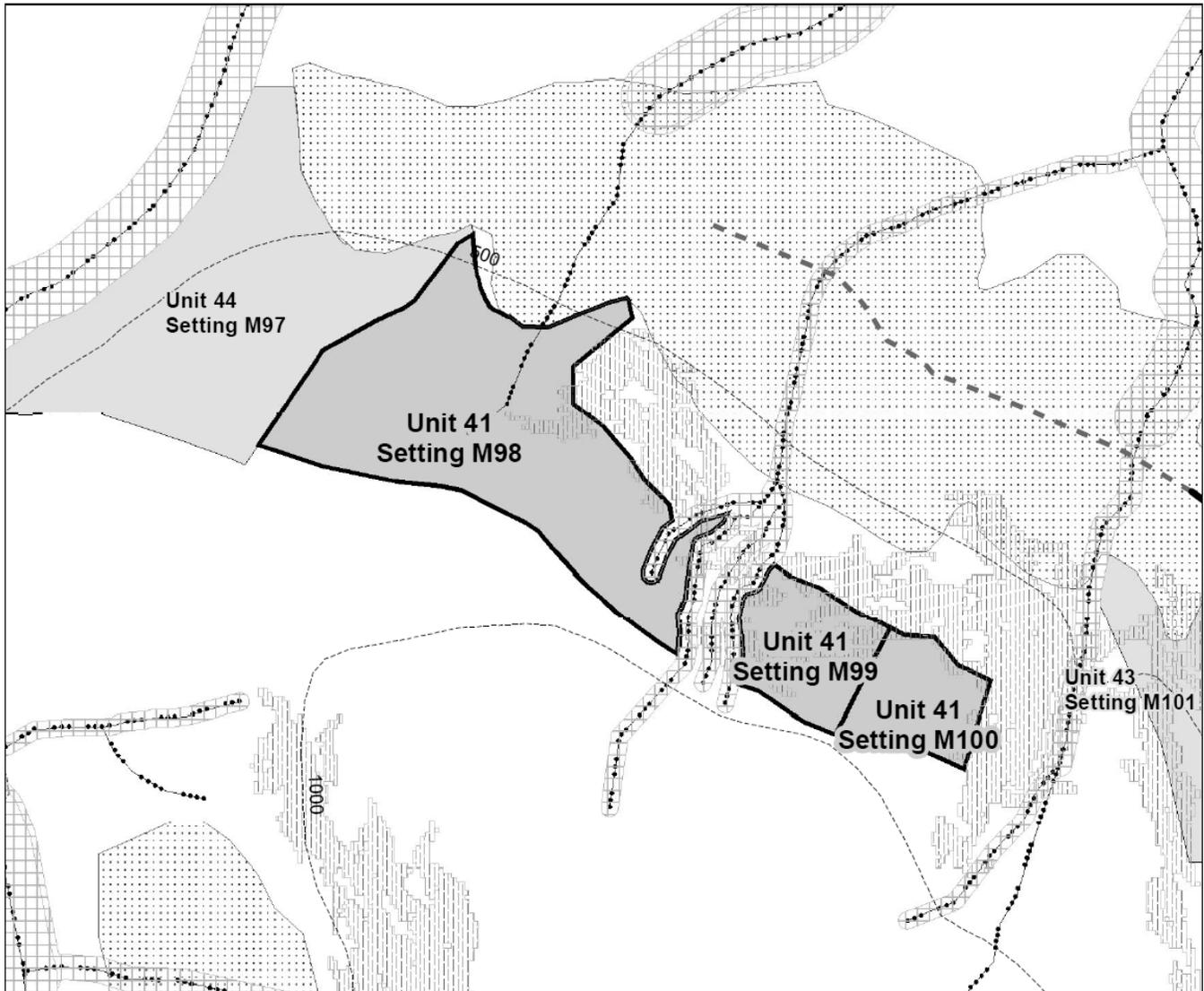
LUD: TM SV	Logging Cable Systems:	Total Unit Acres: 19	Unit Number: 38
		Harvest Acres: 16	Net Harvest Volume (Saw) MBF: 272
<p>SILVICULTURE:</p> <p><u>Existing Stand Condition/Vegetation:</u> This unit is a wind-generated stand that has old-growth stand structure. The mistletoe and stem decay are considered low in this stand but the windthrow risk has been rated as high.</p> <p><u>Silvicultural Objective/Desired Condition:</u> The desired condition for this stand is a highly productive, healthy, windfirm, stand grown for timber management that retains residual trees as needed to meet standards and guides or other objectives.</p> <p><u>Silvicultural Prescription:</u> This stand is being recommended for harvest at this time because it is not expected to obtain the desired condition given the current growth trajectory. Even-aged clearcutting with reserves (15 percent of acres located in upper portion of unit for visuals) with natural regeneration is being prescribed to preclude or minimize the risk of windthrow post-harvest, promote natural regeneration by opening up the canopy, improve site productivity through increased soil temperature and minimize defect and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.</p>			
<p>TIMBER/LOGGING: This unit is designed for downhill cable yarding to a temporary road off of the 51581 road. Retention will be located during layout in groups or clumps.</p>			
<p>ENGINEERING/ROADS: Construct 0.18 mile of temporary road. Road will be decommissioned after the timber sale. The material source is located on Road 6568 mp 0.07. No road concerns.</p>			
<p>SCENERY: The top of this unit is visible from the head of the Mosman Inlet viewshed, where the adopted SIO is low, and VAC rating ranges from low to high. The proposed prescription will meet an SIO of low. A moderate SIO can be achieved if the retention is concentrated in the visible opening.</p>			
<p>SOILS: This unit harvests 2 acres of forested wetlands; cable yarding will minimize soil disturbance.</p>			
<p>No resource concerns were identified for Fish/Watershed, Geology, Wildlife, Heritage, Recreation, Botany and Soils.</p>			

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Unit 41

Navy Timber Sale Selected Alternative

27 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: TM	Logging Systems: Helicopter	Total Unit Acres: 27	Unit Number: 41
		Harvest Acres: 27	Net Harvest Volume (Saw): MBF: 133

SILVICULTURE:

Existing Stand Condition/Vegetation: The stand is a wind-generated, multicanopy, uneven-aged stand. Unit is productive and lies along the backline of a previously harvested unit that was cut in 1993.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.

Silvicultural Prescription: Uneven-aged prescription using single-tree selection (STS) retaining at least 70 percent of the unit pretreatment basal area, based on standing live tree total for the unit, uncut. Individual trees selected for harvest may occur in small groups but will generally be evenly distributed across the stand. Any small groups will usually be less than 1 acre but may occasionally go up to 2 acres in size where needed to address insect and disease issues or capitalize on existing advanced regeneration of desirable tree species. Retain at least 50 percent of the cedar and spruce BA to ensure species diversity.

TIMBER/LOGGING: This unit is designed for helicopter yarding to landings located on temporary extensions off of the 51401 road.

ENGINEERING/ROADS: 0.36 mile of temporary road will be constructed. The road will be decommissioned after the timber sale. The likely material source is located on Road 6548 mp 0.06, Road 6548 mp 0.67, or Road 6540 mp 3.14. The temporary road will use an existing prism to limit construction costs and environmental effects.

FISH/WATERSHED:

There are four Class III, channel type HC5 streams within or adjacent to the unit. Do not harvest in the v-notch (BMP 13.9, 13.16).

There is one Class IV, channel type HC5 stream that lie within the unit. Fall timber away from streams if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16).

RAW buffers may be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.

SCENERY: The unit is visible from either the head of the Burnett Inlet or Anita Bay viewsheds, where the adopted SIOs range from moderate to very low. The proposed prescription will meet moderate SIO.

SOILS: The unit includes 4 acres with slopes over 72 percent gradient. A slope stability assessment will be conducted during project implementation. (BMP 13.5) Harvest on unstable slopes will be avoided.

WILDLIFE: The temporary road in this unit is within one half mile of one or more bald eagle nests and is subject to timing restrictions for blasting under 50 CFR Part 22.26. Seasonal restrictions on helicopter yarding are also required within 1,000 feet of the nests in accordance with 50 CFR Part 22.26.

ROADLESS AREAS: Part of this unit is adjacent to the Mosman Inventoried Roadless Area (#233).

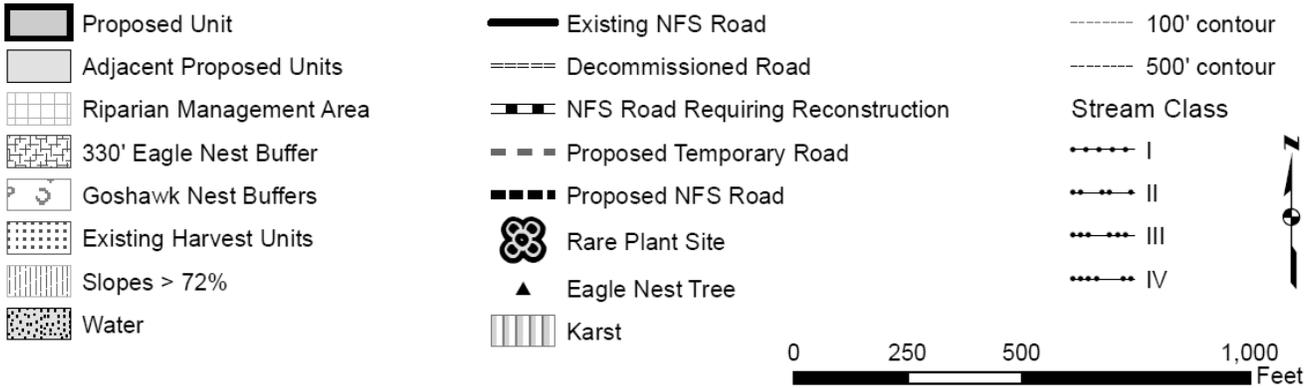
No resource concerns were identified for Geology, Botany, Recreation, and Heritage.

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Unit 43

Navy Timber Sale Selected Alternative

32 Acres



Unit Data Card – Navy Timber Sale Record of Decision

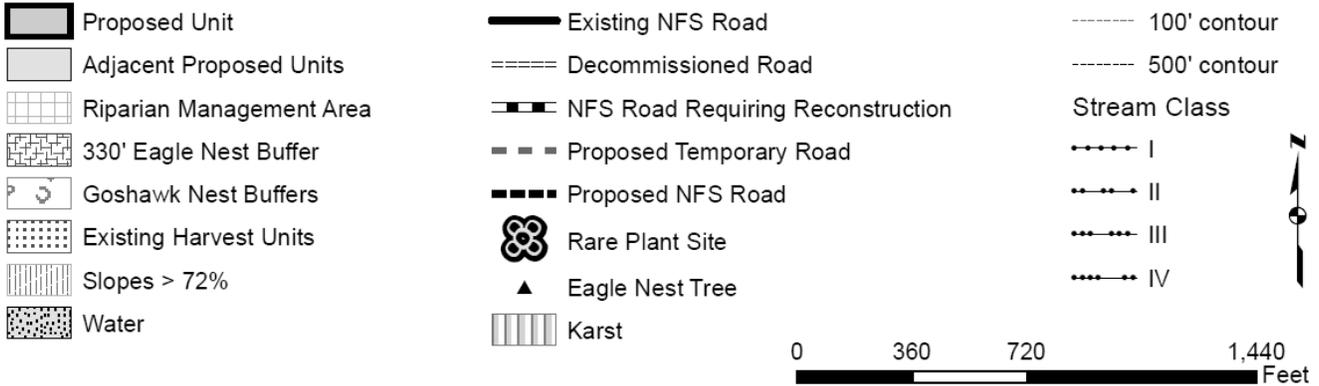
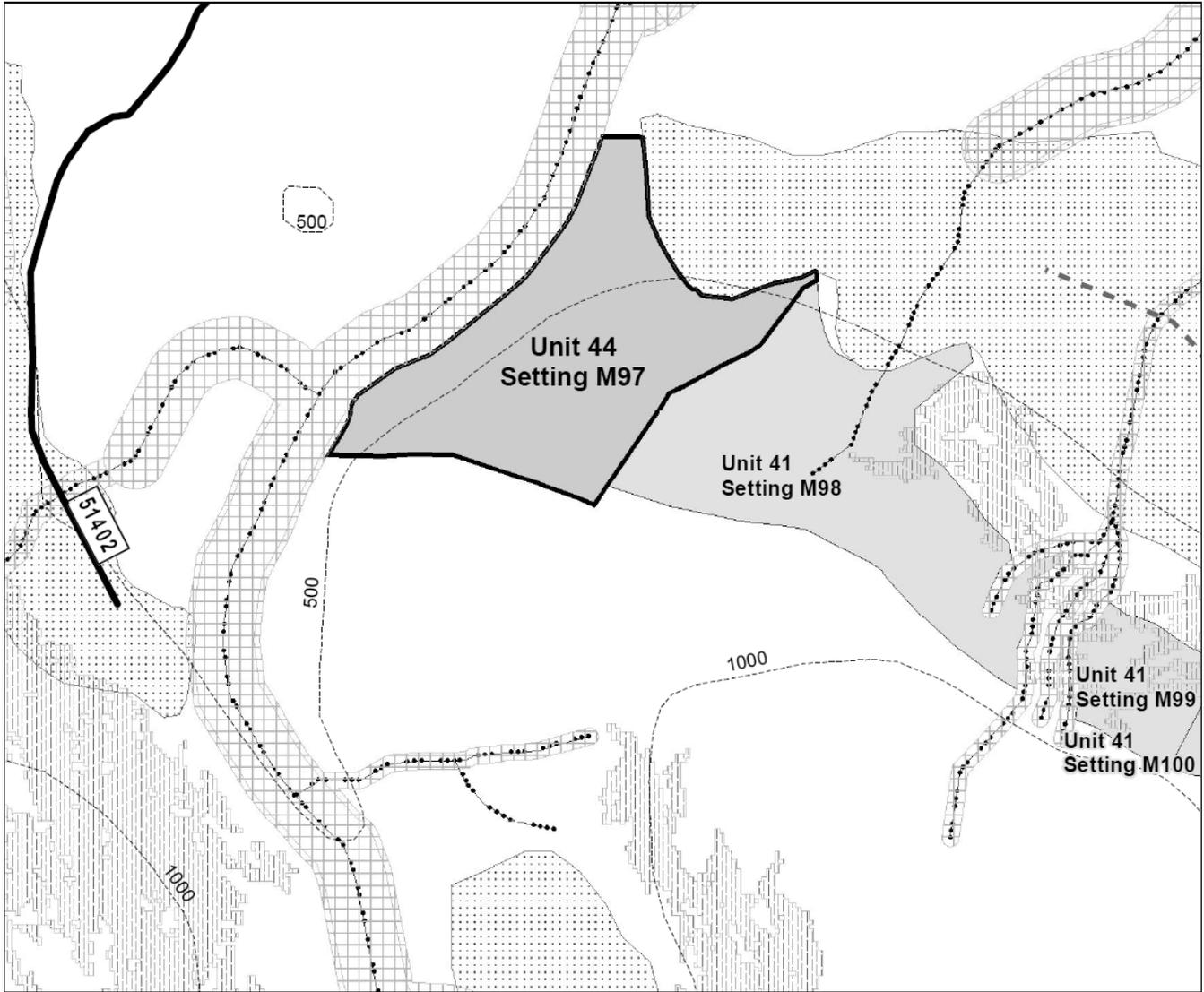
LUD: TM, SV	Logging Systems: Cable & Shovel	Total Unit Acres: 32	Unit Number: 43
		Harvest Acres: 32	Net Harvest Volume (Saw) MBF: 529
SILVICULTURE:			
<p><u>Existing Stand Condition/Vegetation:</u> This unit is a low-lying, lower productive, unmanaged stand with old-growth stand structure. The stem decay and windthrow risk rating for the stand is moderate. Mistletoe infections are light.</p> <p><u>Silvicultural Objective/Desired Condition:</u> The desired condition for this stand is a highly productive, healthy, windfirm, stand grown for timber management that retains residual trees as needed to meet standards and guides.</p> <p><u>Silvicultural Prescription:</u> This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with moderately severe stem decay and defect resulting in a situation where stand growth is being offset or exceeded by decay. Even-aged clearcutting with leave trees (leaving one dominant or co-dominant cedar per 5 acres for future seed source) is being prescribed to preclude or minimize the risk of windthrow post harvest, promote natural regeneration by opening up the canopy, improve site productivity through increased soil temperature and minimize defect and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.</p>			
TIMBER/LOGGING: Setting M101 is designed for downhill cable yarding to a temporary road located off of the 51401 road. Setting M96 is designed for shovel yarding to continuous landings on the 51401 road.			
ENGINEERING/ROADS: Construct 0.11 mile of temporary road. The road will be decommissioned after the timber sale. The material source is located on Road 6548 mp 0.06, Road 6548 mp 0.67, and Road 6540 mp 3.14.			
FISH/WATERSHED:			
There is a Class III, channel type HC5 stream adjacent to the unit. Do not harvest in the v-notch. (BMP 13.9, 13.16). RAW buffers may be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.			
SCENERY: Setting M96 is unseen. Setting M101 is visible from the head of the Burnet Inlet Viewshed, where the adopted SIO is low. Only a small portion of the entire unit is evident, so the proposed prescription will meet a low SIO.			
SOILS: This unit includes 4 acres of slopes over 72 percent gradient. A slope stability assessment is included in the project record. (BMP 13.5) Based on the field review, harvest on slopes over 72 percent gradient will require full suspension to minimize soil disturbance and landslide potential. (BMP 13.9) This unit harvests 2 acres of forested wetlands. Shovel yarding will follow BMPs 12.5, 13.2 and 13.9; shovel tracks may need to be supported by slash (BMP 13.9) to minimize soil disturbance.			
WILDLIFE: The temporary road in this unit is within one half mile of one or more bald eagle nests and may be subject to timing restrictions for blasting under 50 CFR Part 22.26.			
ROADLESS AREAS: Part of this unit is adjacent to the Mosman Inventoried Roadless Area (#233).			
No resource concerns were identified for Geology, Recreation, Botany, and Heritage.			

Appendix ROD-1

Unit 44

Navy Timber Sale Selected Alternative

19 Acres



Unit Data Card – Navy Timber Sale Record of Decision

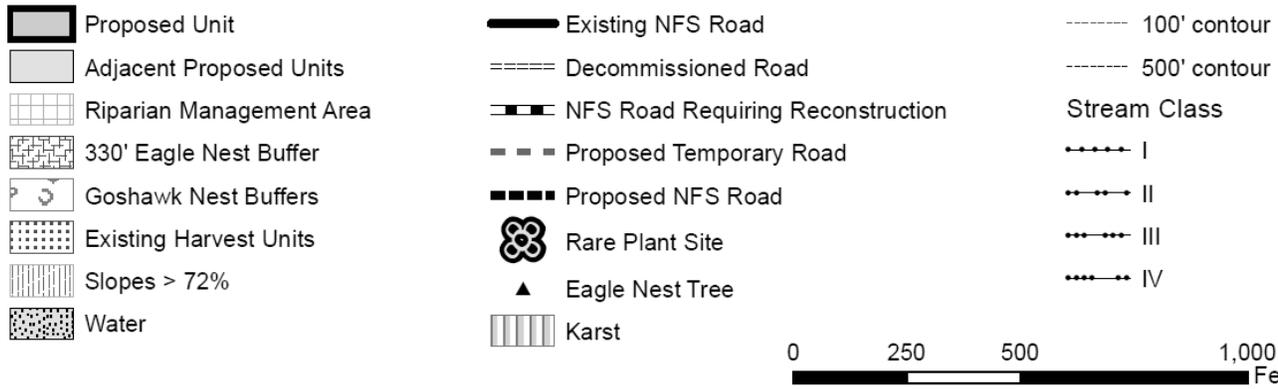
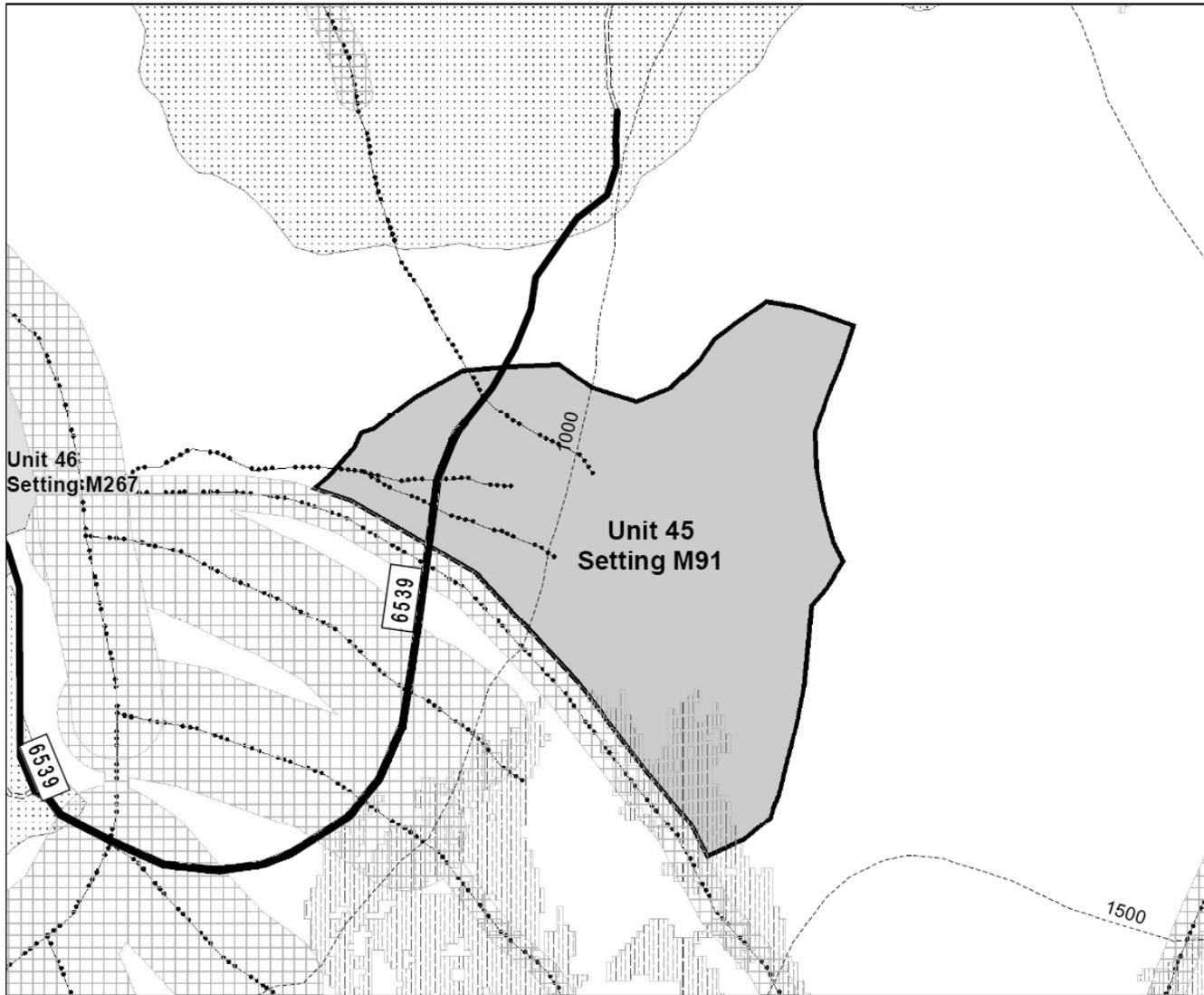
LUD: TM	Logging Helicopter Systems:	Total Unit Acres: 19	Unit Number: 44
		Harvest Acres: 19	Net Harvest Volume (Saw) MBF: 98
<p>SILVICULTURE: <u>Existing Stand Condition/Vegetation:</u> The stand is a wind-generated, multicanopy, uneven-aged stand. The stem decay, physical defect and windthrow risk rating for the stand is moderate. Unit is productive and lies along the backline of a previously harvested unit that was cut in 1993.</p> <p><u>Silvicultural Objective/Desired Condition:</u> The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.</p> <p><u>Silvicultural Prescription:</u> Uneven-aged prescription using single-tree selection (STS) retaining at least 70 percent of the unit pretreatment basal area, based on standing live tree total for the unit, uncut. Individual trees selected for harvest may occur in small groups but will generally be evenly distributed across the stand. Any small groups will usually be less than 1 acre but may occasionally go up to 2 acres in size where needed to address insect and disease issues or capitalize on existing advanced regeneration of desirable tree species. Retain at least 50 percent of the cedar and spruce BA to ensure species diversity.</p>			
<p>TIMBER/LOGGING: Unit is designed for helicopter yarding to landings on the 51401 road.</p>			
<p>FISH/WATERSHED: There is a Class I/II, channel type MM1 and HC3, stream (Duckbill Creek) adjacent to the west unit boundary. No harvest within 120 feet of the channel. RMA buffer has been built into unit design (BMP 12.6, 12.6a, 13.16). RAW buffers may be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.</p>			
<p>SCENERY: Unit is visible from the head of the Anita Bay viewshed, where the adopted SIO is very low. The proposed prescription will meet a moderate SIO.</p>			
<p>SOILS: Unit includes 1 acre with slopes over 72 percent gradient. Helicopter harvest with partial cut prescription will minimize soil disturbance.</p>			
<p>WILDLIFE: Consider opportunities to allow for the elevational migration of wildlife, by retaining structure along the boundary with the managed stand to the northeast.</p>			
<p>ROADLESS AREAS: Part of this unit is adjacent to the Mosman Inventoried Roadless Area (#233).</p>			
<p>No resource concerns were identified for Geology, Roads, Botany and Heritage.</p>			

Appendix ROD-1

Unit 45

Navy Timber Sale Selected Alternative

20 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: TM	Logging Cable Systems:	Total Unit Acres: 20	Unit Number: 45
		Harvest Acres: 20	Net Harvest Volume (Saw) MBF: 335

SILVICULTURE:

Existing Stand Condition/Vegetation: This unit is an unmanaged stand with old-growth stand structure. The stem decay and windthrow risk rating for the stand is moderate. Mistletoe infections are light.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm, stand grown for timber management that retains residual trees as needed to meet standards and guides.

Silvicultural Prescription: This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with moderately severe stem decay and defect resulting in a situation where stand growth is being offset or exceeded by decay. Even-aged clearcutting with leave trees (leaving one dominant or co-dominant cedar per 5 acres for future seed source) is being prescribed to preclude or minimize the risk of windthrow post harvest, promote natural regeneration by opening up the canopy, improve site productivity through increased soil temperature and minimize defect and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.

TIMBER/LOGGING: This unit is designed for downhill cable yarding to the 6539 road.

FISH/WATERSHED:

There is a Class III, channel type HC6 stream on the southwestern unit boundary. Do not harvest in the v-notch (BMP 13.9, 13.16).

There are three Class IV, channel type HC5 streams within the unit. Fall timber away from streams if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16).

RAW buffers may be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.

SCENERY: Unit is not seen from any visual priority travel route or use area.

SOILS: Unit includes 1 acre with slopes over 72 percent gradient. A slope stability assessment will be conducted during project implementation. (BMP 13.5) Harvest on unstable slopes adjacent to the stream will be avoided. This unit includes 1 acre of forested wetlands; cable yarding will minimize soil disturbance.

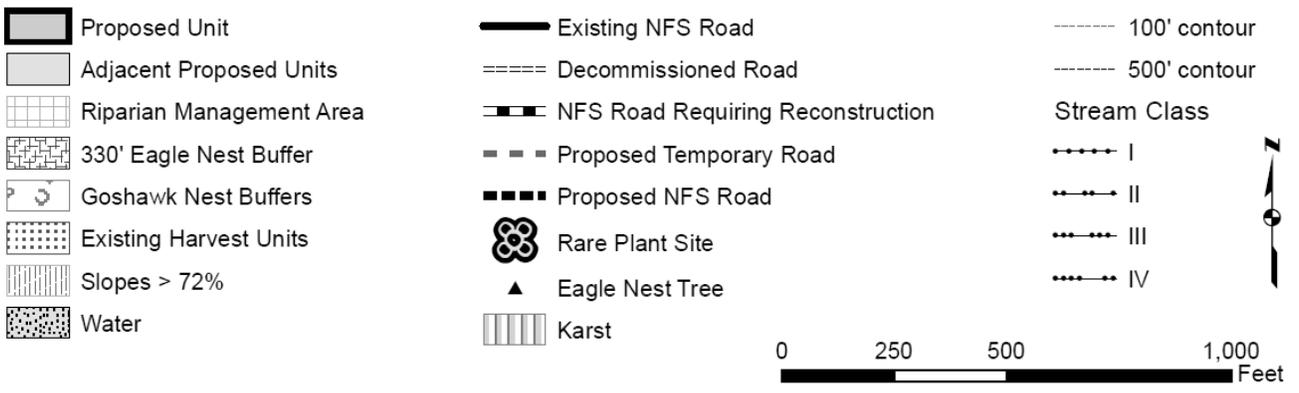
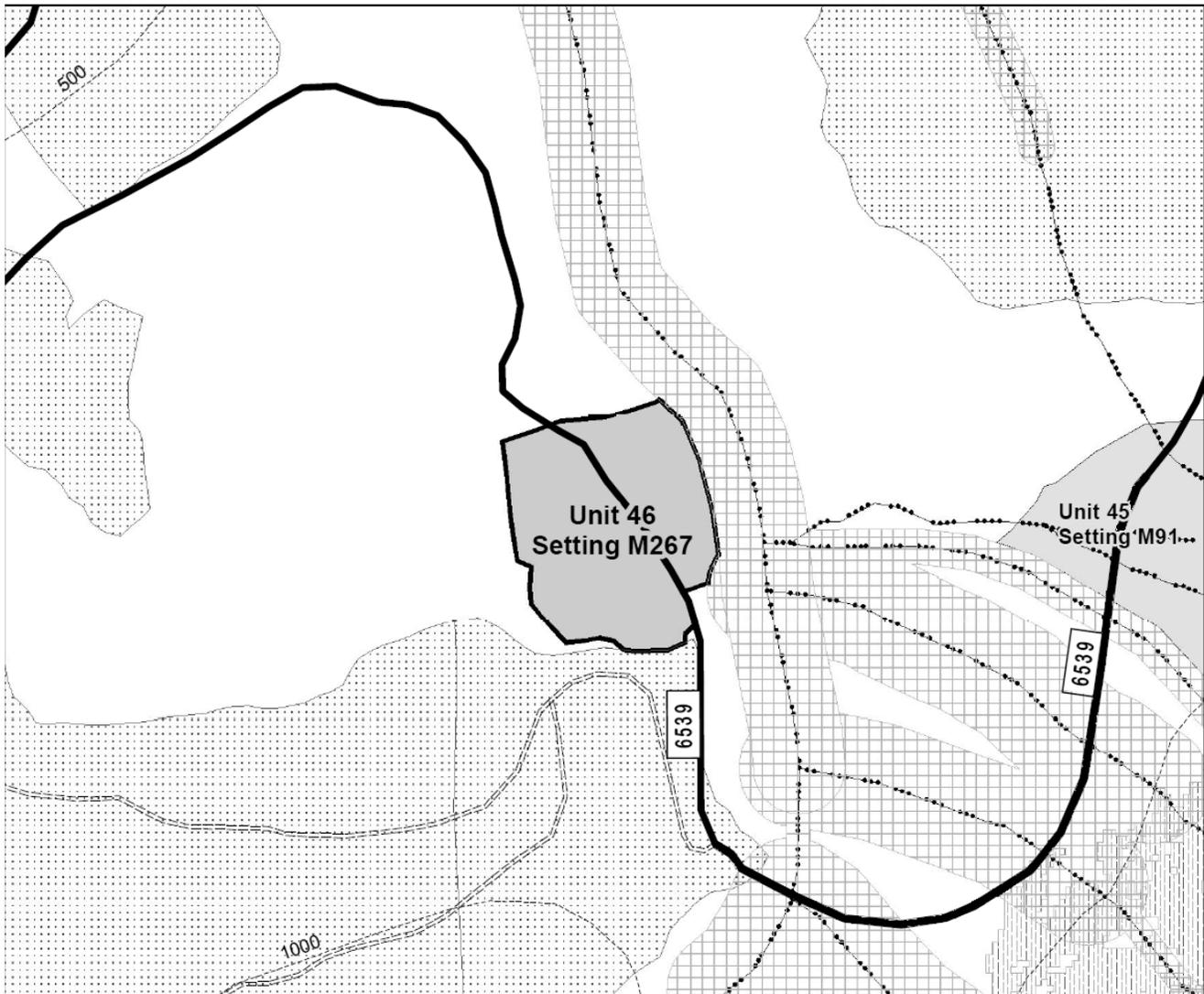
No resource concerns were identified for Roads, Botany, Wildlife, Geology, Heritage and Recreation.

Appendix ROD-1

Unit 46

Navy Timber Sale Selected Alternative

6 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: TM	Logging Systems: Shovel	Total Unit Acres: 6	Unit Number: 46
		Harvest Acres: 6	Net Harvest Volume (Saw) MBF: 93

SILVICULTURE:

Existing Stand Condition/Vegetation: This unit is an unmanaged stand with old-growth stand structure. It is a gently rolling, low-productivity site that has a fairly large component of cedar, many of which are snags or have defect and small crowns.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet standards and guides.

Silvicultural Prescription: This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with stem decay and defect, particularly in the redcedar, resulting in a situation where stand growth is being offset or exceeded by decay. Even-aged clearcutting with leave trees (leaving one dominant or co-dominant cedar per 5 acres for future seed source) is being prescribed to preclude or minimize the risk of windthrow post harvest, promote natural regeneration by opening up the canopy, improve site productivity through increased soil temperature and minimize defect and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.

TIMBER/LOGGING: This unit is designed for shovel yarding to the existing 6539 road.

FISH/WATERSHED:

There is a Class II, channel type HC3 stream (Thrucut Creek) on the eastern unit boundary. No commercial timber harvest within 120 feet of the channel. A RMA buffer has been built into unit design (BMP 12.6, 12.6a, 13.16).

RAW buffers may be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.

SCENERY: The unit is visible from the head of the Anita Bay Inlet Viewshed, where the adopted SIO is very low. Only a slight portion of this opening is evident, so proposed prescription will meet a moderate SIO.

SOILS: This unit harvests 6 acres of forested wetlands. Shovel yarding will follow BMPs 12.5, 13.2 and 13.9; shovel tracks may need to be supported by slash (BMP 13.9) to minimize soil disturbance.

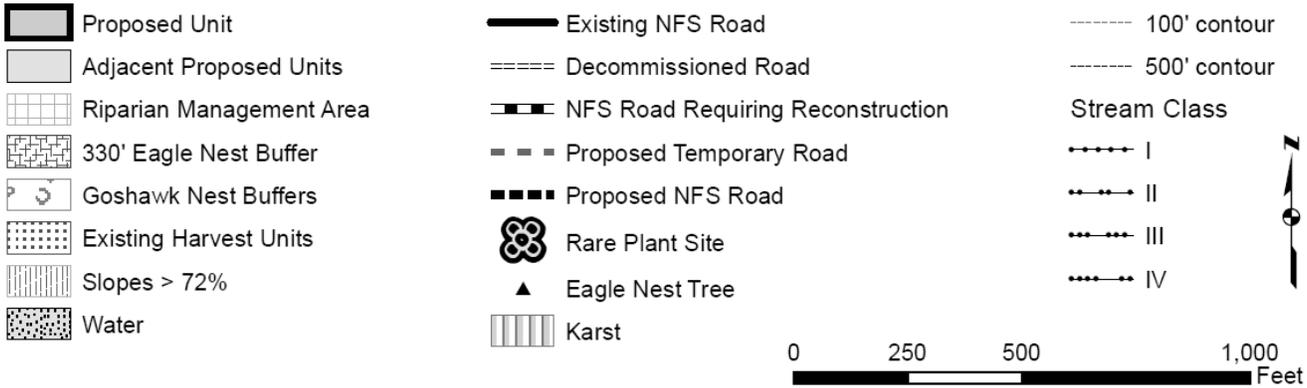
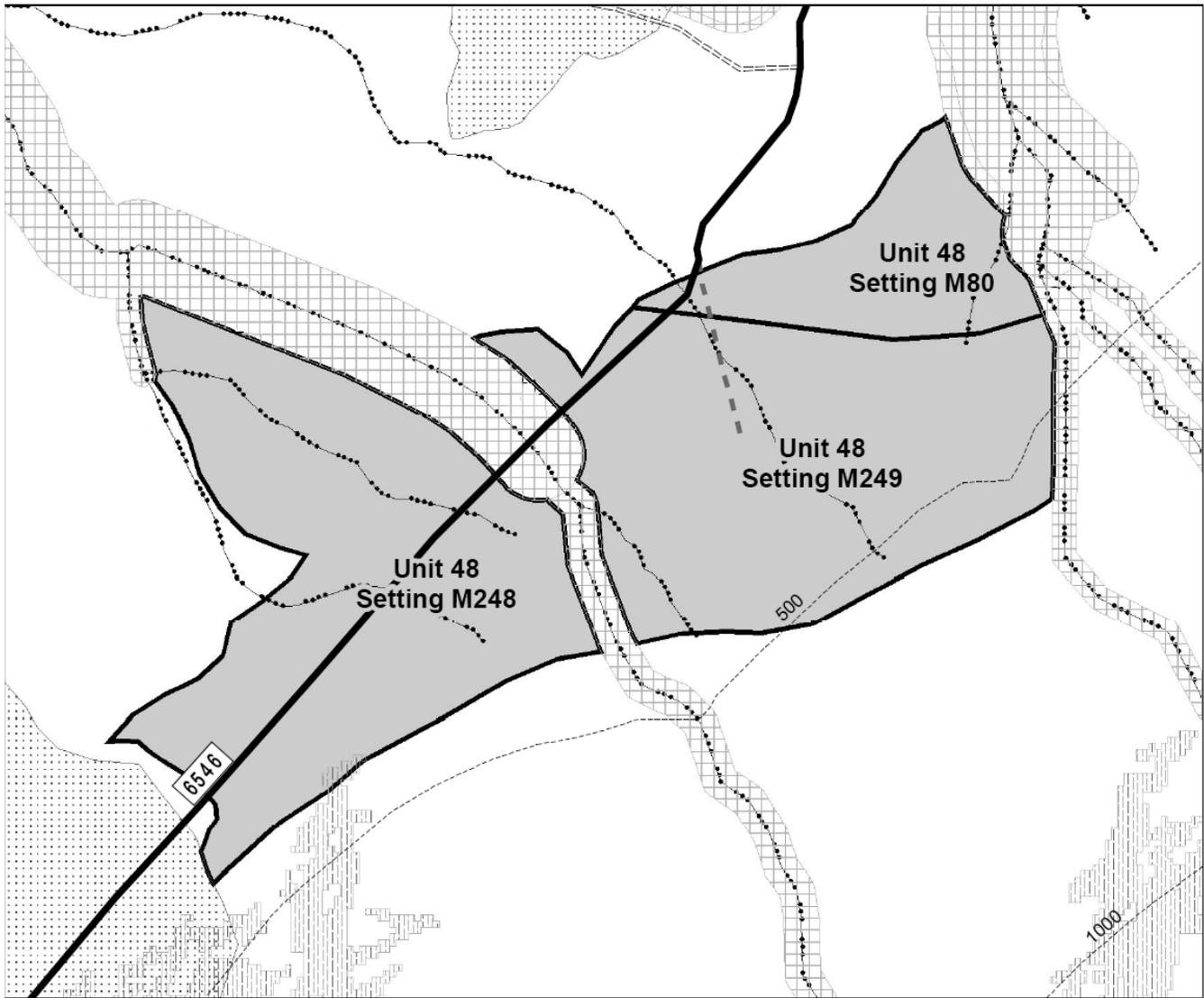
No resource concerns were identified for Roads, Geology, Heritage, Recreation, Botany and Wildlife.

Appendix ROD-1

Unit 48

Navy Timber Sale Selected Alternative

41 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: TM	Logging Systems: Cable & Shovel	Total Unit Acres: 41	Unit Number: 48
		Harvest Acres: 41	Net Harvest Volume (Saw) MBF: 677

SILVICULTURE:

Existing Stand Condition/Vegetation: This unit is an unmanaged stand with old-growth stand structure. It is a gently rolling, moderately productivity site that has low wind risk and light mistletoe infections but moderate amounts of decay in the stand.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet standards and guides.

Silvicultural Prescription: This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with moderately severe levels of stem decay and defect, resulting in a situation where stand growth is being offset or exceeded by decay. Even-aged clearcutting is being prescribed to preclude or minimize the risk of windthrow post harvest, promote natural regeneration by opening up the canopy, improve site productivity through increased soil temperature and minimize defect and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.

TIMBER/LOGGING: This unit is designed for downhill cable and shovel yarding to the existing 6546 road. A short temporary spur road may be necessary to facilitate yarding in setting M249. Shovel yard setting M248.

ENGINEERING/ROADS: Construct 0.09 mile of temporary road if needed to access setting M249. If constructed, the road will be decommissioned after the timber sale.

FISH/WATERSHED:

There is a Class II, channel type AF1 stream on the northeast corner of the unit. No harvest within 140 feet of the stream channel (BMP 13.9, 13.16).

There is a Class II, channel type HC3 stream that bisects unit. No harvest within 100 feet of the stream channel. (BMP 13.9, 13.16).

There are three Class III, channel types HC1, HC5, and HC6, within or adjacent to the unit. Do not harvest in the v-notch, (BMP 13.9, 13.16).

There are five Class IV, channel type HC5, streams within the unit. Fall timber away from streams if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16).

The temporary road may have stream crossings depending on final location. Adequate size structures will be necessary and will be removed immediately following timber sale activities. (BMP 13.16, 14.20).

RAW buffers may be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.

SOILS: Shovel yarding will follow BMPs 12.5, 13.2 and 13.9; shovel tracks may need to be supported by slash (BMP 13.9) to minimize soil disturbance.

SCENERY: Unit is not seen from any visual priority travel route or use area.

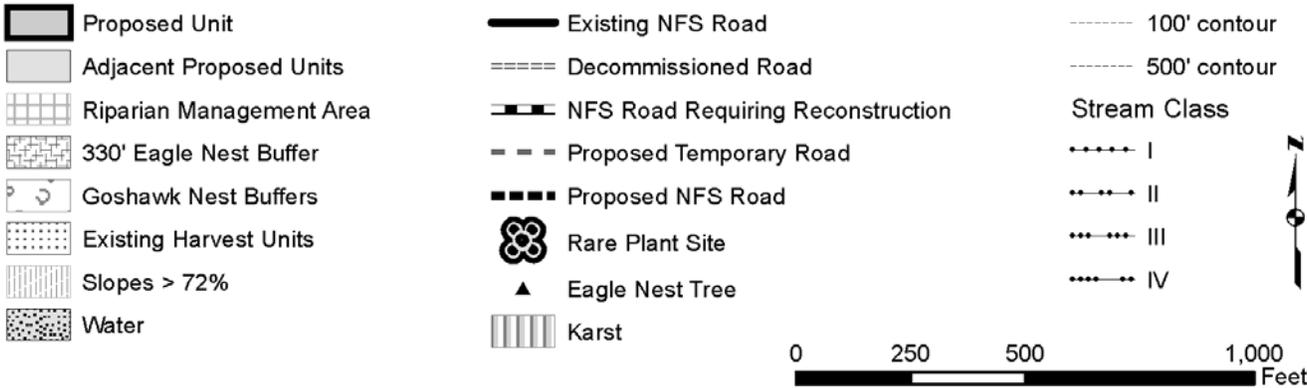
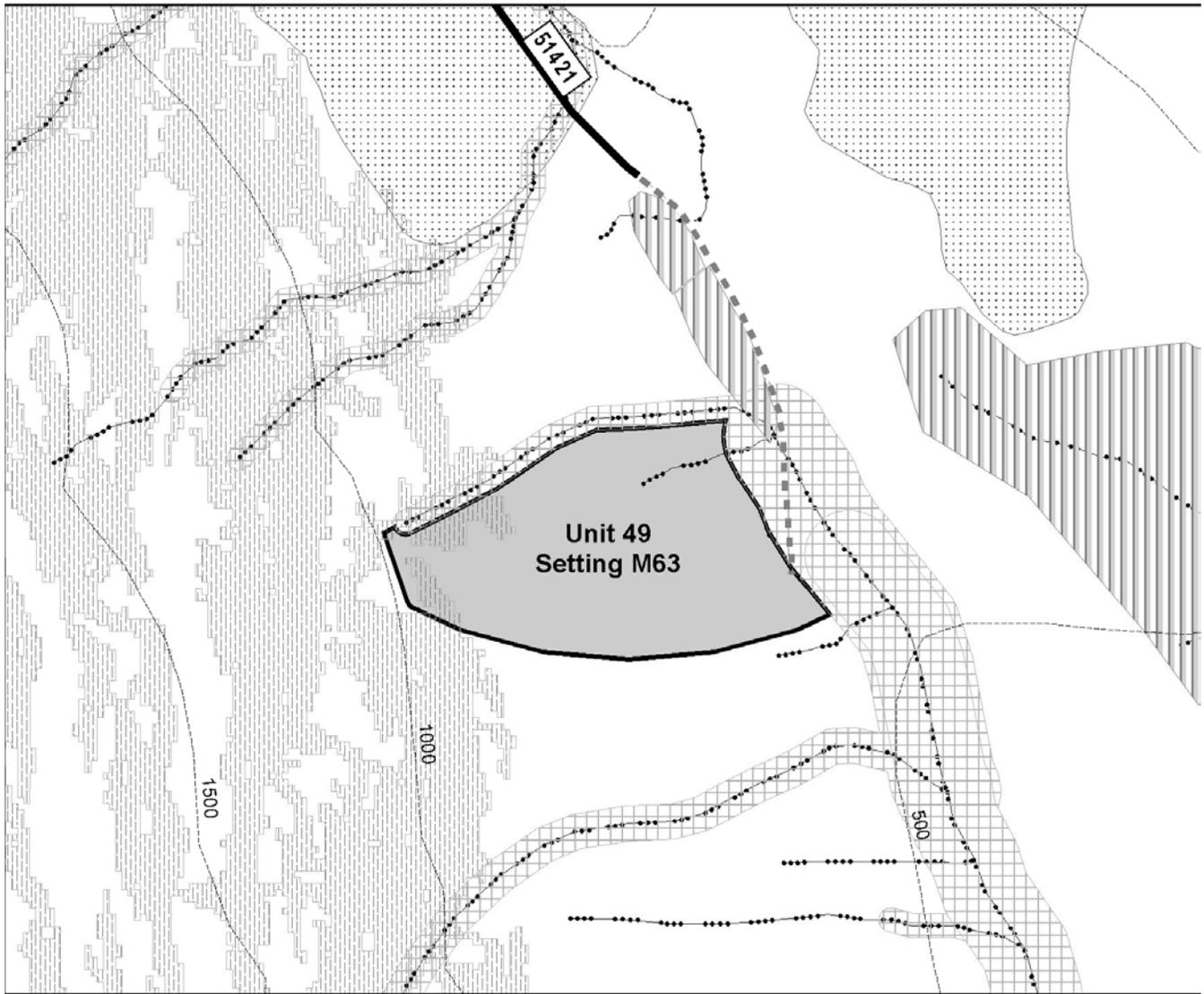
No resource concerns were identified for Geology, Wildlife, Heritage, Botany and Recreation.

Appendix ROD-1

Unit 49

Navy Timber Sale Selected Alternative

10 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: TM	Logging Cable Systems:	Total Unit Acres: 10	Unit Number: 49
		Harvest Acres: 10	Net Harvest Volume (Saw) MBF: 158

SILVICULTURE:

Existing Stand Condition/Vegetation: This unit is an unmanaged stand with old-growth stand structure. It is a moderately productive site that has a fairly large amount of snags, and moderately severe levels of stem defect and decay.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet standards and guides.

Silvicultural Prescription: This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with stem decay and defect, resulting in a situation where stand growth is being offset or exceeded by decay. Even-aged clearcutting is being prescribed to preclude or minimize the risk of windthrow post harvest, promote natural regeneration by opening up the canopy, improve site productivity through increased soil temperature and remove/minimize defect and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.

TIMBER/LOGGING: Unit is designed for downhill cable yarding to landings located on the proposed temporary road. Retention will be located in the northern portion as a RAW buffer.

ENGINEERING/ROADS: Construct 0.24 mile of temporary road along the base of a ridge. The road will be located to avoid a small section of moderate- and high-vulnerability karst, and crosses a Class III stream. The road will be decommissioned after the timber sale. The material source is located on Road 6540 mp 10.3, and Road 51421 mp 0.34.

FISH/WATERSHED:

There is a Class II/III, channel type MM1, stream (Mirkwood Creek) on the east side of the unit. No harvest within 120 feet of the stream channel. (BMP 13.9, 13.16).

There is one Class III, channel type HC6, within or adjacent to unit. No harvest in v-notch. (BMP 13.9, 13.16).

There is one Class IV, channel type HC5 streams within the unit. Fall timber away from streams if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16).

Limit adjacent sedimentation impacts during road construction. The temporary road crosses a very active Class III, channel type HC5, stream (mp. 0.60). A log stringer bridge may be necessary.

Adequate size structures will be necessary for all stream crossings (BMP 14.17) and will be removed immediately following timber sale activities (BMP 13.16, 14.20).

RAW buffers will be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.

GEOLOGY/KARST: A well-developed karst area including moderate- and high-vulnerability karst north of the unit was excluded from the harvest unit. Road will be located downslope of the karst.

SCENERY: Unit is not seen from any visual priority travel route or use area.

SOILS: This unit includes minor inclusions of slopes over 72 percent gradient. Require partial suspension.

ROADLESS AREAS: Part of this unit is adjacent to the Mosman Inventoried Roadless Area (#233).

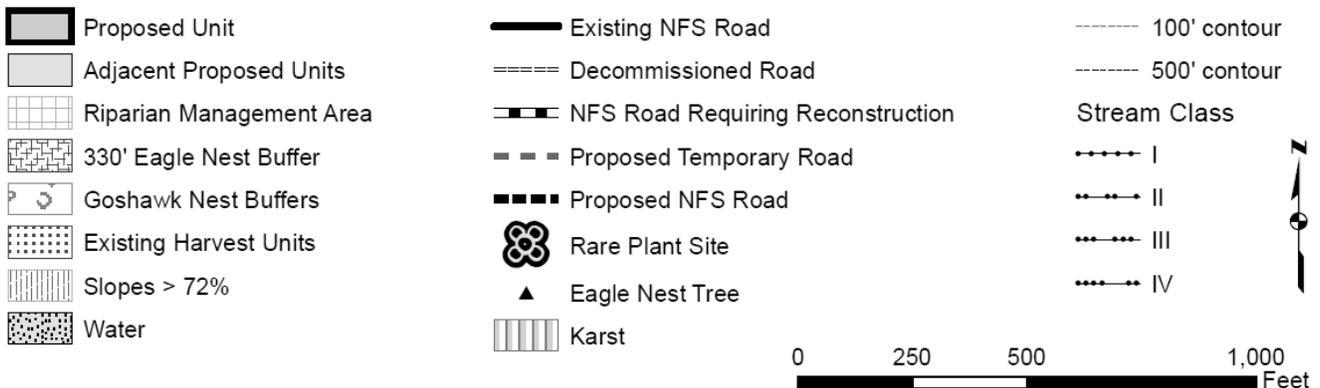
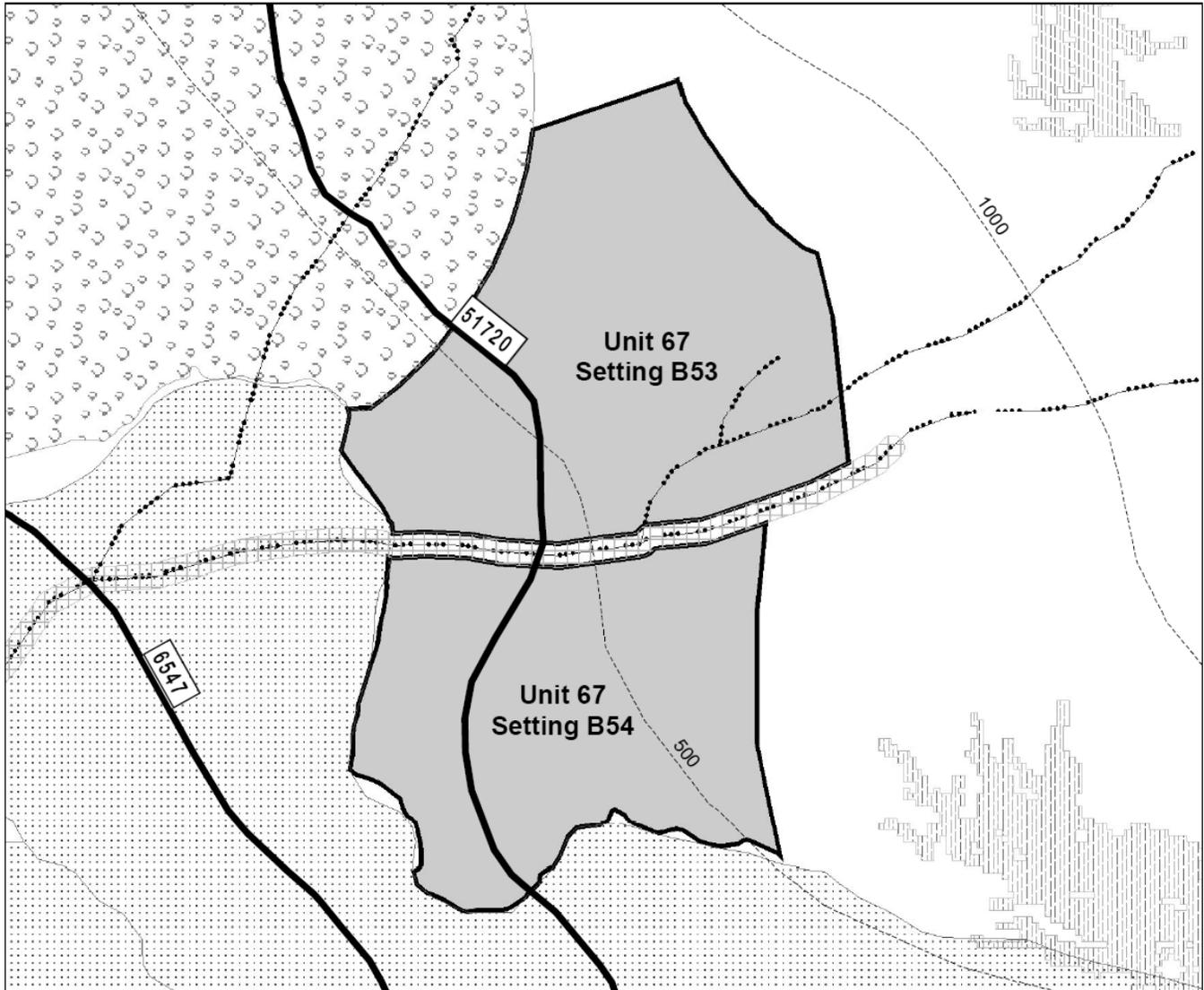
No resource concerns were identified for Wildlife, Heritage, and Botany.

Appendix ROD-1

Unit 67

Navy Timber Sale Selected Alternative

36 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: TM, SV	Logging Cable Systems:	Total Unit Acres: 36	Unit Number: 67
		Harvest Acres: 18	Net Harvest Volume (Saw) MBF: 299

SILVICULTURE:

Existing Stand Condition/Vegetation: This unit has old-growth stand structure. It is a productive unit that lies along the backline of an existing young growth unit that was harvested in 1982. The stem decay and windthrow risk rating for the stand is high, while mistletoe infections were not recorded.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet standards and guides or other objectives.

Silvicultural Prescription: This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with severe levels of stem decay and defect resulting in a situation where stand growth is being offset or exceeded by decay and defect. Even-aged clearcutting with reserves for visuals and wildlife (50 percent of acres) is being prescribed to preclude or minimize the risk of windthrow post harvest in this high risk unit, promote natural regeneration by opening up the canopy, improve site productivity through increased soil temperature and minimize defect and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information. Treat setting B53 as a clearcut and then reserve setting B54 as reserves for wildlife connectivity.

TIMBER/LOGGING: The unit is designed for cable yarding to the existing 51720 road.

FISH/WATERSHED:

There is a Class III, channel type HC5, stream that bisects the unit. Do not harvest in the v-notch. (BMP 13.9, 13.16). There are two Class IV, channel type HC5, streams within the unit. Fall timber away from the streams if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16).

RAW buffers will be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.

SCENERY: Unit is seen from the head of the Burnett Inlet viewshed, where the adopted SIOs are moderate to very low. The portion of Scenic Viewshed that lies at the bottom of setting B54 is unseen. The proposed prescription will meet moderate to very low SIOs.

SOILS: This unit is not suitable for harvest with ground-based equipment due to slope steepness and soil conditions.

WILDLIFE: This unit is adjacent to a 230-acre goshawk nesting habitat buffer surrounding several known nests. No commercial timber harvest is permitted within the identified buffer. New road construction is permitted if no other reasonable roading alternatives outside the mapped nesting habitat exist. Permit no continuous disturbance likely to result in nest abandonment within the surrounding 600 feet from March 15 to August 15. Activity restrictions are removed for active nests that become inactive or unsuccessful.

This prescription retains 50% acres adjacent to the existing clearcut for wildlife connectivity which should provide adequate cover.

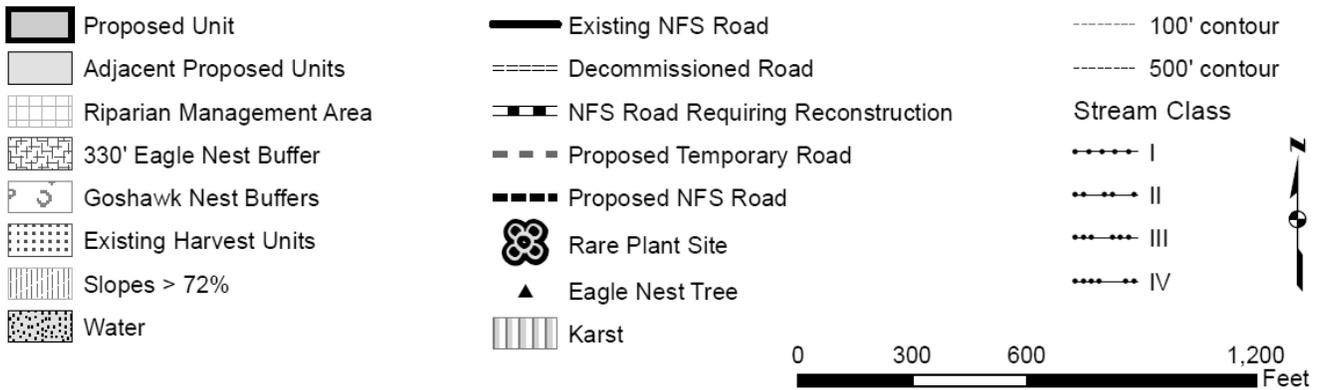
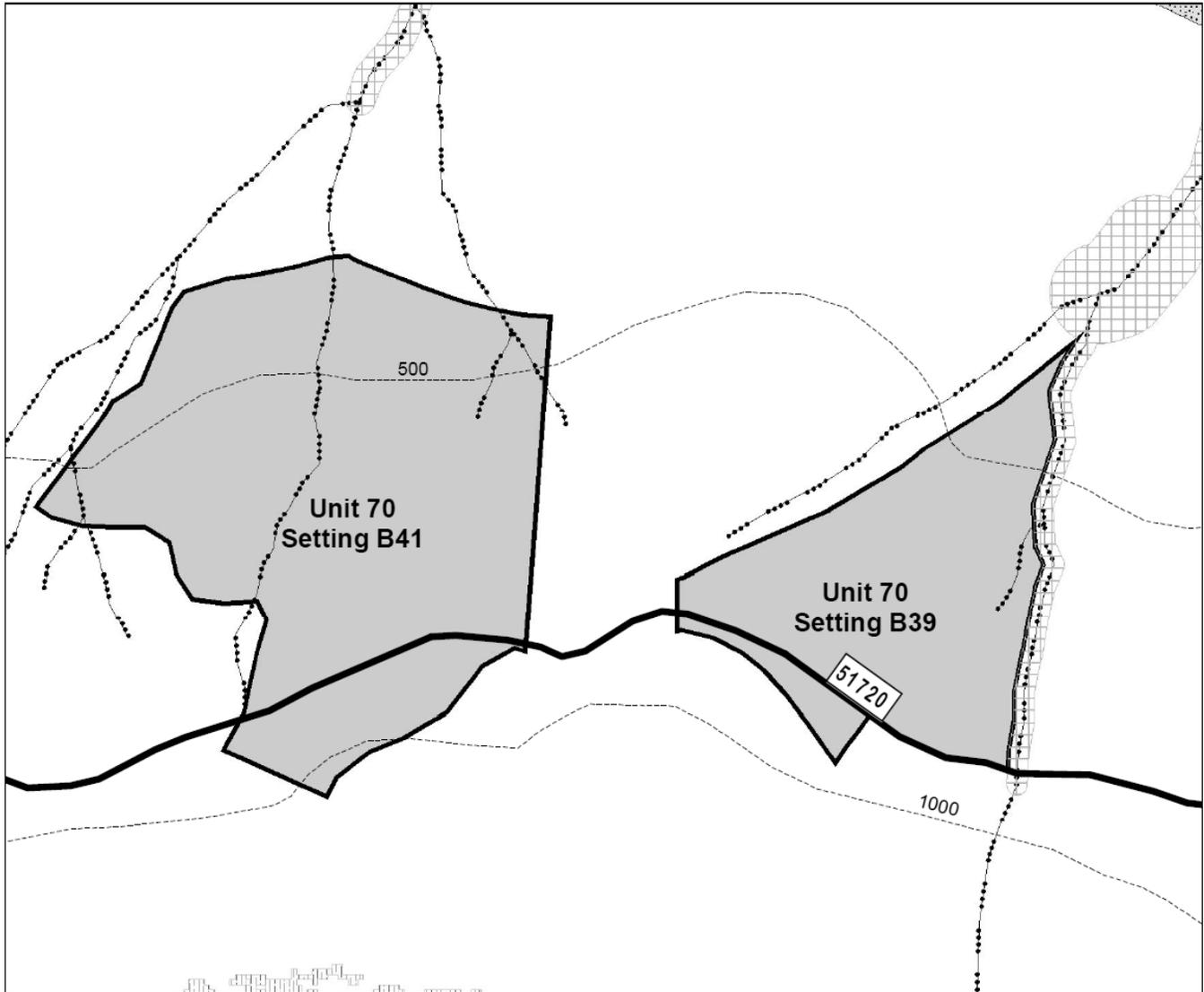
No resource concerns were identified for Roads, Botany, Geology, Heritage, Recreation.

Appendix ROD-1

Unit 70

Navy Timber Sale Selected Alternative

49 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: ML, TM	Logging Cable Systems:	Total Unit Acres: 49	Unit Number: 70
		Harvest Acres: 41	Net Harvest Volume (Saw) MBF: 694

SILVICULTURE:

Existing Stand Condition/Vegetation: This unit has old-growth stand structure with moderate levels of mistletoe in most western hemlock. Stem decay and defect is prevalent throughout the stand and is found in all tree species. Windthrow risk rating for the stand is low.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet standards and guides or other objectives.

Silvicultural Prescription: This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with moderately severe mistletoe infections, stem decay and defect resulting in a situation where stand growth is being offset or exceeded by decay and mistletoe is affecting stand vigor. Even-aged clearcutting with reserves for visuals and wildlife (15 percent of acres) is being prescribed to preclude or minimize the risk of windthrow post harvest, promote natural regeneration by opening up the canopy, improve site productivity through increased soil temperature and minimize defect and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.

TIMBER/LOGGING: This unit is designed for uphill cable yarding to the existing 51720 road. Retention will be located in groups of clumps during layout in the southern (upper and middle elevational) portion of the unit. In setting B41, concentrate retention in western portion above and below the road.

ENGINEERING/ROADS: None

FISH/WATERSHED:

There is a Class III, channel type HC5, stream that is adjacent to the unit with a section of AF2 that will affect the northeast corner of the unit. No harvest in the v-notch. Provide buffer on active portion of the alluvial fan. (BMP 13.9, 13.16).

There are at least five Class IV, channel type HC, streams within the unit. Fall timber away from streams if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16).

RAW buffers may be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.

SCENERY: Unit will be seen from nearly the entire length of the Anita Bay viewshed, which has an adopted SIO of low, and an intermediate VAC rating. To meet scenic integrity objectives, retention should be divided into groupings or clusters, and located near the tops and middle portions of the unit, instead of the bottom portions which are not visible. This will effectively break up or reduce the unit's openings enough to ensure the SIO is met. Additional adjustments to the unit boundary layout will further reduce the visual impact of the straight lines for a more natural appearance.

SOILS: This unit has broken ground with short steep pitches; require at least partial suspension.

WILDLIFE: Retention should be larger green trees and snags.

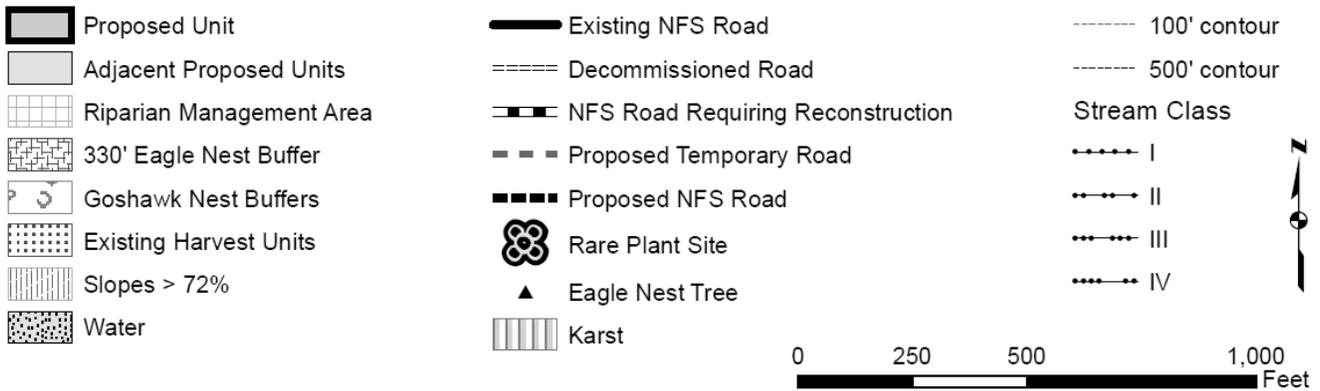
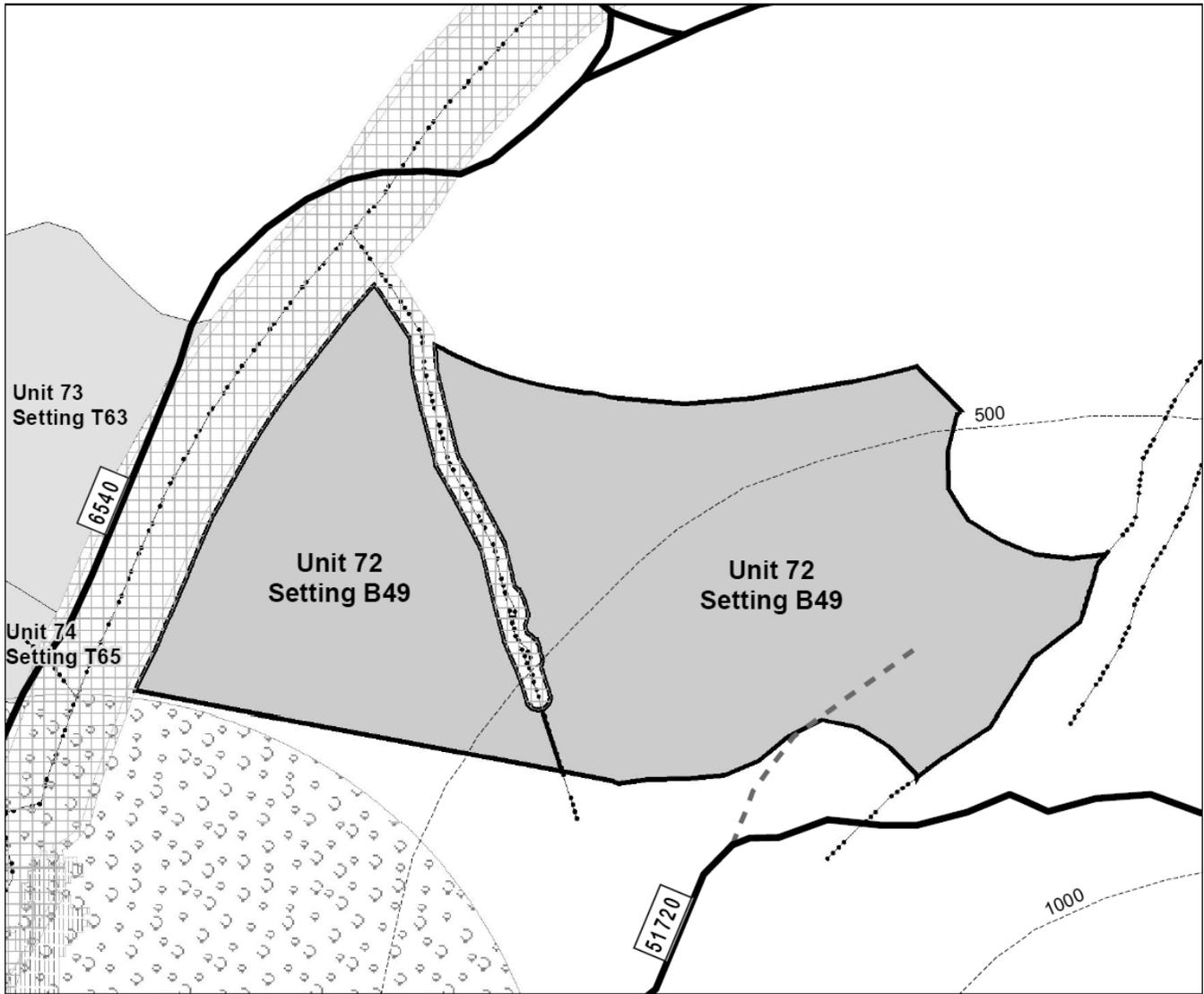
No resource concerns were identified for Roads, Botany, Geology, Heritage, Recreation.

Appendix ROD-1

Unit 72

Navy Timber Sale Selected Alternative

39 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: TM	Logging Cable Systems:	Total Unit Acres: 39	Unit Number: 72
		Harvest Acres: 20	Net Harvest Volume (Saw) MBF: 327

SILVICULTURE:

Existing Stand Condition/Vegetation: This unit has old-growth stand structure, west/northwest aspect with moderately severe levels of mistletoe in most western hemlock. Stem decay and defect is prevalent throughout the stand and is found in all tree species. Windthrow risk rating for the stand is low.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet standards and guides or other objectives.

Silvicultural Prescription: This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with moderately severe mistletoe infections, stem decay and defect resulting in a situation where stand growth is being offset or exceeded by decay and mistletoe is affecting stand vigor. Even-aged clearcutting with reserves for visuals and wildlife (50 percent of acres) is being prescribed to preclude or minimize the risk of windthrow post harvest, promote natural regeneration by opening up the canopy, improve site productivity through increased soil temperature and minimize defect and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.

TIMBER/LOGGING: This unit is designed for uphill cable yarding to a temporary spur off of the 51720 road. Retention will be located in the western portion of the unit.

ENGINEERING/ROADS: Construct 0.13 mile of temporary road. The road will be decommissioned after the timber sale. The material source is located on Road 51720, mp 0.74.

FISH/WATERSHED:

There is a Class II, channel type MM1, stream adjacent to the west side of the unit. No harvest within 120 feet of the channel (BMP 12.6).

There is a Class III, channel type HC5, stream in the unit. Do not harvest in the v-notch. (BMP 13.9, 13.16). Channel type verification may be necessary to determine alluvial characteristics of channel.

There is a Class IV, channel type HC5, portion of stream. Fall timber away from stream if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16).

RAW buffers may be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.

SCENERY: The unit is seen from the Anita Bay viewshed, which has an adopted SIO of very low. The proposed prescription will meet moderate SIOs.

SOILS: This unit has 3 acres with slopes steeper than 72 percent; this area is will be included in the 50 percent reserve.

WILDLIFE: This unit is near a 230-acre goshawk nesting habitat buffer. No commercial timber harvest is permitted within the identified buffer. Permit no continuous disturbance that is likely to result in nest abandonment within the surrounding 600 feet from March 15 to August 15. Noise disturbance (timing) restrictions are removed for active nests that become inactive or unsuccessful. Retention in western part of unit will help maintain connectivity.

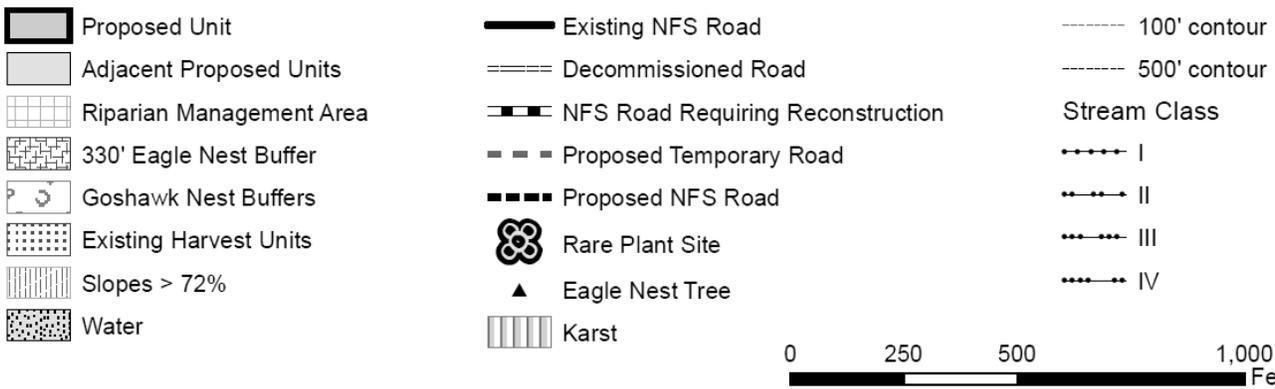
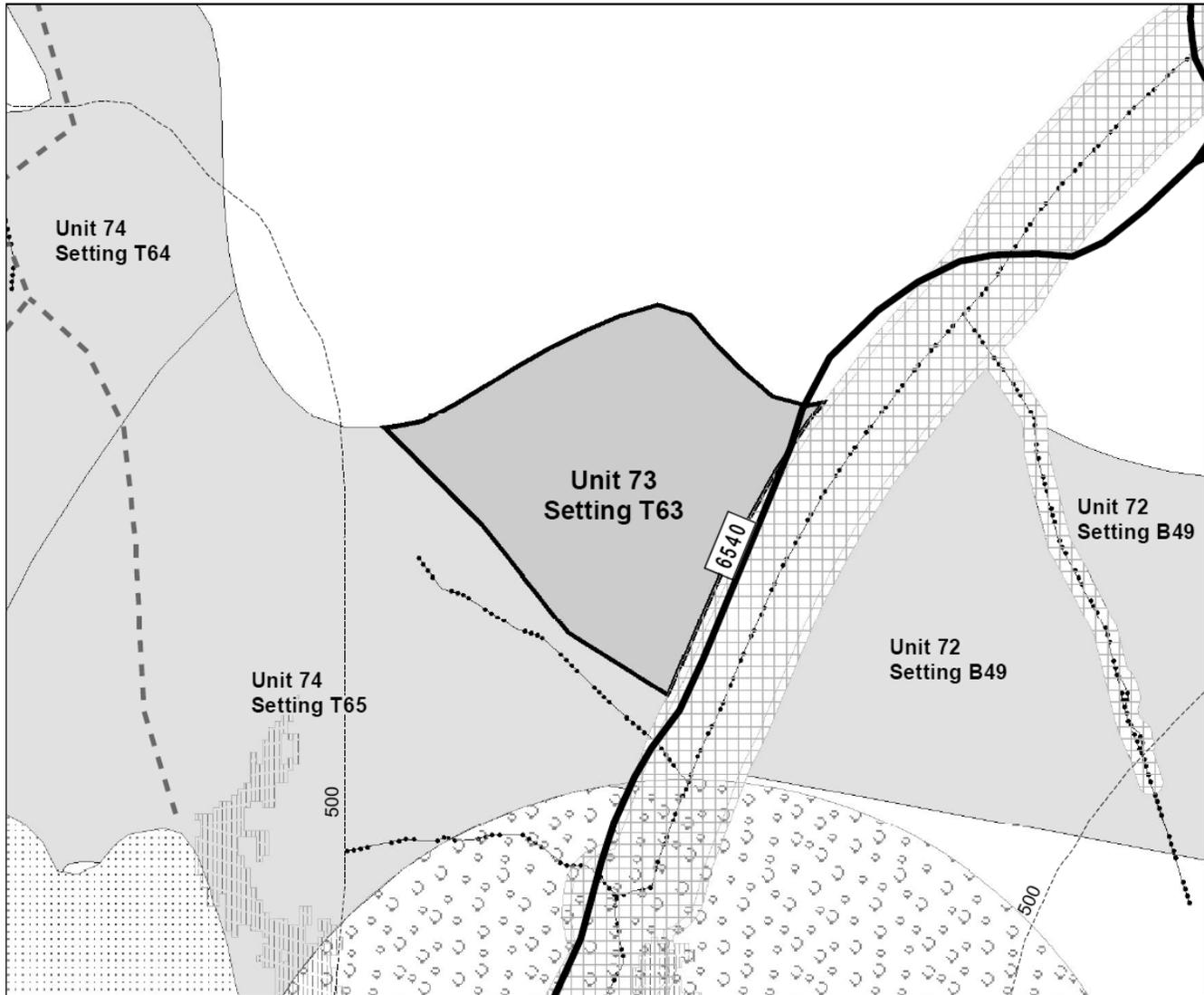
No resource concerns were identified for Geology, Heritage, Recreation, and Botany.

Appendix ROD-1

Unit 73

Navy Timber Sale Selected Alternative

12 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: TM	Logging Systems: Cable & Shovel	Total Unit Acres: 12	Unit Number: 73
		Harvest Acres: 10	Net Harvest Volume (Saw) MBF: 163

SILVICULTURE:

Existing Stand Condition/Vegetation: This unit has old-growth stand structure, an east/southeast aspect and prevalent stem decay and defect throughout the stand. The windthrow risk rating for the stand is moderate.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm, stand grown for timber management that retains residual trees as needed to meet standards and guides or other objectives.

Silvicultural Prescription: This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with moderately severe stem decay and defect resulting in a situation where stand growth is being offset or exceeded by decay and the light infections mistletoe may be affecting stand vigor. Even-aged clearcutting with reserves (15 percent of the unit for wildlife habitat connectivity) is being prescribed to preclude or minimize the risk of windthrow post harvest, promote natural regeneration by opening up the canopy, improve site productivity through increased soil temperature and minimize defect and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.

TIMBER/LOGGING: This unit is designed for downhill cable yarding to the existing 6540 road. If landings cannot be identified outside of the RMA, then a short temporary road may be required. Retention will be located along the west/southwest boundary during layout.

FISH/WATERSHED:

There is a Class II, channel type MM1, stream on the southeast side of the unit. No harvest within 120 feet of the channel (BMP 12.6, 12.6a, 13.16). No harvest below the road.

RAW buffers will be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.

SCENERY: Unit is not seen from any visual priority travel route or use area.

SOILS: Mitkof/Nakwasina soils, limit shovel operations to areas with slopes less the 25 percent; shovel yarding will follow BMPs 12.5, 13.2 and 13.9; tracks need to be supported by slash (BMP 13.9) to minimize soil disturbance.

WILDLIFE:

This unit is near a 230-acre goshawk nesting habitat buffer around several known goshawk nests. No commercial timber harvest is permitted within the identified buffer. New road construction is permitted if no other reasonable roading alternatives outside the mapped nesting habitat exist. Permit no continuous disturbance likely to result in nest abandonment within the surrounding 600 feet from March 15 to August 15. Noise disturbance (timing) restrictions are removed for active nests that become inactive or unsuccessful. Retaining a travel corridor along the boundary between Units 73 and 74 will provide minimal connectivity.

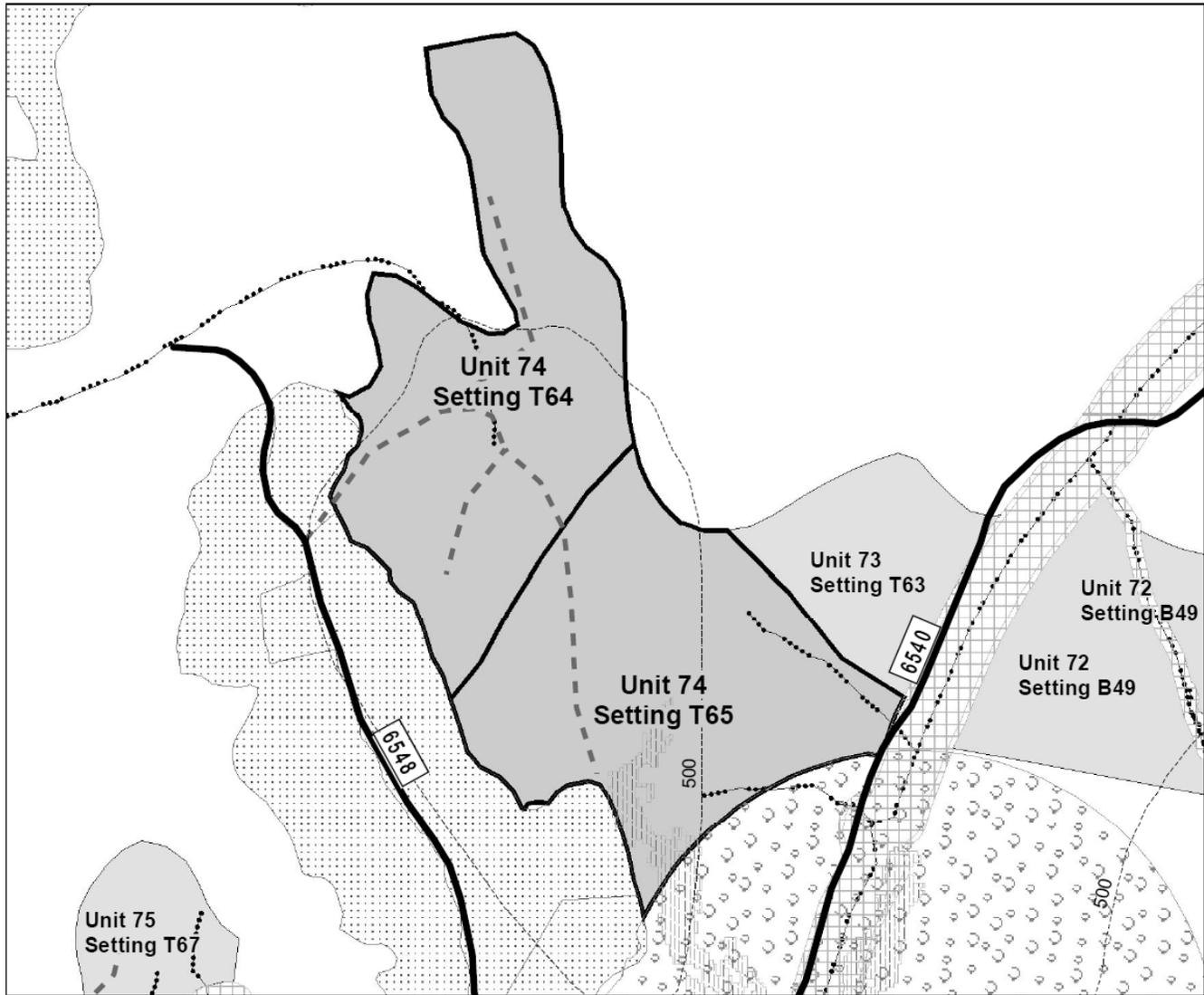
No resource concerns were identified for Roads, Geology, Heritage, Recreation, Botany and Soils.

Appendix ROD-1

Unit 74

Navy Timber Sale Selected Alternative

70 Acres



- | | | |
|--------------------------|-----------------------------------|---------------------|
| Proposed Unit | Existing NFS Road | 100' contour |
| Adjacent Proposed Units | Decommissioned Road | 500' contour |
| Riparian Management Area | NFS Road Requiring Reconstruction | Stream Class |
| 330' Eagle Nest Buffer | Proposed Temporary Road | I |
| Goshawk Nest Buffers | Proposed NFS Road | II |
| Existing Harvest Units | Rare Plant Site | III |
| Slopes > 72% | Eagle Nest Tree | IV |
| Water | Karst | |

Unit Data Card – Navy Timber Sale Record of Decision

LUD: TM	Logging Systems: Cable & Shovel	Total Unit Acres: 70	Unit Number: 74
		Harvest Acres: 60	Net Harvest Volume (Saw) MBF: 992

SILVICULTURE:

Existing Stand Condition/Vegetation: This unit has old-growth stand structure and has variable site productivity throughout. The unit covers a knob and therefore has varied aspects. The unit contains prevalent stem decay and defect throughout the stand. The windthrow and mistletoe rating for the stand is low.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm, stand grown for timber management that retains residual trees as needed to meet standards and guides or other objectives.

Silvicultural Prescription: This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with moderately severe stem decay and defect resulting in a situation where stand growth is being offset or exceeded by decay and the light infections mistletoe may be affecting stand vigor. Even-aged clearcutting with reserves (15 percent of the unit for wildlife habitat connectivity) is being prescribed to preclude or minimize the risk of windthrow post harvest, promote natural regeneration by opening up the canopy, improve site productivity through increased soil temperature and minimize defect and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.

TIMBER/LOGGING: The unit is designed for a combination of shovel and uphill cable yarding. Setting T64 is designed for shovel yarding to a proposed temporary road extension of the 6548 road. Setting T65 is designed for both cable and shovel yarding. Retention will be located along the eastern boundary during layout.

ENGINEERING/ROADS: Three temporary roads are needed to access the entire unit. The primary temporary road is 0.47 mile in length. The second temporary road intersects the primary temporary road at mp 0.14 and travels north for 0.20 mile. The third temporary road intersects the primary temporary road at mp 0.21 and travels south west for 0.10 mile. A total of 0.77 mile of temporary road will be constructed. The roads will be decommissioned after the timber sale. The material source is located on Road 6548 mp 0.06, Road 6548 mp 0.67, and Road 6540 mp 3.14.

FISH/WATERSHED:

There are three Class IV, channel type HC5, streams within the unit. Fall timber away from stream if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16).

There is a small portion of a Class II, channel type MM1, stream near the the unit. No harvest within 120 feet of the channel (BMP 12.6).

SCENERY: Setting T64 is not seen. Only T65 is seen from the Anita Bay viewshed, and has an adopted SIO of very low. The proposed prescription will meet this SIO.

SOILS: This unit includes 3 acres of slopes over 72 percent gradient. A slope stability assesment is included in the project record. (BMP 13.5) Based on the field review, slopes over 85 percent gradient are not suitable for timber harvest and harvest on slopes over 72 percent gradient will require full suspension to minimize soil disturbance and landslide potential. (BMP 13.9) Forested wetlands occur in the northern portion of the unit. Shovel yarding will follow BMPs 12.5, 13.2 and 13.9; shovel tracks may need to be supported by slash (BMP 13.9) to minimize soil disturbance.

WILDLIFE:

This unit is adjacent to a 230-acre goshawk nesting habitat buffer containing several known nests. No commercial timber harvest is permitted within the identified buffer. New road construction is permitted if no other reasonable roading alternatives outside the mapped nesting habitat exist. Permit no continuous disturbance likely to result in nest abandonment within the surrounding 600 feet from March 15 to August 15. Noise disturbance (timing) restrictions are removed for active nests that become inactive or unsuccessful. Retaining a travel corridor along the boundary between Units 73 and 74 will provide minimal connectivity.

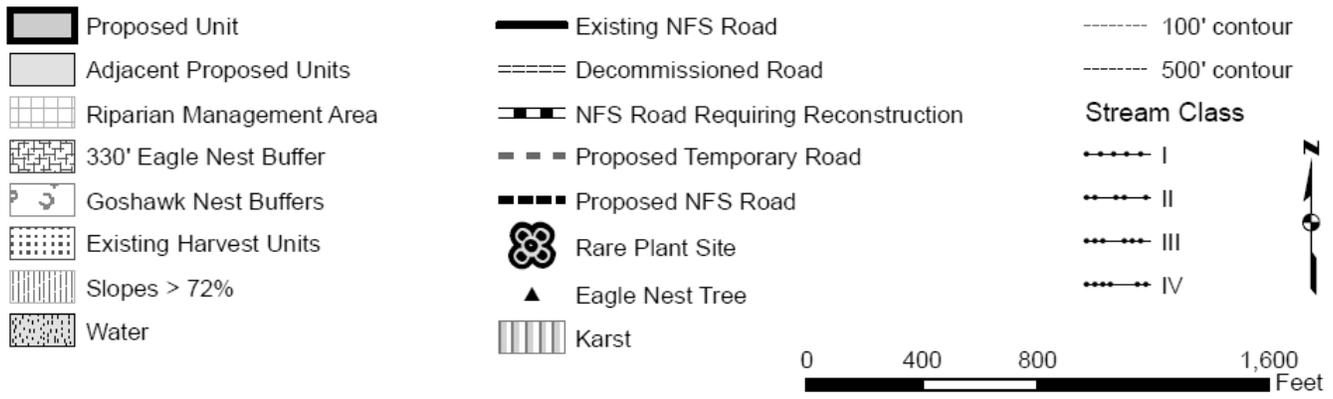
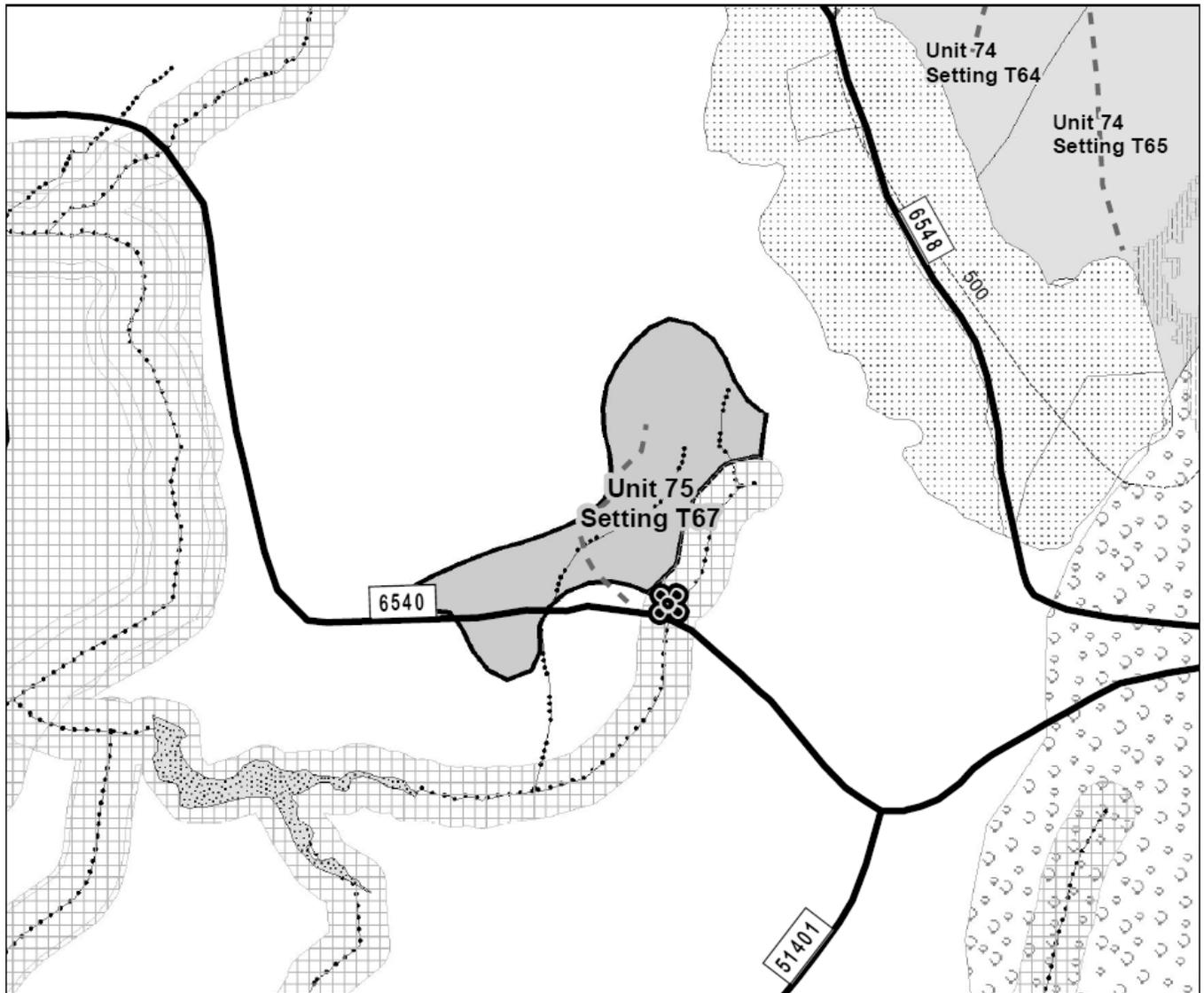
No resource concerns identified for Geology, Heritage, Botany and Recreation.

Appendix ROD-1

Unit 75

Navy Timber Sale Selected Alternative

15 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: TM	Logging Systems: Shovel	Total Unit Acres: 15	Unit Number: 75
		Harvest Acres: 15	Net Harvest Volume (Saw) MBF: 76

SILVICULTURE:
Existing Stand Condition/Vegetation: The stand is a wind-generated, multicanopy, uneven-aged stand. The stem decay, physical defect and mistletoe infections are low. There is evidence of some cedar decline in patches. The windthrow risk rating for the stand is high.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.

Silvicultural Prescription: Uneven-aged prescription using single-tree selection (STS) retaining at least 70 percent of the unit pretreatment basal area, based on standing live tree total for the unit, uncut. Individual trees selected for harvest may occur in small groups but will generally be evenly distributed across the stand. Any small groups will usually be less than 1 acre but may occasionally go up to 2 acres in size where needed to address insect and disease issues or capitalize on existing advanced regeneration of desirable tree species. Retain at least 50 percent of the cedar and spruce BA to ensure species diversity.

TIMBER/LOGGING: This unit is designed for shovel yarding to a temporary spur off the existing 6540 road. This unit is prescribed for a single-tree selection partial harvest. Leave trees will not impair yarding activities or pose a safety risk.

ENGINEERING/ROADS: Construct 0.17 mile of temporary road. The road will be decommissioned after the timber sale. The material source is located on Road 6548 mp 0.06, Road 6548 mp 0.67, and Road 6540 mp 3.14. Spur road will be located so as to not impact stream flow. The spur road has been relocated to avoid rare plants.

BOTANY: Ten individuals of lesser round-leaved orchid (*Platanthera orbiculata*) are located within the RMA buffer on the east side of this unit. The proposed spur road was relocated to establish a 100-foot windfirm buffer to avoid impacts.

FISH/WATERSHED:
 There is a Class I, channel type HC1, stream on the east side of the unit. No harvest within 100 feet of the channel (BMP 12.6, 12.6a, 13.16).
 The temporary road in the unit crosses a mapped Class IV stream, adequate size structures will be necessary for all stream crossings and will be removed immediately following timber sale activities (BMP 13.16, 14.20).
 There are two Class IV, channel type HC, streams in the unit. Fall timber away from stream if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16)

WILDLIFE: This unit is an 'island' of old growth in the dense scrub timber in this part of the area between Anita Bay and Burnett Inlet. Maintaining 70 percent retention would provide a 'stepping stone' for old-growth dependent species. A survey conducted in July 2015 discovered two juvenile goshawks within this unit; however, no nest was located. Implementation of this unit will be deferred until an additional survey can be completed to determine whether a nest is located in the vicinity.

SCENERY: Unit is not seen from any visual priority travel route or use area.

SOILS: The unit harvests 15 acres of forested wetlands. Shovel yarding will follow BMPs 12.5, 13.2 and 13.9; shovel tracks need to be supported by slash (BMP 13.9) to minimize soil disturbance.

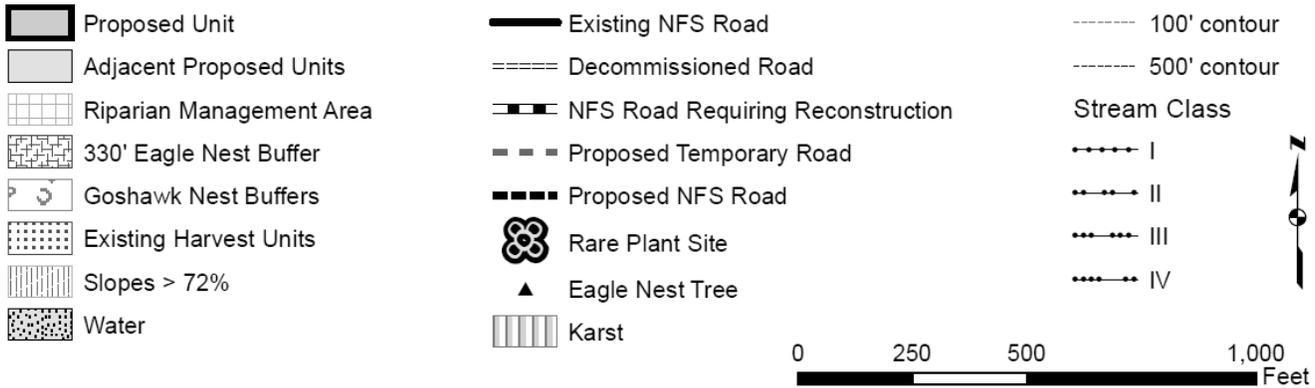
No resource concerns identified for Geology, Heritage, and Recreation.

Appendix ROD-1

Unit 76

Navy Timber Sale Selected Alternative

15 Acres



Unit Data Card – Navy Timber Sale Record of Decision

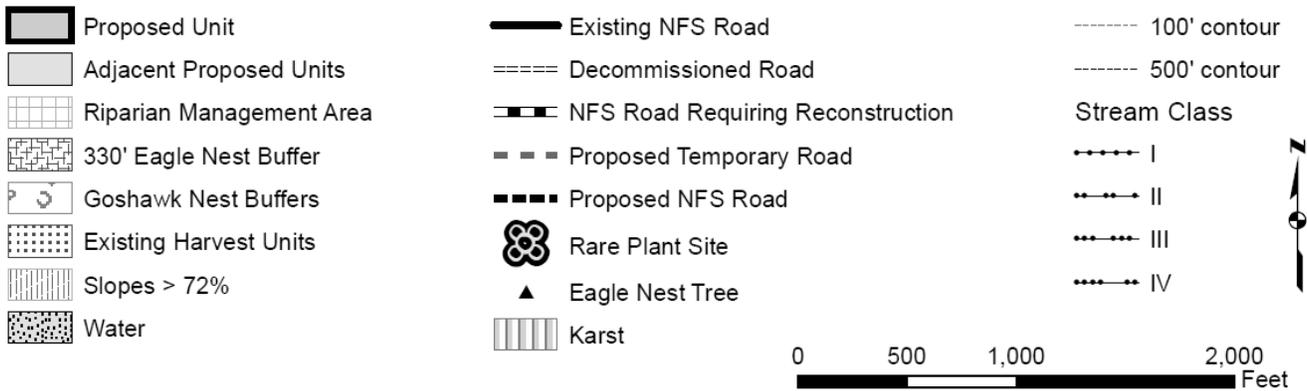
LUD: TM,SV	Logging Systems: Shovel	Total Unit Acres: 15	Unit Number: 76
		Harvest Acres: 15	Net Harvest Volume (Saw) MBF: 74
<p>SILVICULTURE: <u>Existing Stand Condition/Vegetation:</u> The stand is a wind-generated, multicanopy, uneven-aged stand with varied site productivity. The stem decay, physical defect and mistletoe infections are low. There is evidence of some cedar decline in patches. The windthrow risk rating for the stand is low.</p> <p><u>Silvicultural Objective/Desired Condition:</u> The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.</p> <p><u>Silvicultural Prescription:</u> Uneven-aged prescription using single-tree selection (STS) retaining at least 70 percent of the unit pretreatment basal area, based on standing live tree total for the unit, uncut. Individual trees selected for harvest may occur in small groups but will generally be evenly distributed across the stand. Any small groups will usually be less than 1 acre but may occasionally go up to 2 acres in size where needed to address insect and disease issues or capitalize on existing advanced regeneration of desirable tree species. Retain at least 50 percent of the cedar and spruce BA to ensure species diversity.</p>			
<p>TIMBER/LOGGING: This unit is designed for shovel yarding to the existing 6540 road. This unit is prescribed for a single tree selection partial harvest. Minimize harvest near the Class I stream to maintain security cover for brown bears. Leave trees will not impair yarding activities or pose a safety risk.</p>			
<p>FISH/WATERSHED: There is a Class I, channel types MC1, MC2, and FP4 streams (Pump Creek) on the east side of the unit. No harvest within 130 feet (FP4) or 100 feet (MC) of the channel; partial-harvest prescription should be windfirm (BMP 12.6, 12.6a, 13.16).</p>			
<p>WILDLIFE: This stand receives a lot of use by black and brown bears attracted to the spawning salmon in Pump Creek. Leave trees should be concentrated adjacent to the RMA to help maintain bear security as well as windfirmness of the stream buffer.</p>			
<p>SCENERY: Unit is not seen from any visual priority travel route or use area.</p>			
<p>SOILS: The unit includes 15 acres of forested wetlands. Shovel yarding will follow BMPs 12.5, 13.2 and 13.9; shovel tracks need to be supported by slash (BMP 13.9) to minimize soil disturbance.</p>			
<p>No resource concerns were identified for Roads, Botany, Geology, Heritage, and Recreation.</p>			

Appendix ROD-1

Unit 77

Navy Timber Sale Selected Alternative

53 Acres



Unit Data Card – Navy Timber Sale Record of Decision

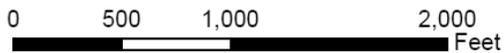
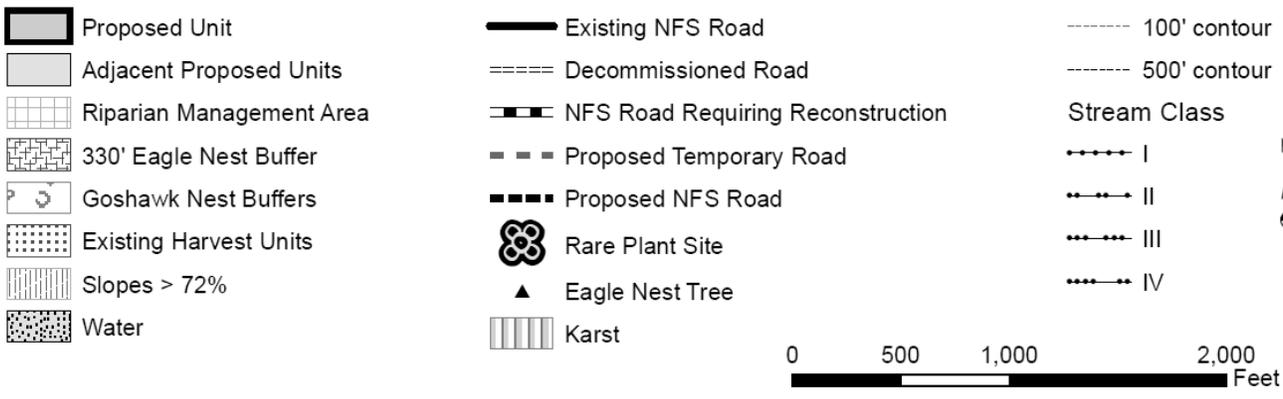
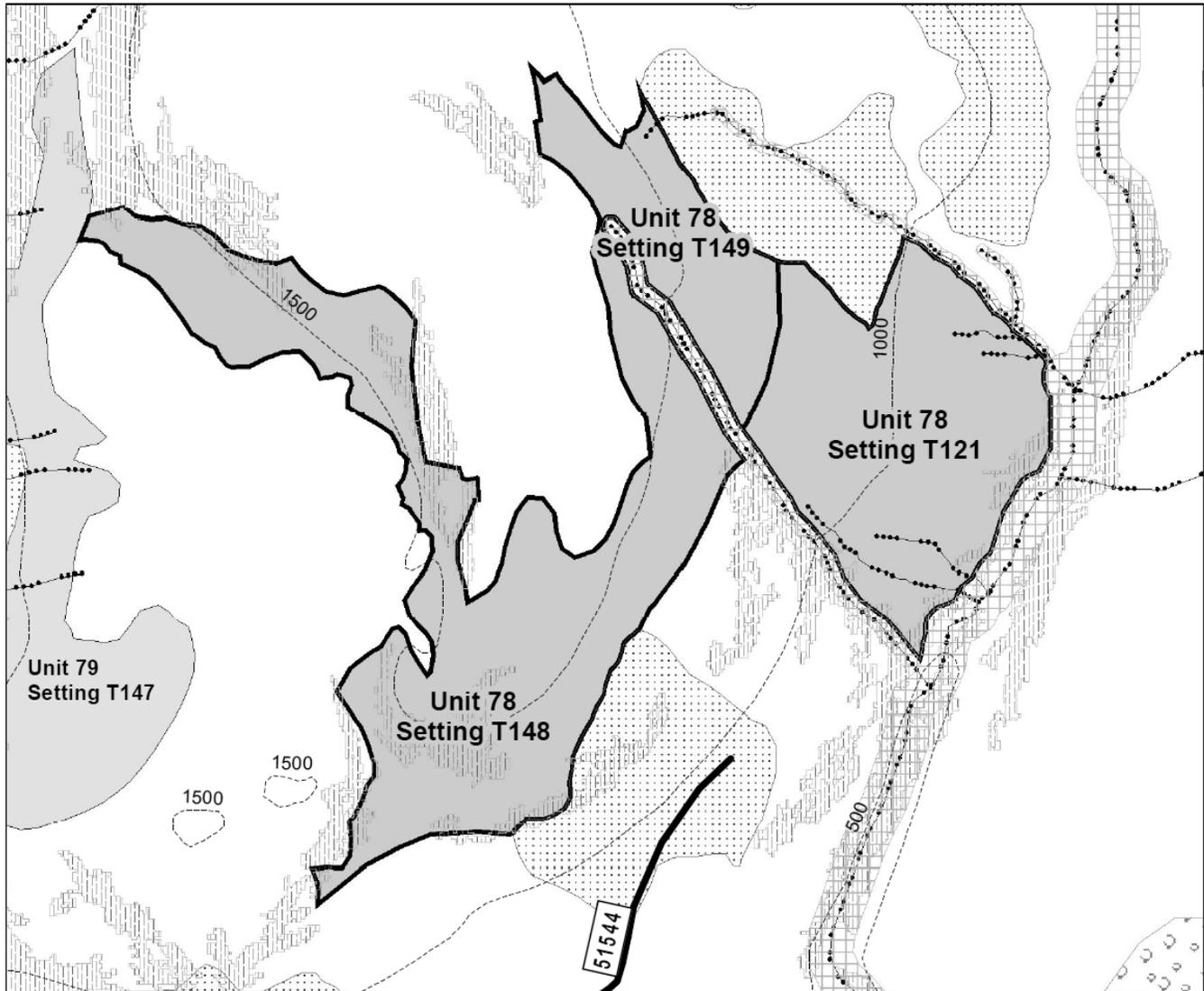
LUD: TM	Logging Systems: Shovel	Total Unit Acres: 53	Unit Number: 77
		Harvest Acres: 53	Net Harvest Volume (Saw) MBF: 266
<p>SILVICULTURE: <u>Existing Stand Condition/Vegetation:</u> The stand is a wind-generated, multicanopy, uneven-aged stand. The stem decay is moderately severe, physical defect is high, whereas mistletoe infections and windthrow risk are low.</p> <p><u>Silvicultural Objective/Desired Condition:</u> The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.</p> <p><u>Silvicultural Prescription:</u> Uneven-aged prescription using single-tree selection (STS) retaining at least 70 percent of the unit pretreatment basal area, based on standing live tree total for the unit, uncut. Individual trees selected for harvest may occur in small groups but will generally be evenly distributed across the stand. Any small groups will usually be less than 1 acre but may occasionally go up to 2 acres in size where needed to address insect and disease issues or capitalize on existing advanced regeneration of desirable tree species. Retain at least 50 percent of the cedar and spruce BA to ensure species diversity.</p>			
<p>TIMBER/LOGGING: This unit is designed for shovel yarding to the existing 51544 road. This unit is prescribed for a single-tree selection partial harvest. Minimize harvest near the Class I stream to maintain security cover for brown bears. Leave trees will not impair yarding activities or pose a safety risk.</p>			
<p>FISH/WATERSHED: There is a Class I, channel type FP4, stream (Pump Creek) on the east side of the unit. No harvest within 130 feet of the channel, individual tree mark prescription should be windfirm (BMP 12.6, 12.6a, 13.16). There is a Class II, channel types MC1 and PA5, stream on the west side of the unit. No harvest within 100 feet of channel; individual tree mark prescription should be windfirm (BMP 12.6, 12.6a, 13.16). There are three Class IV, channel type HC5, streams within the unit. Fall timber away from stream if feasible. Full suspension or split yard away from streams if feasible; a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16).</p>			
<p>SCENERY: Unit is not seen from any visual priority travel route or use area.</p>			
<p>SOILS: The unit includes 44 acres of forested wetlands. Shovel yarding will follow BMPs 12.5, 13.2 and 13.9; shovel tracks need to be supported by slash (BMP 13.9) to minimize soil disturbance.</p>			
<p>WILDLIFE: This unit is near a 100-acre goshawk nesting habitat buffer. No commercial timber harvest is permitted within the identified buffer. Permit no continuous disturbance that is likely to result in nest abandonment within the surrounding 600 feet from March 15 to August 15. Noise disturbance (timing) restrictions are removed for active nests that become inactive or unsuccessful. This stand receives a lot of use by black and brown bears attracted to the spawning salmon in Pump Creek and Class I tributaries. Leave trees should be concentrated adjacent to the RMA to help maintain bear security as well as windfirmness of the stream buffer.</p>			
<p>No resource concerns were identified for Roads, Geology, Heritage, Botany and Recreation.</p>			

Appendix ROD-1

Unit 78

Navy Timber Sale Selected Alternative

139 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: TM, ML	Logging Systems: Helicopter	Total Unit Acres: 139	Unit Number: 78
		Harvest Acres: 139	Net Harvest Volume (Saw) MBF: 695

SILVICULTURE:

Existing Stand Condition/Vegetation: The stand is a wind-generated, multicanopy, uneven-aged stand. The stem decay is moderately severe, physical defect is high, whereas mistletoe infections and windthrow risk are low. There is evidence of porcupine damage in western hemlock and Sitka spruce. Yellow cedar decline was found in moderate severity in scattered patches.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.

Silvicultural Prescription: Uneven-aged prescription using single-tree selection (STS) retaining at least 70 percent of the unit pretreatment basal area, based on standing live tree total for the unit, uncut. Individual trees selected for harvest may occur in small groups but will generally be evenly distributed across the stand. Any small groups will usually be less than 1 acre but may occasionally go up to 2 acres in size where needed to address insect and disease issues or capitalize on existing advanced regeneration of desirable tree species. Retain at least 50 percent of the cedar and spruce BA to ensure species diversity.

TIMBER/LOGGING: This unit is designed for helicopter yarding to landings on the existing 51544 road.

FISH/WATERSHED:

There is a Class II, channel type MC3, portion of mainstem stream (Pump Creek) on the southeast corner of the unit. No harvest within 100 feet of the channel, (BMP 12.6, 12.6a, 13.16).

There is a Class III, channel type HC6, stream that bisects the unit. Do not harvest in the v-notch. (BMP 13.9, 13.16).

There are at least five Class IV, channel type HC, streams within the unit. Fall timber away from streams if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16).

Partial harvest helicopter treatment will reduce impacts associated with windthrow.

SCENERY: Setting T121 is unseen. Setting T149 is partially visible in the distance from the head of the Burnett Inlet viewshed, and setting T148 is partially visible from the heads of the Burnett and Mosman Inlet viewsheds. The adopted SIO for these settings is very low. The proposed prescription, along with the great distances from where parts of this unit can be seen, will meet a high SIO.

SOILS: Unit contains areas with slopes >72 percent. Prior to harvest a slope stability analysis will be done and documented in the change analysis report; it is anticipated that these areas can be avoided with the STS prescription.

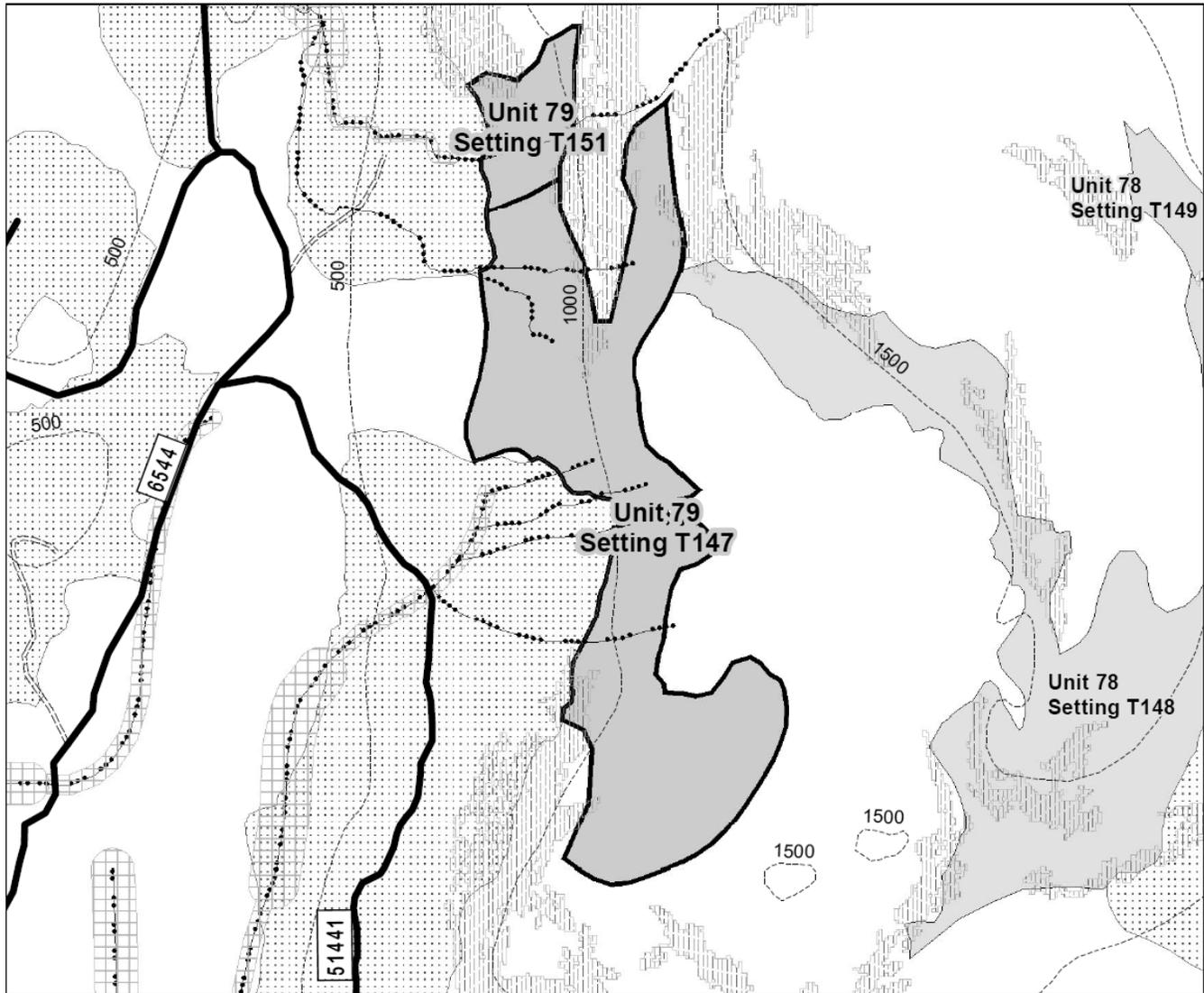
No resource concerns were identified for Roads, Geology, Heritage, Wildlife, Botany and Recreation.

Appendix ROD-1

Unit 79

Navy Timber Sale Selected Alternative

65 Acres



Unit Data Card – Navy Timber Sale Record of Decision

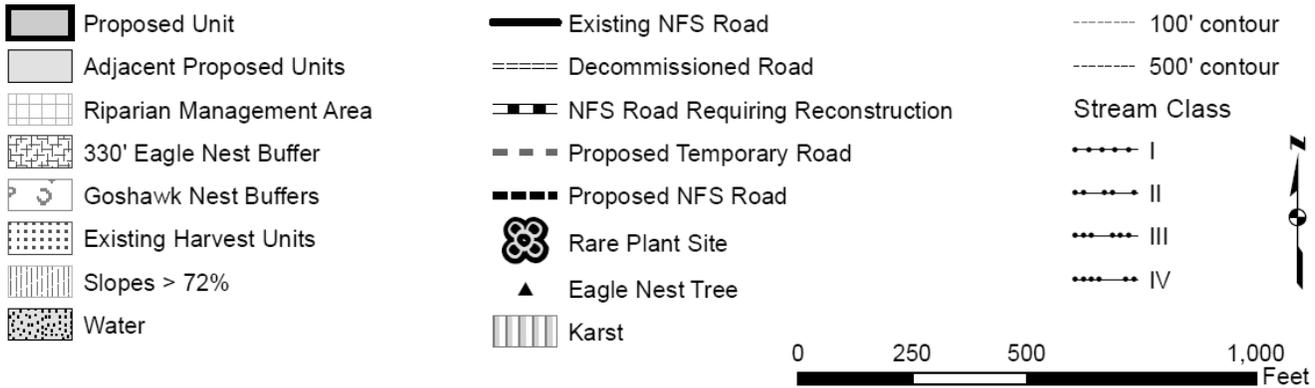
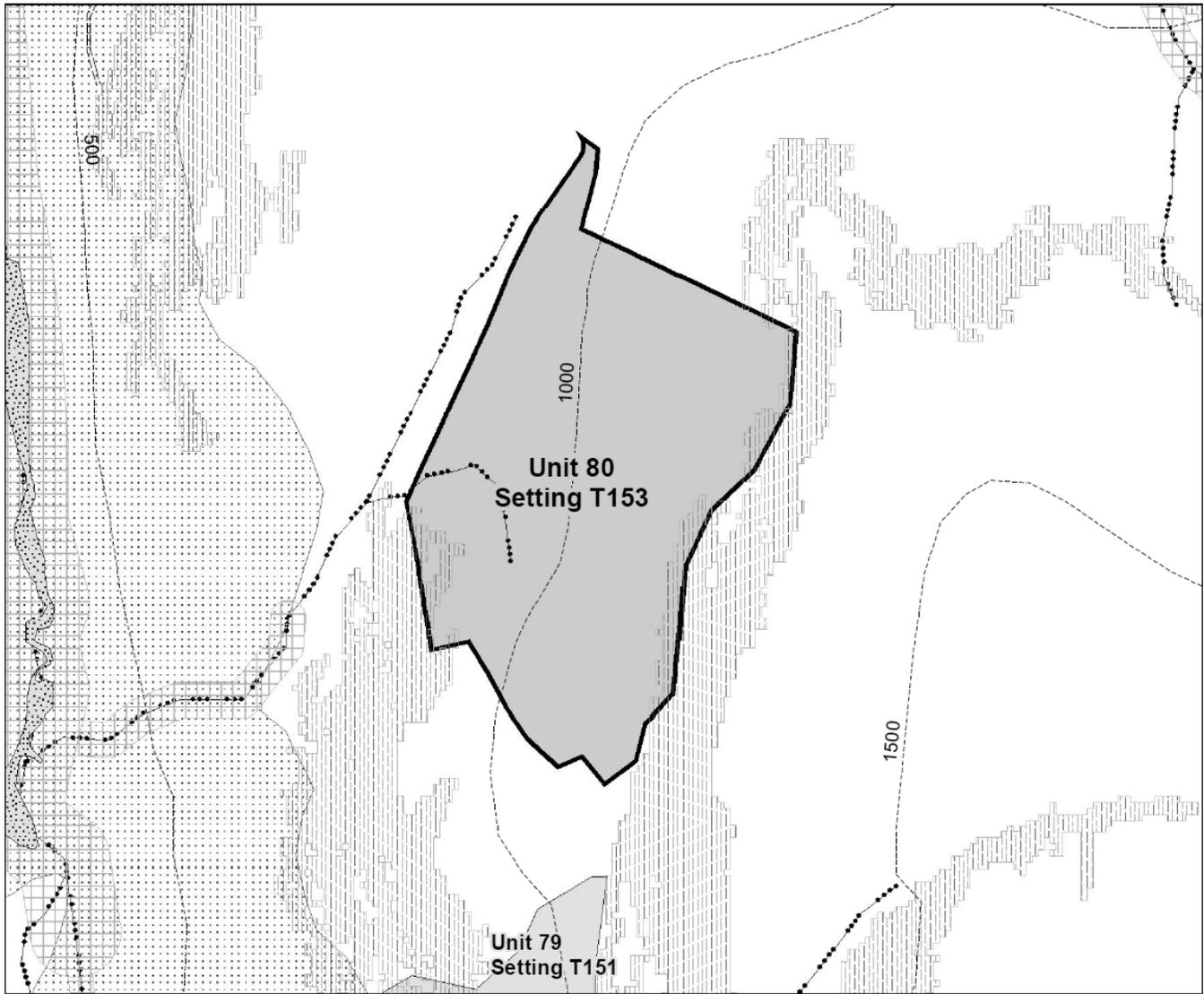
LUD: ML	Logging Systems: Helicopter	Total Unit Acres: 65	Unit Number: 79
		Harvest Acres: 65	Net Harvest Volume (Saw) MBF: 326
<p>SILVICULTURE: <u>Existing Stand Condition/Vegetation:</u> The stand is a wind-generated, multicanopy, uneven-aged stand that is fairly high elevation and fairly productive. The stem decay and physical defect in moderately severe, whereas mistletoe infections and windthrow risk are low. There is evidence of recent, severe porcupine damage in western hemlock and Sitka spruce. Yellow cedar decline was found in moderate severity in scattered patches.</p> <p><u>Silvicultural Objective/Desired Condition:</u> The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.</p> <p><u>Silvicultural Prescription:</u> Uneven-aged prescription using single-tree selection (STS) retaining at least 70 percent of the unit pretreatment basal area, based on standing live tree total for the unit, uncut. Individual trees selected for harvest may occur in small groups but will generally be evenly distributed across the stand. Any small groups will usually be less than 1 acre but may occasionally go up to 2 acres in size where needed to address insect and disease issues or capitalize on existing advanced regeneration of desirable tree species. Retain at least 50 percent of the cedar and spruce BA to ensure species diversity.</p>			
<p>TIMBER/LOGGING: This unit is designed for helicopter yarding to landings on the existing 6544 and 51441 roads.</p>			
<p>FISH/WATERSHED: There are seven Class IV, channel type HC, streams that run through the unit. Fall timber away from streams if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16).</p>			
<p>SCENERY: Setting T151 is unseen. Parts of setting T147 are slightly visible from Clarence Strait, and it has an adopted SIO of low. Since so little of T147 can be seen from this distance, the proposed prescription will meet a high SIO.</p>			
<p>SOILS: The unit includes 7 acres with slope over 72 percent gradient. A slope stability assessment was conducted and found these areas suitable for harvest with proposed prescription. (BMP 13.5).</p>			
<p>WILDLIFE: The 70 percent retention prescription will allow for the elevational migration of wildlife by maintaining an elevational travel corridor between the two existing clearcuts.</p>			
<p>No resource concerns were identified for Roads, Geology, Heritage, Botany and Recreation.</p>			

Appendix ROD-1

Unit 80

Navy Timber Sale Selected Alternative

18 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: ML, SV	Logging Systems: Helicopter	Total Unit Acres: 18	Unit Number: 80
		Harvest Acres: 18	Net Harvest Volume (Saw) MBF: 92

SILVICULTURE:

Existing Stand Condition/Vegetation: The stand is a high elevation, productive, multicanopy, uneven-aged stand. The stem decay and physical defect in trees is moderately severe, whereas mistletoe infections and windthrow risk are low. No cedar decline was recorded.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.

Silvicultural Prescription: Uneven-aged prescription using single-tree selection (STS) retaining at least 70 percent of the unit pretreatment basal area, based on standing live tree total for the unit, uncut. Individual trees selected for harvest may occur in small groups but will generally be evenly distributed across the stand. Any small groups will usually be less than 1 acre but may occasionally go up to 2 acres in size where needed to address insect and disease issues or capitalize on existing advanced regeneration of desirable tree species. Retain at least 50 percent of the cedar and spruce BA to ensure species diversity.

TIMBER/LOGGING: This unit is designed for helicopter yarding to landings located on the existing 6544 road.

ENGINEERING/ROADS: None

FISH/WATERSHED:

There is at least one Class IV, channel type HC, stream within the unit. Fall timber away from stream if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16).

SCENERY: Unit is not seen from any visual priority travel route or use area.

SOILS: The unit includes 3 acres with slopes over 72 percent gradient. A slope stability assessment was conducted and found these areas suitable for harvest with proposed prescription (BMP 13.5).

ROADLESS AREAS: Part of this unit is adjacent to the North Etoin Inventoried Roadless Area (#232).

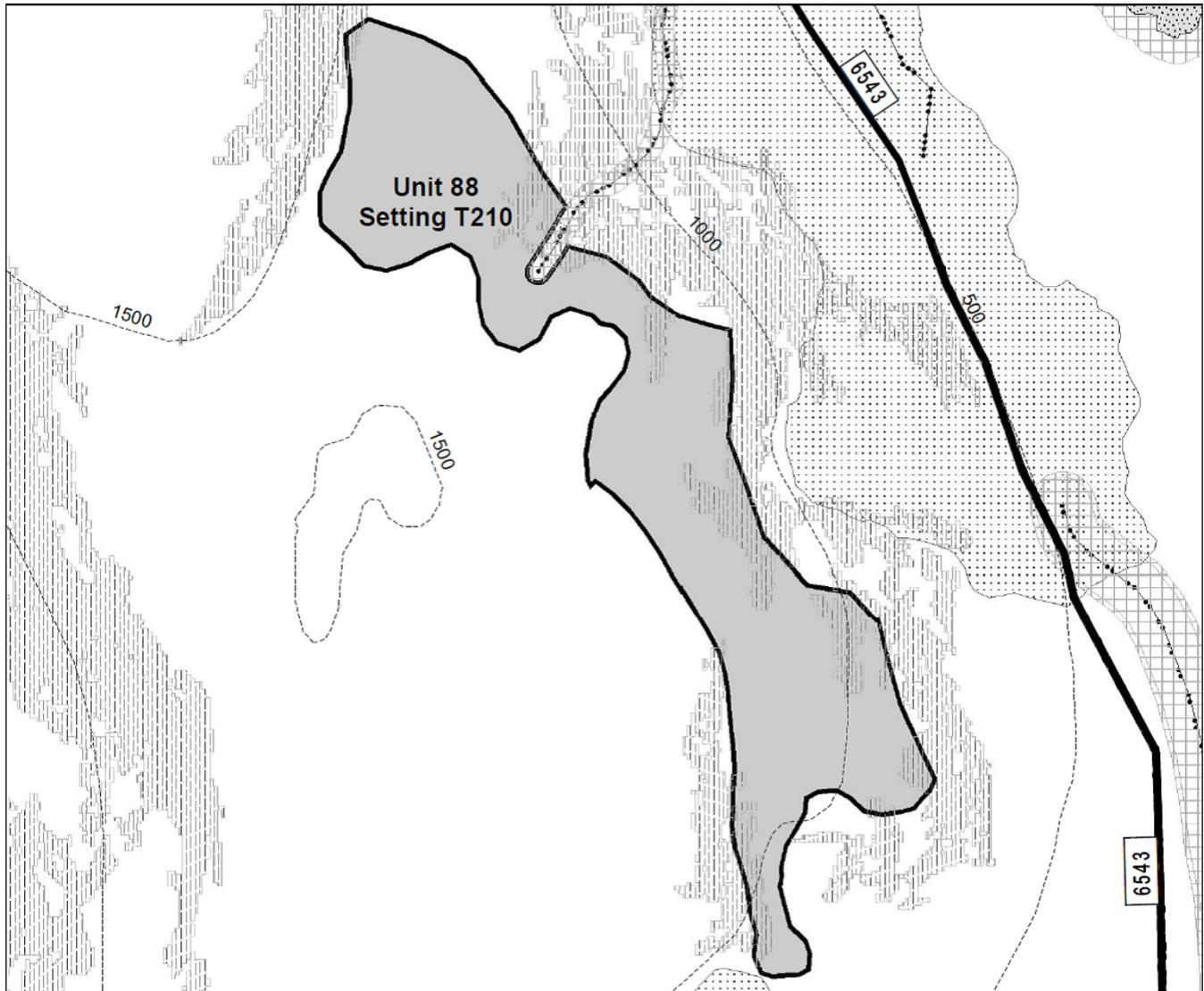
No resource concerns were identified for Geology, Wildlife, Botany, Recreation, and Heritage.

Appendix ROD-1

Unit 88

Navy Timber Sale Selected Alternative

46 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: ML	Logging Systems: Helicopter	Total Unit Acres: 46	Unit Number: 88
		Harvest Acres: 46	Net Harvest Volume (Saw) MBF: 231
<p>SILVICULTURE: <u>Existing Stand Condition/Vegetation:</u> The stand is a high elevation multicanopy, uneven-aged stand with widely variable productivity. The stem decay is moderately severe and physical defect in trees was rated as severe. Mistletoe infections and windthrow risk are low. No cedar decline was recorded. Some recent porcupine damage was noted.</p> <p><u>Silvicultural Objective/Desired Condition:</u> The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.</p> <p><u>Silvicultural Prescription:</u> Uneven-aged prescription using single-tree selection (STS) retaining at least 70 percent of the unit pretreatment basal area, based on standing live tree total for the unit, uncut. Individual trees selected for harvest may occur in small groups but will generally be evenly distributed across the stand. Any small groups will usually be less than 1 acre but may occasionally go up to 2 acres in size where needed to address insect and disease issues or capitalize on existing advanced regeneration of desirable tree species. Retain at least 50 percent of the cedar and spruce BA to ensure species diversity.</p>			
<p>TIMBER/LOGGING: This unit is designed for helicopter yarding to landings on the existing 6543 road.</p>			
<p>FISH/WATERSHED: There is a Class III, channel type HC6, stream on the northeast boundary of the unit. Do not harvest in the v-notch. (BMP 13.9, 13.16). Partial harvest helicopter treatment will reduce impacts associated with windthrow.</p>			
<p>SCENERY: Unit is not seen from any visual priority travel route or use area.</p>			
<p>SOILS: Unit includes approximately 7 acres with slopes over 72 percent gradient. These areas will be avoided with the partial harvest prescription.</p>			
<p>WILDLIFE: The 70 percent retention prescription will allow for the elevational migration of wildlife between this unit and nearby existing clearcuts.</p>			
<p>No resource concerns were identified for Roads, Geology, Heritage, Botany and Recreation.</p>			

Appendix ROD-1

Unit 90

Navy Timber Sale Selected Alternative

9 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: ML	Logging Systems: Cable & Shovel	Total Unit Acres: 9	Unit Number: 90
		Harvest Acres: 9	Net Harvest Volume (Saw) MBF: 153

SILVICULTURE:

Existing Stand Condition/Vegetation: This unit is a low lying, gently sloped unmanaged stand with old-growth stand structure. It is a moderately productive site that has moderately severe levels of stem defect, moderate windthrow risk and light, but widespread mistletoe infections.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet standards and guides.

Silvicultural Prescription: This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with stem decay and widespread mistletoe infections, resulting in a situation where stand growth is being offset or exceeded by decay. Even-aged clearcutting is being prescribed to preclude or minimize the risk of windthrow, post harvest, promote natural regeneration by opening up the canopy, improve site productivity through increased soil temperature and remove/minimize defect and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.

TIMBER/LOGGING: This unit is designed for downhill cable logging to a landing located on the existing reconstructed 6543 road. Shovel yarding is planned for the eastern side of the unit.

FISH/WATERSHED:

There is a Class II, channel type PA5/MM1, stream on the eastern boundary of the unit. No harvest within 100 feet (PA5) or 120 feet (MM1) of the channel. (BMP 13.9, 13.16).

RAW buffers may be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.

SCENERY: Unit is not seen from any visual priority travel route or use area.

SOILS: The unit harvests 9 acres of forested wetlands. Shovel yarding will follow BMPs 12.5, 13.2 and 13.9; shovel tracks need to be supported by slash (BMP 13.9). Special consideration is needed to minimize soil disturbance due to downslope stream.

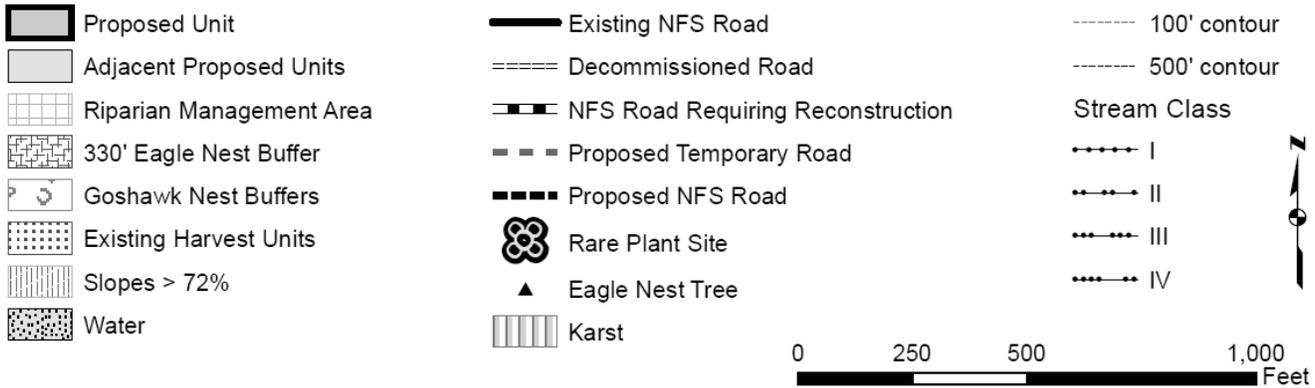
No resource concerns were identified for Roads, Geology, Heritage, Recreation, Botany and Wildlife.

Appendix ROD-1

Unit 91

Navy Timber Sale Selected Alternative

33 Acres



Unit Data Card – Navy Timber Sale Record of Decision

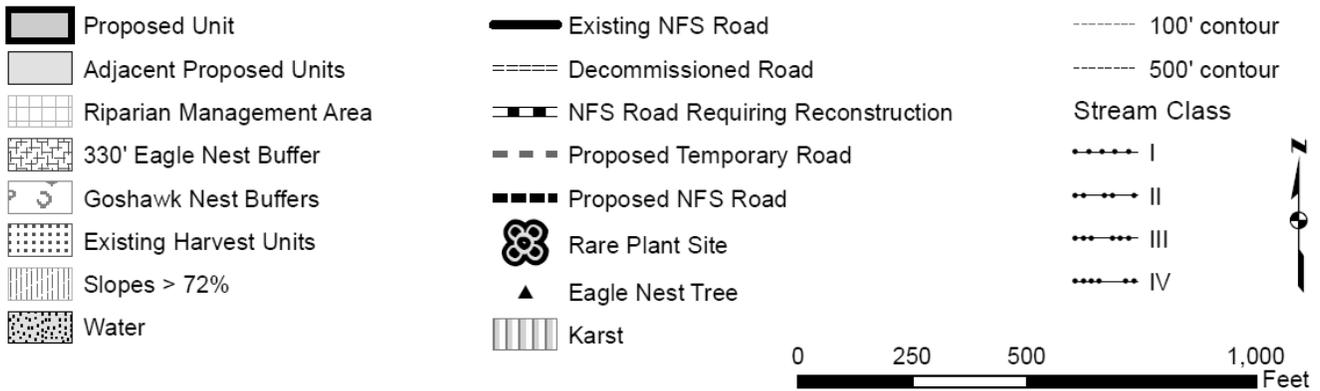
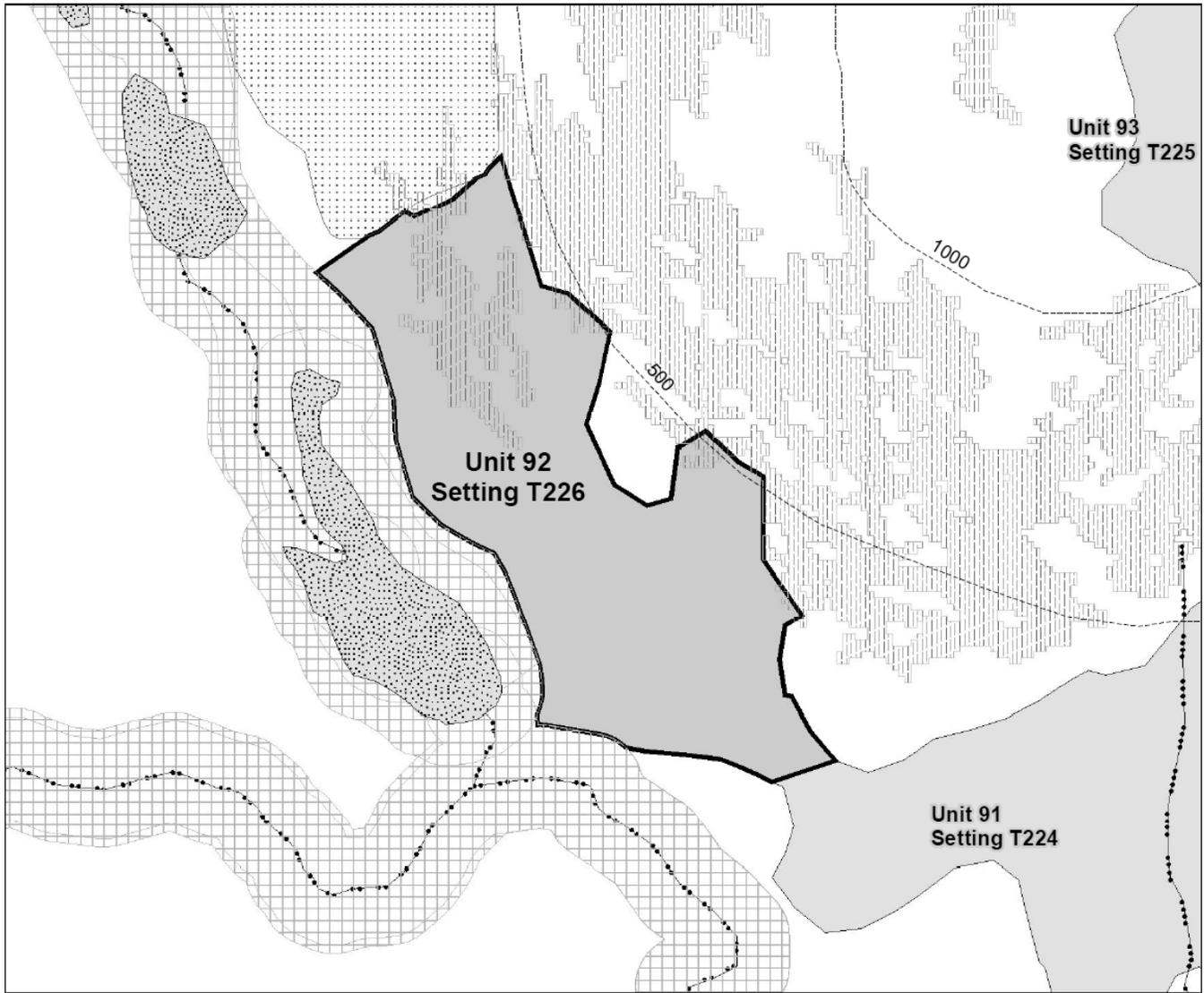
LUD: TM	Logging Systems: Helicopter	Total Unit Acres: 33	Unit Number: 91
		Harvest Acres: 33	Net Harvest Volume (Saw) MBF: 168
<p>SILVICULTURE: <u>Existing Stand Condition/Vegetation:</u> The stand is southern exposed, multicanopy, uneven-aged stand that extends from 200 feet elevation to approximately 1,200 feet elevation. The stem decay and physical defect in trees is moderately severe. Mistletoe infections were light but widespread throughout the unit. Windthrow risk was rated as high. No cedar decline was recorded.</p> <p><u>Silvicultural Objective/Desired Condition:</u> The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.</p> <p><u>Silvicultural Prescription:</u> Uneven-aged prescription using single-tree selection (STS) retaining at least 70 percent of the unit pretreatment basal area, based on standing live tree total for the unit, uncut. Individual trees selected for harvest may occur in small groups but will generally be evenly distributed across the stand. Any small groups will usually be less than 1 acre but may occasionally go up to 2 acres in size where needed to address insect and disease issues or capitalize on existing advanced regeneration of desirable tree species. Retain at least 50 percent of the cedar and spruce BA to ensure species diversity.</p>			
<p>TIMBER/LOGGING: This unit is designed for helicopter yarding to landings on the 6540 road.</p>			
<p>ENGINEERING/ROADS: None.</p>			
<p>FISH/WATERSHED: There are two Class II, channel type HC1, streams on the southern boundary of the unit. No harvest within 100 feet of channel. (BMP 13.9, 13.16). There are three Class IV, channel type HC5, streams within the unit. Fall timber away from streams if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16). RAW buffers will be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.</p>			
<p>SCENERY: Unit is not seen from any visual priority travel route or use area.</p>			
<p>SOILS: This unit includes 1 acre with slopes over 72 percent gradient; this area will be avoided with the partial harvest prescription.</p>			
<p>WILDLIFE: The 70 percent retention prescription will allow for the elevational migration of wildlife.</p>			
<p>No resource concerns were identified for Geology, Roads, Heritage, Botany and Recreation.</p>			

Appendix ROD-1

Unit 92

Navy Timber Sale Selected Alternative

18 Acres



Unit Data Card – Navy Timber Sale Record of Decision

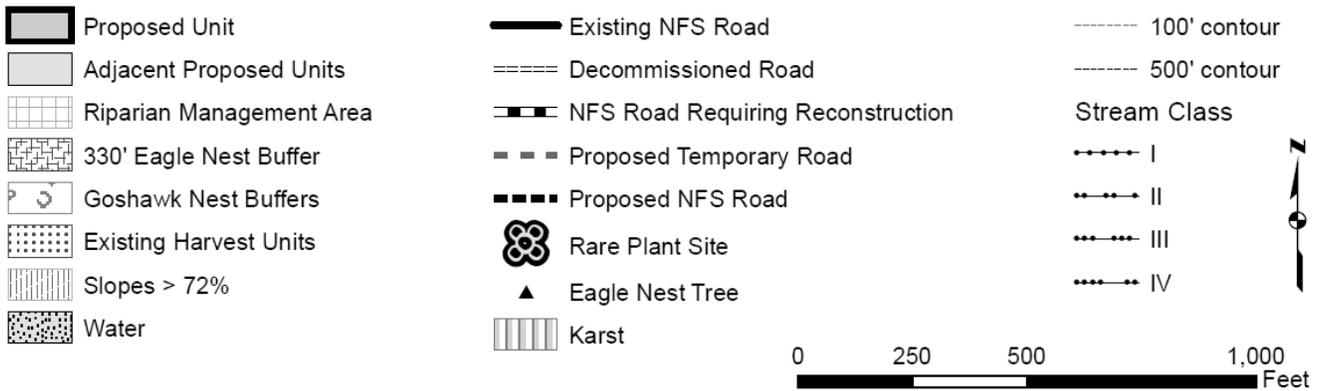
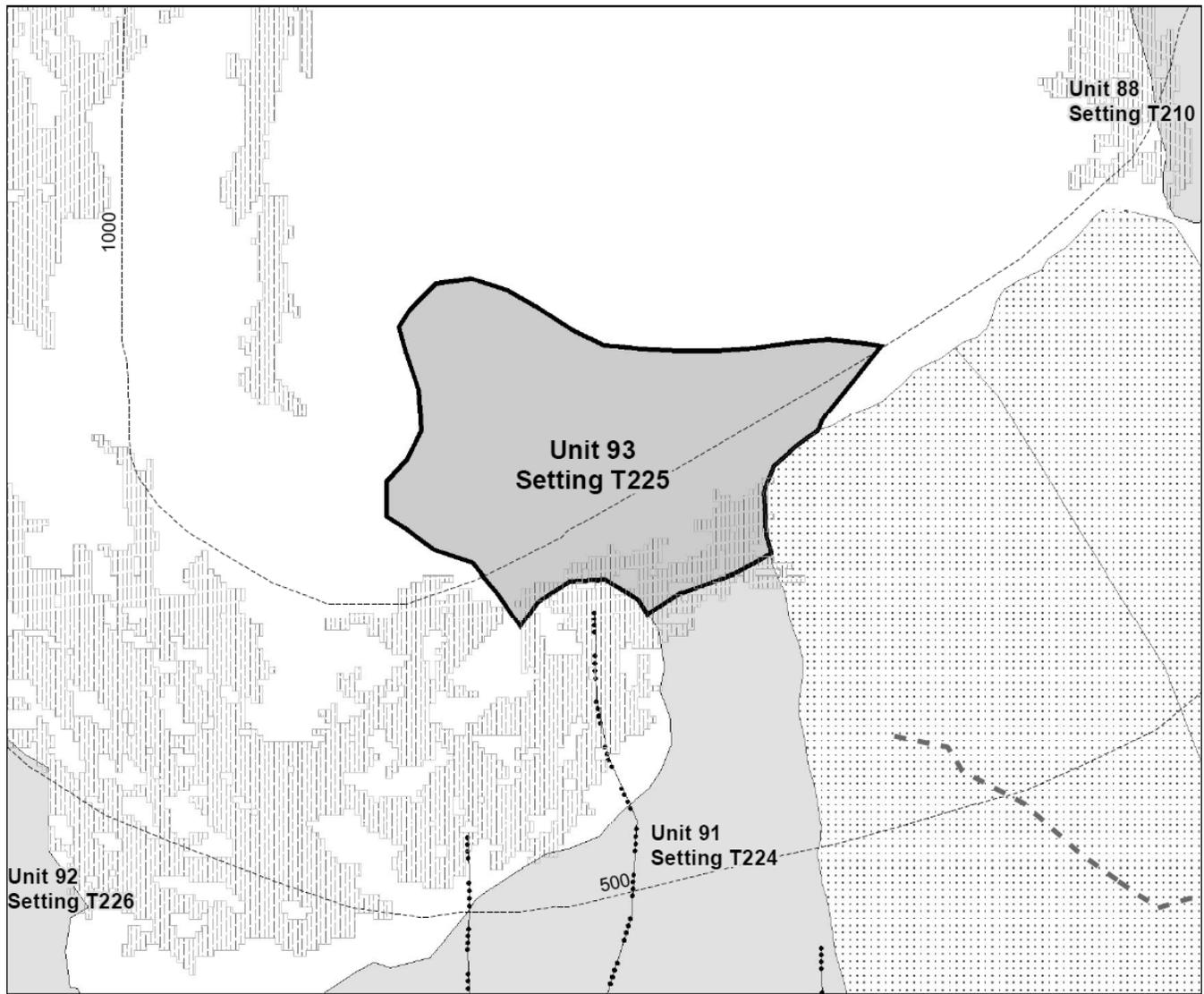
LUD: TM	Logging Systems: Helicopter	Total Unit Acres: 18	Unit Number: 92
		Harvest Acres: 18	Net Harvest Volume (Saw) MBF: 92
<p>SILVICULTURE: <u>Existing Stand Condition/Vegetation:</u> The stand is a productive, multicanopy, uneven-aged stand with a southwestern exposure. The stem decay and physical defect in trees is moderately severe. Mistletoe infections were light but widespread throughout the unit. Windthrow risk was rated as high. No cedar decline was recorded.</p> <p><u>Silvicultural Objective/Desired Condition:</u> The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.</p> <p><u>Silvicultural Prescription:</u> Uneven-aged prescription using single-tree selection (STS) retaining at least 70 percent of the unit pretreatment basal area, based on standing live tree total for the unit, uncut. Individual trees selected for harvest may occur in small groups but will generally be evenly distributed across the stand. Any small groups will usually be less than 1 acre but may occasionally go up to 2 acres in size where needed to address insect and disease issues or capitalize on existing advanced regeneration of desirable tree species. Retain at least 50 percent of the cedar and spruce BA to ensure species diversity.</p>			
<p>TIMBER/LOGGING: This unit is designed for helicopter yarding to landings on the 6540 road.</p>			
<p>ENGINEERING/ROADS: None</p>			
<p>FISH/WATERSHED: There is a Class II, channel type PA1 and LC1, stream on the southwest side of the unit. No harvest within 100 feet of channel. (BMP 13.9, 13.16). There is a Class II lake/pond on the west side of the unit. No harvest within 100 feet of shoreline. (BMP 13.9, 13.16). RAW buffers will be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.</p>			
<p>GEOLOGY/KARST: Potential for limestone bedrock in the unit.</p>			
<p>SCENERY: Unit is not seen from any visual priority travel route or use area.</p>			
<p>SOILS: This unit includes 2 acres with slopes over 72 percent gradient. A slope stability assessment will be conducted during project implementation. (BMP 13.5) Harvest on unstable slopes will be avoided.</p>			
<p>WILDLIFE: The 70 percent prescription will allow for the elevational migration of wildlife: If possible, leave elevational travel corridor within/between Unit's 91/92.</p>			
<p>No resource concerns were identified for Heritage, Roads, Wildlife, Botany and Recreation.</p>			

Appendix ROD-1

Unit 93

Navy Timber Sale Selected Alternative

14 Acres



Unit Data Card – Navy Timber Sale Record of Decision

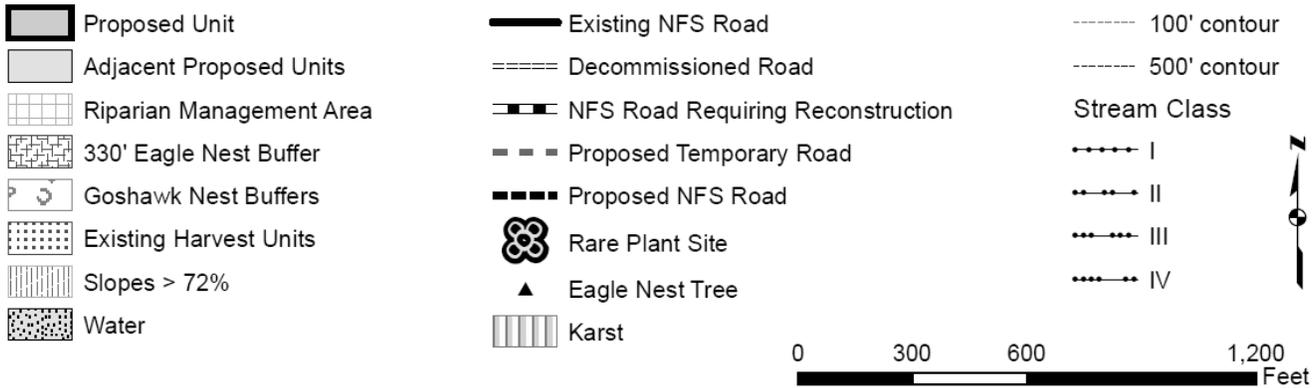
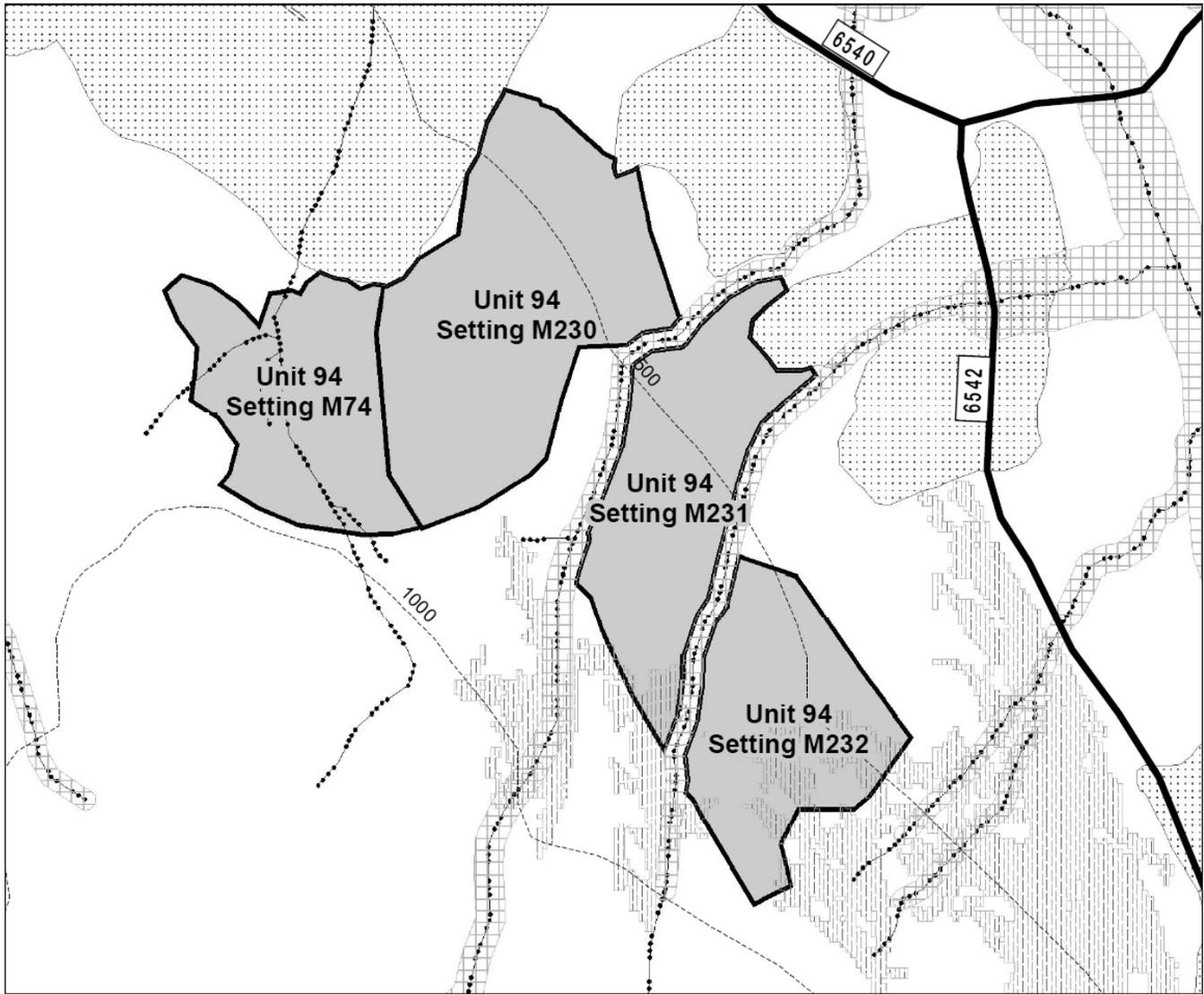
LUD: TM	Logging Systems: Helicopter	Total Unit Acres: 14	Unit Number: 93
		Harvest Acres: 14	Net Harvest Volume (Saw) MBF: 70
<p>SILVICULTURE: <u>Existing Stand Condition/Vegetation:</u> The stand has moderately low site productivity, and is a high elevation, uneven-aged stand with a southeastern exposure. The stem decay and physical defect in trees is light. Mistletoe infections are severe and affecting nearly all western hemlock. Windthrow risk was rated as moderately high. No cedar decline was recorded.</p> <p><u>Silvicultural Objective/Desired Condition:</u> The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.</p> <p><u>Silvicultural Prescription:</u> Uneven-aged prescription using single-tree selection (STS) retaining at least 70 percent of the unit pretreatment basal area, based on standing live tree total for the unit, uncut. Individual trees selected for harvest may occur in small groups but will generally be evenly distributed across the stand. Any small groups will usually be less than 1 acre but may occasionally go up to 2 acres in size where needed to address insect and disease issues or capitalize on existing advanced regeneration of desirable tree species. Retain at least 50 percent of the cedar and spruce BA to ensure species diversity.</p>			
<p>TIMBER/LOGGING: This unit is designed for helicopter yarding to a temporary road in the adjacent managed stand.</p>			
<p>ENGINEERING/ROADS: To reduce the helicopter yarding distance, a temporary road (0.44 mile) may be constructed on an existing road prism to save costs and reduce environmental effects.</p>			
<p>SCENERY: This unit is partially visible from the Mosman Inlet viewshed, and has an adopted SIO of very low. The proposed prescription will meet a high SIO due to the distance the unit can be seen from and the aspect visible.</p>			
<p>SOILS: This unit includes 1 acre with slopes over 72 percent gradient; this area will be avoided with the partial harvest prescription.</p>			
<p>No resource concerns were identified for Roads, Fish/Watershed, Heritage, Recreation, Botany and Wildlife.</p>			

Appendix ROD-1

Unit 94

Navy Timber Sale Selected Alternative

41 Acres



Unit Data Card – Navy Timber Sale Record of Decision

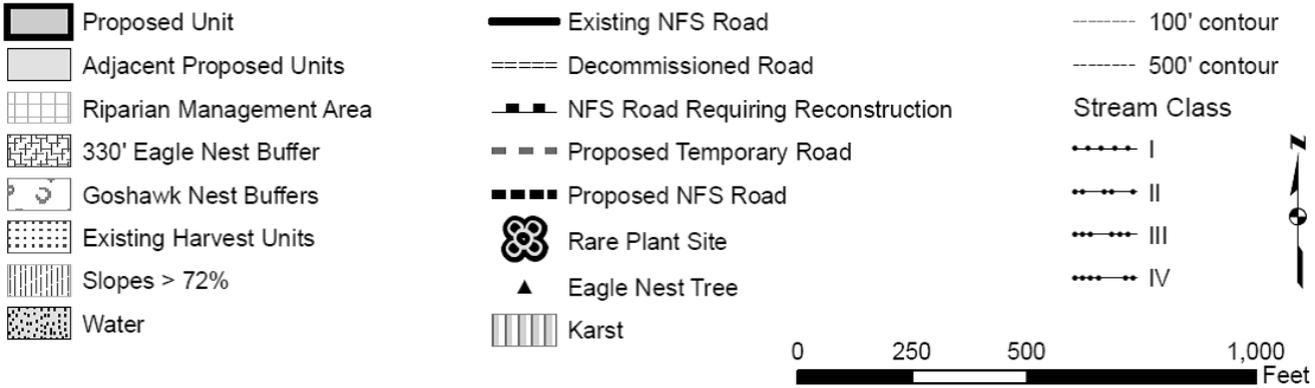
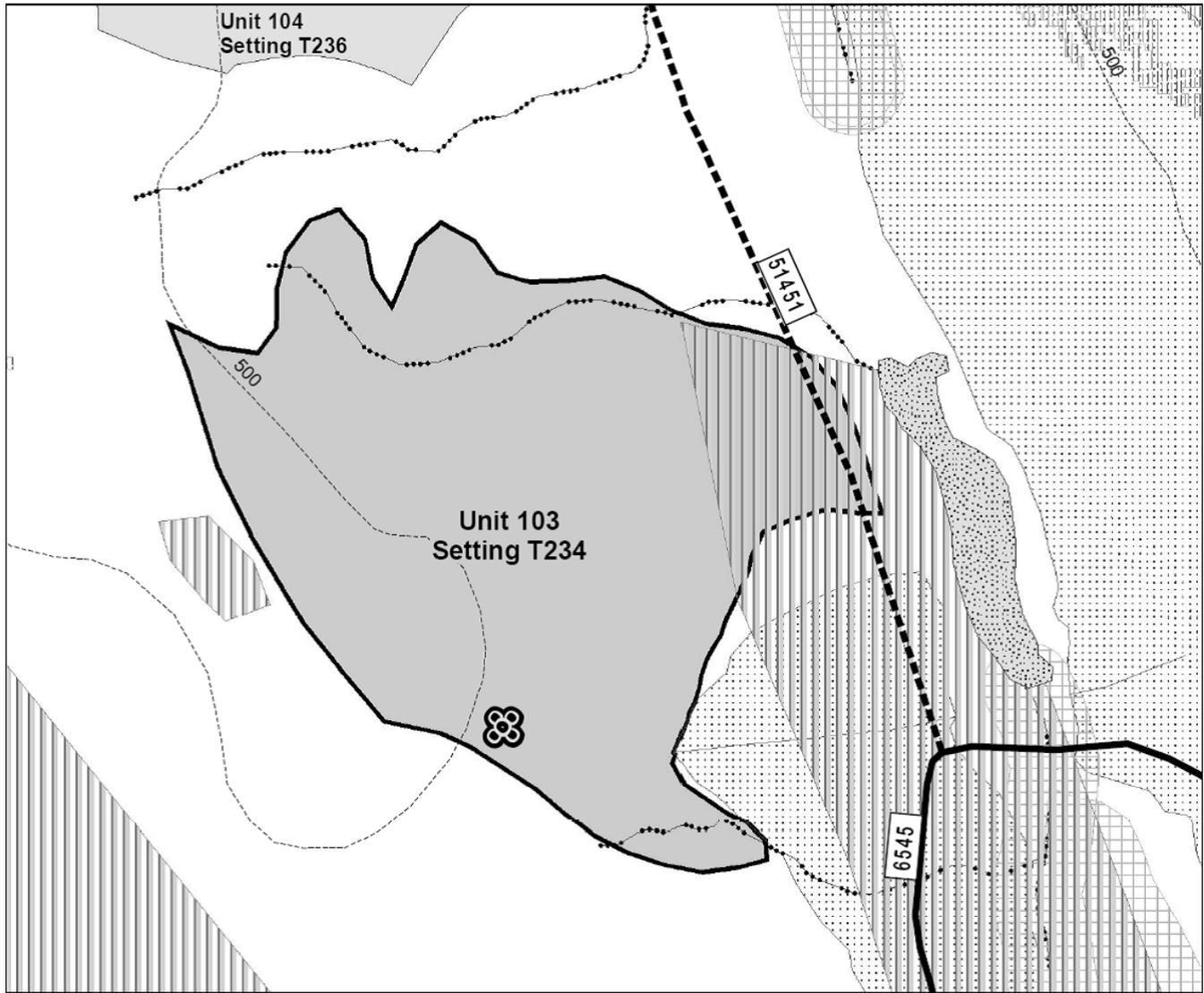
LUD: TM	Logging Systems: Helicopter	Total Unit Acres: 41	Unit Number: 94
		Harvest Acres: 41	Net Harvest Volume (Saw) MBF: 204
<p>SILVICULTURE: <u>Existing Stand Condition/Vegetation:</u> Uneven-aged stand. The stand is a wind-generated multicanopy stand of moderately low site productivity, and is high elevation, uneven-aged, with a northeastern exposure. The stem decay and physical defect in trees is moderately high. Mistletoe infections are absent. Windthrow risk was rated low. No cedar decline was recorded.</p> <p><u>Silvicultural Objective/Desired Condition:</u> The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.</p> <p><u>Silvicultural Prescription:</u> Uneven-aged prescription using single-tree selection (STS) retaining at least 70 percent of the unit pretreatment basal area, based on standing live tree total for the unit, uncut. Individual trees selected for harvest may occur in small groups but will generally be evenly distributed across the stand. Any small groups will usually be less than 1 acre but may occasionally go up to 2 acres in size where needed to address insect and disease issues or capitalize on existing advanced regeneration of desirable tree species. Retain at least 50 percent of the cedar and spruce BA to ensure species diversity.</p>			
<p>TIMBER/LOGGING: This unit is designed for helicopter yarding to landings located on the existing 6542 and 6540 roads.</p>			
<p>FISH/WATERSHED: There are two Class III, channel types HC5 and HC6, streams that flow between settings. Do not harvest in the v-notch. (BMP 12.6, 12.6a, 13.16). There are at least four Class IV, channel type HC, streams within the unit. Fall timber away from streams if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16). RAW buffers will be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.</p>			
<p>SCENERY: Unit is not seen from any visual priority travel route or use area.</p>			
<p>SOILS: This unit has 5 acres with slopes >72 percent; a slope stability assessment will be conducted during project implementation. (BMP 13.5) Harvest on unstable slopes will be avoided.</p>			
<p>WILDLIFE: The prescription of 70 percent retention would allow for the elevational migration of wildlife.</p>			
<p>No resource concerns were identified for Roads, Geology, Heritage, Botany and Recreation.</p>			

Appendix ROD-1

Unit 103

Navy Timber Sale Selected Alternative

35 Acres



Unit Data Card – Navy Timber Sale Record of Decision

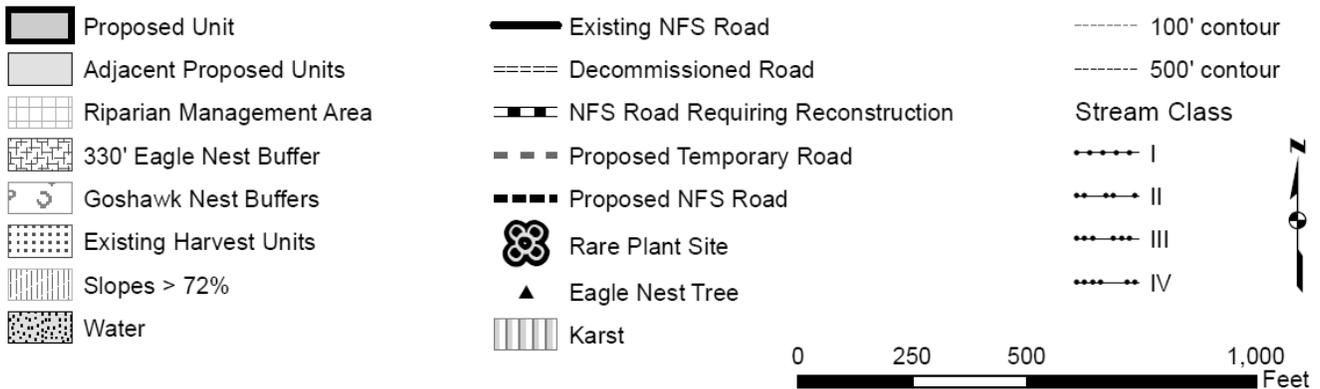
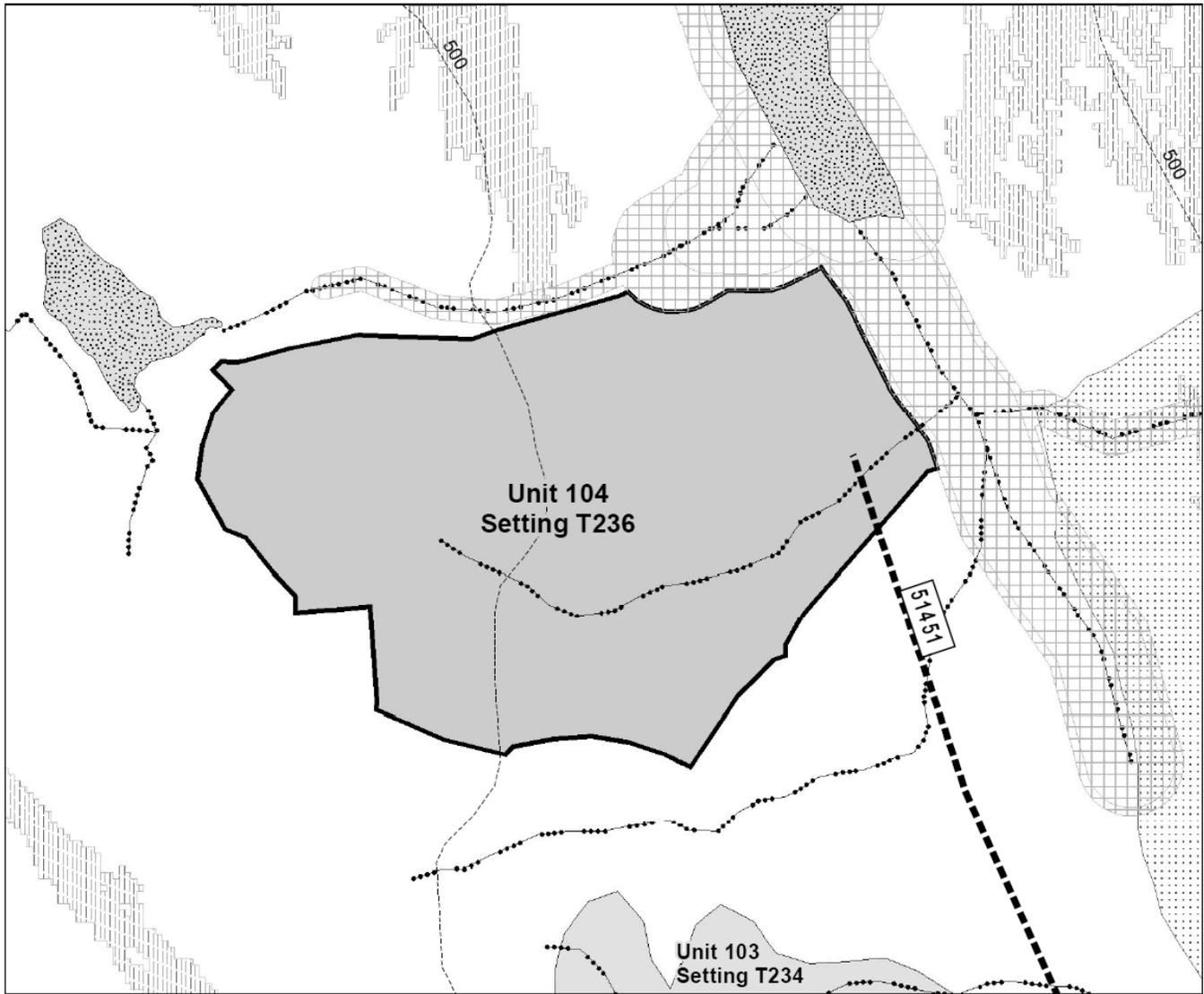
LUD: ML, TM	Logging Cable Systems:	Total Unit Acres: 35	Unit Number: 103
		Harvest Acres: 35	Net Harvest Volume (Saw) MBF: 582
<p>SILVICULTURE: <u>Existing Stand Condition/Vegetation:</u> This is a wind-generated multicanopy eastern aspect uneven-aged stand of moderate/high productivity. Mistletoe infections are light throughout all western hemlocks. Stem decay and physical defect are light. Wind hazard is moderately high. Cedar decline is moderate and patchy throughout the stand.</p> <p><u>Silvicultural Objective/Desired Condition:</u> The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.</p> <p><u>Silvicultural Prescription:</u> This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with stem decay and widespread mistletoe infections, resulting in a situation where stand growth is being offset or exceeded by decay. Due to the moderately high windthrow risk, even-aged clearcutting is being prescribed to preclude or minimize the risk of post harvest windthrow, to promote natural regeneration by opening up the canopy, to improve site productivity through increased soil temperature and to remove/minimize defect and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.</p>			
<p>TIMBER/LOGGING: This unit is designed for downhill cable yarding to landings located on the proposed extension of the 6545 road (road 51451).</p>			
<p>ENGINEERING/ROADS: Refer to road card 51451.</p>			
<p>BOTANY: One population of broad-lipped twayblade (<i>Listera convallarioides</i>), 16 individuals, is documented in the unit. Lay out the unit boundary to exclude this population.</p>			
<p>FISH/WATERSHED: There are two Class IV, channel type HC, streams that run through unit. Fall timber away from streams if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16)</p>			
<p>GEOLOGY/KARST: Mapped moderate-vulnerability karst area in eastern portion of unit was not found to contain any features requiring protection within the unit or along the proposed road line accessing the unit.</p>			
<p>SCENERY: Unit is not seen from any visual priority travel route or use area.</p>			
<p>SOILS: This unit harvests 2 acres of forested wetlands; cable yarding will minimize soil disturbance.</p>			
<p>No resource concerns were identified for Geology, Wildlife, Recreation, and Heritage.</p>			

Appendix ROD-1

Unit 104

Navy Timber Sale Selected Alternative

33 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: ML, TM	Logging Cable Systems:	Total Unit Acres: 33	Unit Number: 104
		Harvest Acres: 33	Net Harvest Volume (Saw) MBF: 544

SILVICULTURE:
Existing Stand Condition/Vegetation: This is a wind-generated multicanopy eastern aspect uneven-aged stand of moderate/low productivity. Mistletoe infections are light and scattered throughout all western hemlocks. Stem decay and physical defect are light. Wind hazard is moderately high. Cedar decline is heavy throughout the stand.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.

Silvicultural Prescription: This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with stem decay and widespread mistletoe infections, resulting in a situation where stand growth is being offset or exceeded by decay. Due to the moderately high windthrow risk even-aged clearcutting is being prescribed to preclude or minimize the risk of post harvest windthrow, to promote natural regeneration by opening up the canopy, to improve site productivity through increased soil temperature and to remove/minimize defect and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.

TIMBER/LOGGING: This unit is designed for downhill cable yarding to landings located on the proposed extension of the 6545 road (road 51451).

ENGINEERING/ROADS: Refer to road card 51451.

FISH/WATERSHED:
 There are two Class II, channel types AF1 and MM1, adjacent to the unit. No harvest within 140 feet (AF) or 120 feet (MM) of the stream channels. (BMP 13.9, 13.16). The stream has sensitive channel types that may need large RAW buffers in this high risk windthrow area.
 There is a Class III, channel type HC5, stream on the northern unit boundary. No harvest in the v-notch. (BMP 13.9, 13.16).
 There is a Class IV, channel type HC, stream within the unit. Fall timber away from streams if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16).

RAW buffers will be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.

SCENERY: Unit is not seen from any visual priority travel route or use area.

SOILS: This unit harvests 1 acre of forested wetlands; cable yarding will minimize soil disturbance.

ROADLESS AREAS: Part of this unit is adjacent to the North Etolin Inventoried Roadless Area (#232).

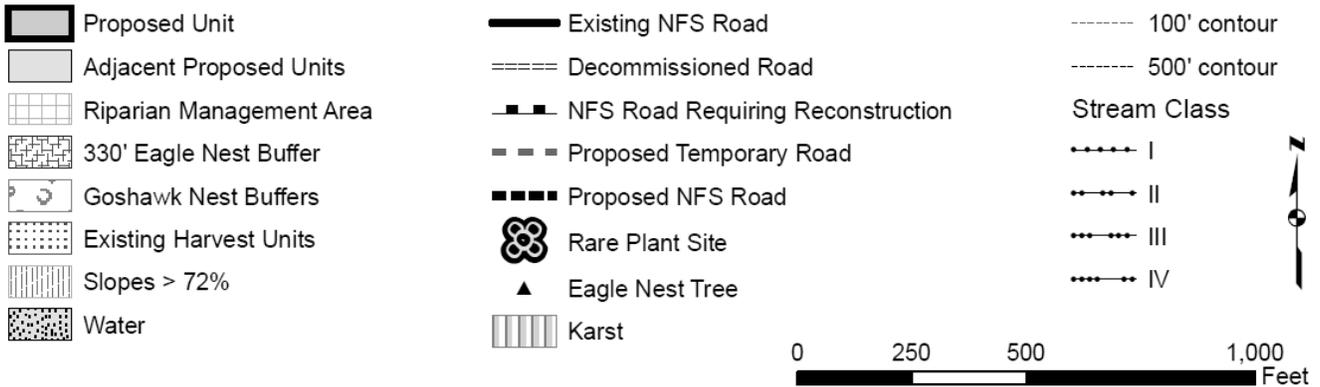
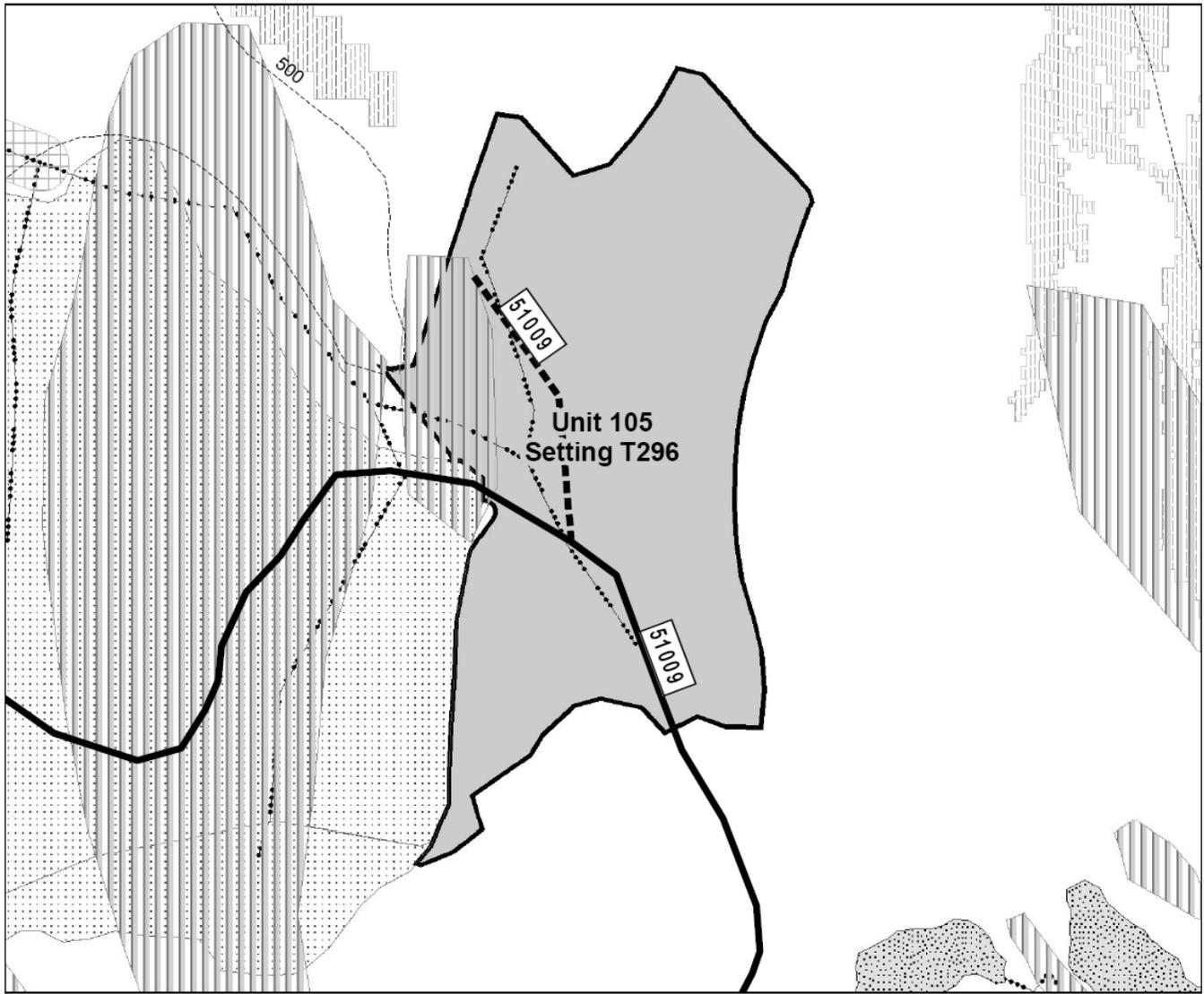
No resource concerns were identified for Geology, Heritage, Botany, Recreation, and Wildlife.

Appendix ROD-1

Unit 105

Navy Timber Sale Selected Alternative

26 Acres



Unit Data Card – Navy Timber Sale Record of Decision

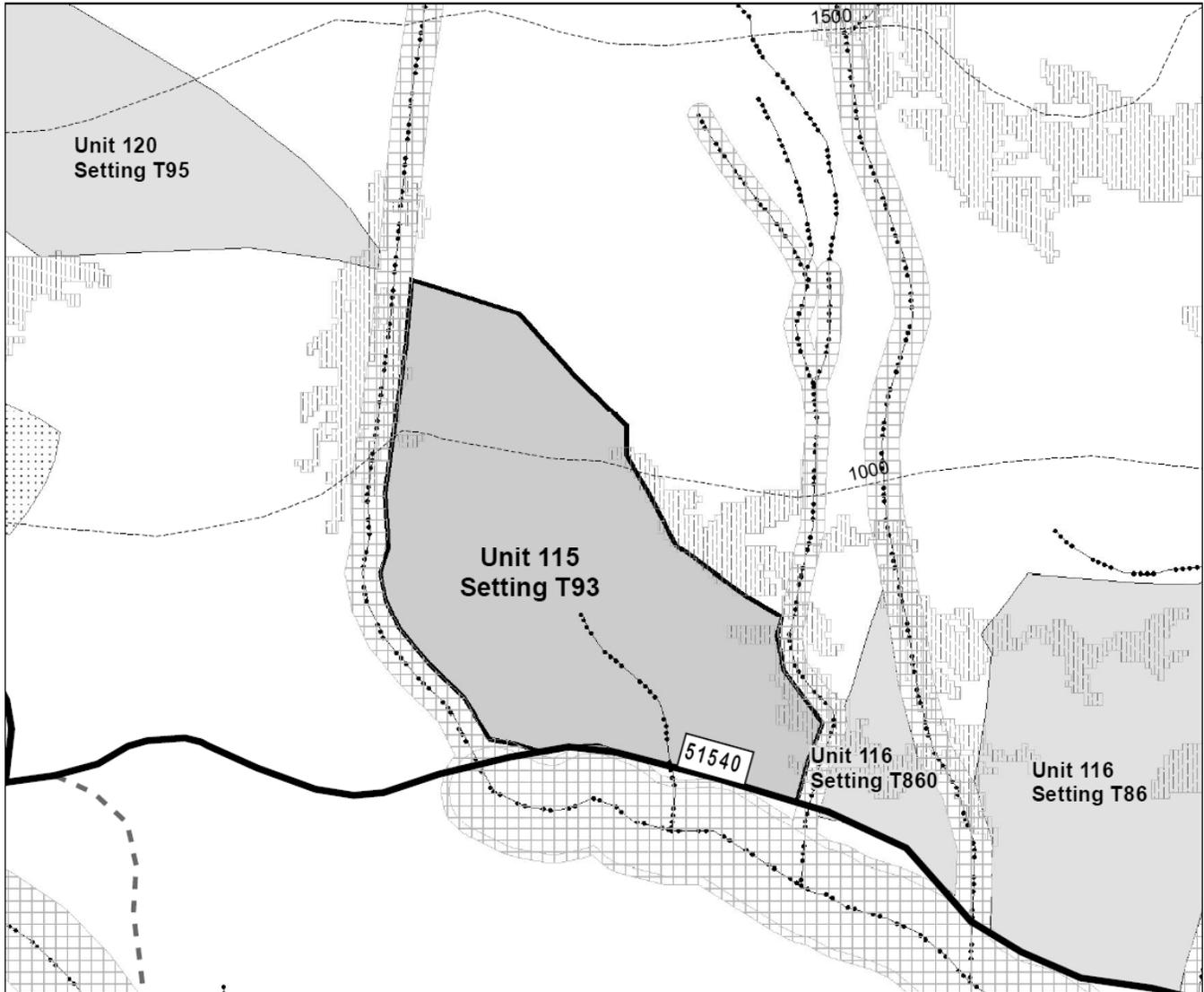
LUD: ML, TM	Logging Cable Systems:	Total Unit Acres: 26	Unit Number: 105
		Harvest Acres: 26	Net Harvest Volume (Saw) MBF: 430
<p>SILVICULTURE: <u>Existing Stand Condition/Vegetation:</u> The stand is a wind-generated multicanopy stand of high site productivity, and is high elevation, uneven-aged, with a southwestern exposure. The stem decay and physical defect in trees is low. Mistletoe infections are light, distributed in most western hemlock. Windthrow risk was rated moderately high. Cedar decline was recorded as light and patchy. Porcupine damage was noted as recent and severe.</p> <p><u>Silvicultural Objective/Desired Condition:</u> The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.</p> <p><u>Silvicultural Prescription:</u> This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with stem decay and widespread mistletoe infections, resulting in a situation where stand growth is being offset or exceeded by decay. Due to the moderately high windthrow risk even-aged clearcutting is being prescribed to preclude or minimize the risk of post harvest windthrow, to promote natural regeneration by opening up the canopy, to improve site productivity through increased soil temperature and to remove/minimize defect, disease, and porcupine damage in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.</p>			
<p>TIMBER/LOGGING: This unit is designed for downhill cable yarding to landings on the existing road and proposed extension of the 51009 road. Some shovel yarding may occur in the southwest portion of the unit.</p>			
<p>ENGINEERING/ROADS: Construct 0.12 mile of new NFS road. Refer to road card 51009. The material source is located on Road 51009, mp 0.86.</p>			
<p>FISH/WATERSHED: There are at least two Class IV, channel type HC, streams that run through unit. Fall timber away from streams if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16).</p>			
<p>GEOLOGY/KARST: Moderate vulnerability karst west of proposed spur road. Small solution (karst) features found along proposed road location contributing water to Class IV stream. Unit needs review prior to approving shovel logging to ensure karst protection. Limit soil disturbance to minimize potential sediment delivery to downslope karst area.</p>			
<p>SCENERY: Unit is not seen from any visual priority travel route or use area.</p>			
<p>SOILS: This unit harvests 1 acre of forested wetlands; cable yarding will minimize soil disturbance. .</p>			
<p>No resource concerns were identified for Botany, Heritage, Recreation, Wildlife.</p>			

Appendix ROD-1

Unit 115

Navy Timber Sale Selected Alternative

17 Acres



Unit Data Card – Navy Timber Sale Record of Decision

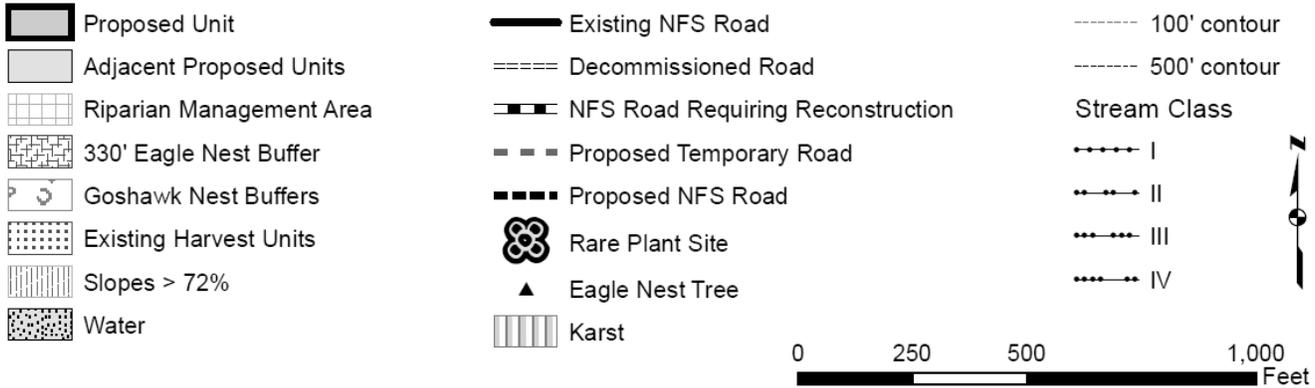
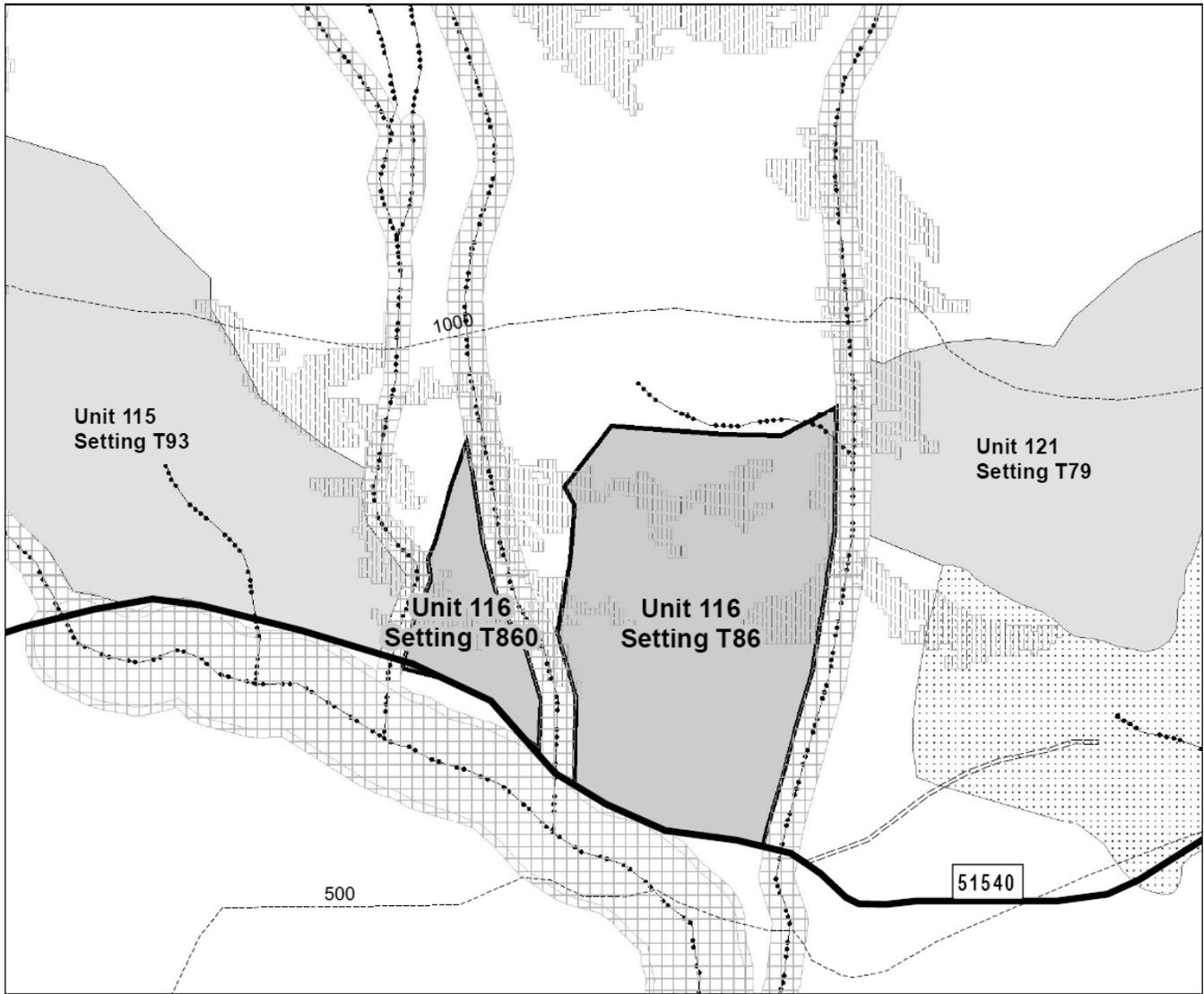
LUD: TM	Logging Cable Systems:	Total Unit Acres: 17	Unit Number: 115
		Harvest Acres: 17	Net Harvest Volume (Saw) MBF: 289
<p>SILVICULTURE: <u>Existing Stand Condition/Vegetation:</u> The stand is a wind-generated multicanopy stand of high site productivity, and is high elevation, uneven-aged, with a southern exposure. The stem decay and physical defect in trees is moderately high. Mistletoe infections are light, distributed in most western hemlock. Windthrow risk was rated moderately high. Cedar decline was recorded as light and patchy. Porcupine damage was noted as recent and severe.</p> <p><u>Silvicultural Objective/Desired Condition:</u> The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.</p> <p><u>Silvicultural Prescription:</u> This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with high levels of stem decay and physical defect, resulting in a situation where stand growth is being offset or exceeded by decay. Due to the moderately high windthrow risk even-aged clearcutting is being prescribed to preclude or minimize the risk of post harvest windthrow, to promote natural regeneration by opening up the canopy, to improve site productivity through increased soil temperature and to remove/minimize defect, disease, and porcupine damage in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.</p>			
<p>TIMBER/LOGGING: This unit is designed for downhill cable yarding to landings located on the existing 51540 road.</p>			
<p>FISH/WATERSHED: There is a Class II, channel type MM1, stream adjacent to the southern unit boundary and Road 51540. No harvest within 120 feet of the channel. (BMP 12.6, 12.6a, 13.16). No harvest permitted below the 51540 road. There are two Class III, channel types HC5 and HC6, streams on both sides of the unit. Do not harvest in the v-notch. (BMP 13.9, 13.16). There is a Class IV, channel type HC1, stream within the unit. Fall timber away from streams if feasible. Full suspension or split yard away from stream if feasible, a minimum of partial suspension is required. Remove logging debris from stream (BMP 13.9, 13.16). RAW buffers may be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.</p>			
<p>SCENERY: Unit is not seen from any visual priority travel route or use area.</p>			
<p>SOILS: The unit is designed to avoid harvest on unstable soils. It includes 1 acre of slopes over 72 percent gradient midslope; full suspension is required. Partial suspension is required on the remainder of the unit. (BMP 13.5, 13.9).</p>			
<p>No resource concerns were identified for Roads, Botany, Geology, Heritage, Wildlife, and Recreation.</p>			

Appendix ROD-1

Unit 116

Navy Timber Sale Selected Alternative

17 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: TM	Logging Cable Systems:	Total Unit Acres: 15	Unit Number: 116
		Harvest Acres: 15	Net Harvest Volume (Saw) MBF: 254

SILVICULTURE:

Existing Stand Condition/Vegetation: The stand is a wind-generated multicanopy stand of moderate to high site productivity, and is high elevation, uneven-aged, with a southern exposure. The stem decay and physical defect in trees is moderately high. Mistletoe infections are light, distributed in most western hemlock. Windthrow risk was rated moderately high. Cedar decline was recorded as light and patchy. Porcupine damage was noted as recent and severe.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.

Silvicultural Prescription: This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with high levels of stem decay and physical defect, resulting in a situation where stand growth is being offset or exceeded by decay. Due to the moderately high windthrow risk even-aged clearcutting is being prescribed to preclude or minimize the risk of post harvest windthrow, to promote natural regeneration by opening up the canopy, to improve site productivity through increased soil temperature and to remove/minimize defect, disease, and porcupine damage in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.

TIMBER/LOGGING: This unit is designed for downhill cable yarding to landings located on the existing 51540 road.

FISH/WATERSHED:

There is a Class II, channel type MM1, stream adjacent to the southern unit boundary and Road 51540. No harvest within 120 feet of the channel. (BMP 12.6, 12.6a, 13.16). No harvest permitted below the 51540 road.

There are three Class III, channel types HC5 and HC6, streams within or adjacent to the unit. Do not harvest in the v-notch. (BMP 13.9, 13.16).

There is a Class IV, channel type HC5, stream within the unit. Fall timber away from streams if feasible. Full suspension or split yard away from stream if feasible, a minimum of partial suspension is required. Remove logging debris from stream (BMP 13.9, 13.16).

RAW buffers may be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.

SCENERY: Unit is not seen from any visual priority travel route or use area.

SOILS: Unit includes scattered patches of slopes over 72 percent gradient. A slope stability assessment is included in the project record. (BMP 13.5) Based on the field review, slopes over 72 percent gradient will require full suspension to minimize soil disturbance and landslide potential. (BMP 13.9) This unit harvests 7 acres of forested wetlands; cable yarding will minimize soil disturbance.

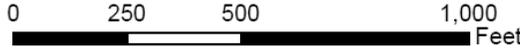
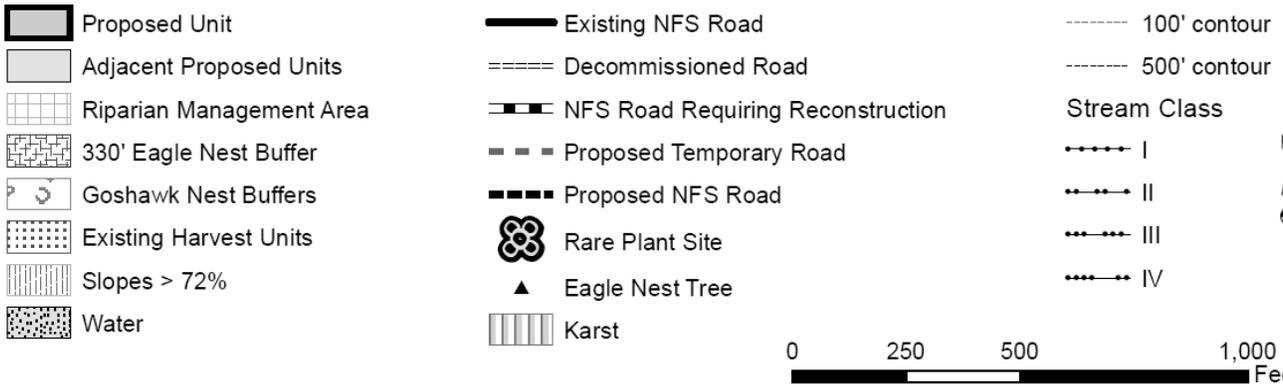
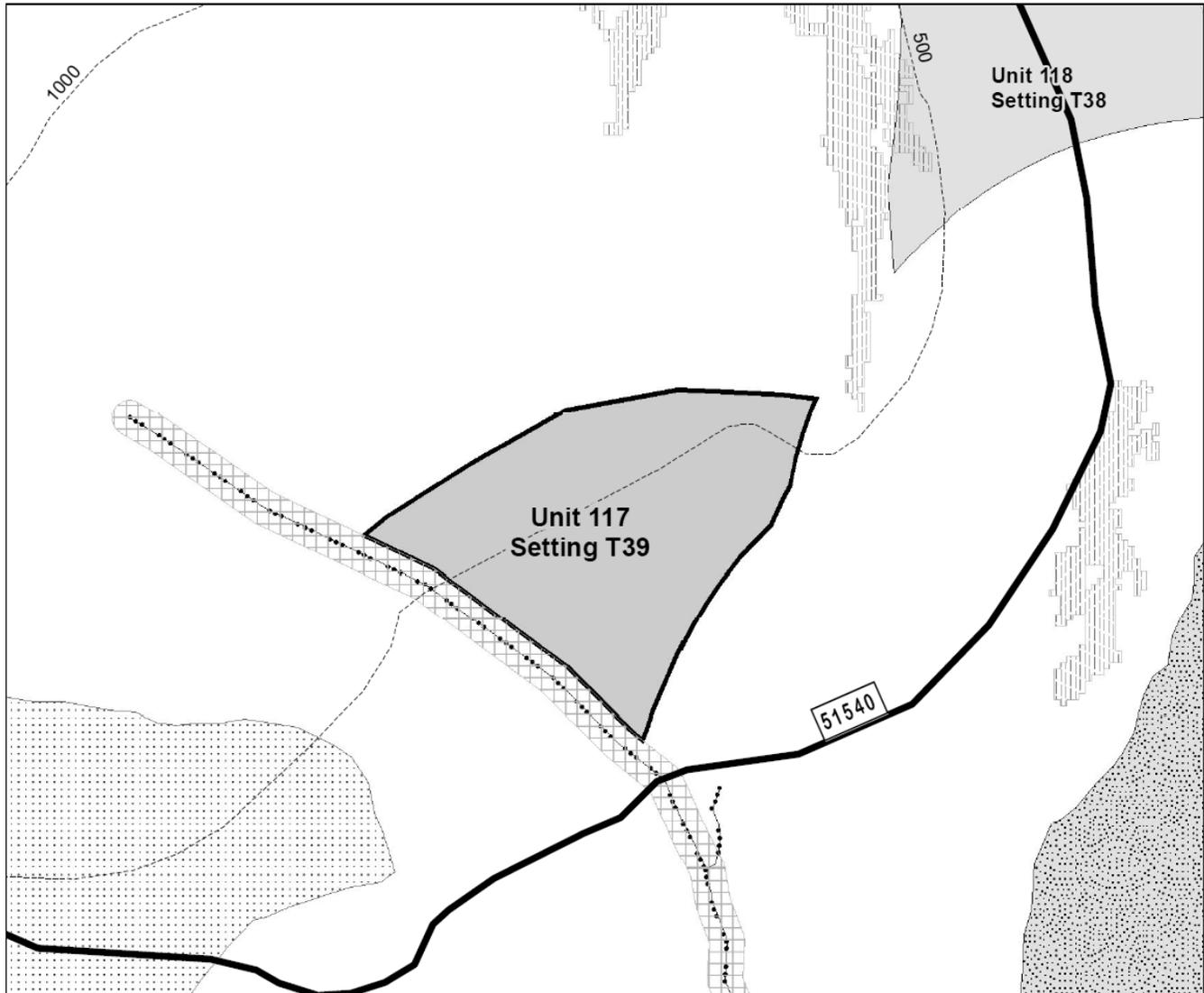
No resource concerns were identified for Roads, Botany, Heritage, Wildlife and Recreation.

Appendix ROD-1

Unit 117

Navy Timber Sale Selected Alternative

11 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: TM	Logging Cable Systems:	Total Unit Acres: 11	Unit Number: 117
		Harvest Acres: 11	Net Harvest Volume (Saw) MBF: 181

SILVICULTURE:

Existing Stand Condition/Vegetation: The stand is a wind-generated multicanopy stand of moderate site productivity, and is low elevation, uneven-aged, with a southeastern exposure. The stem decay and physical defect in trees is moderately high. Mistletoe infections are light, distributed in most western hemlock. Windthrow risk was rated moderately high. Cedar decline was recorded as absent.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.

Silvicultural Prescription: This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with high levels of stem decay and physical defect, resulting in a situation where stand growth is being offset or exceeded by decay. Due to the moderately high windthrow risk, even-aged clearcutting is being prescribed to preclude or minimize the risk of post harvest windthrow, to promote natural regeneration by opening up the canopy, to improve site productivity through increased soil temperature and to remove/minimize defect, and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.

TIMBER/LOGGING: This unit is designed for downhill cable yarding to a landing located on the existing 51540 road. A short temporary spur may be necessary if the 51540 road is not outside of the beach buffer.

FISH/WATERSHED:

There is a Class III, channel type HC6, stream on the southern boundary of the unit. Do not harvest in the v-notch. (BMP 13.9, 13.16).

RAW buffers will be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.

SCENERY: The relatively straight backline and squared off western corner of this unit will be seen from the head of Anita Bay. The SIO in this area is very low. Small unit size and location low on the slope will enable it to meet the very low SIO.

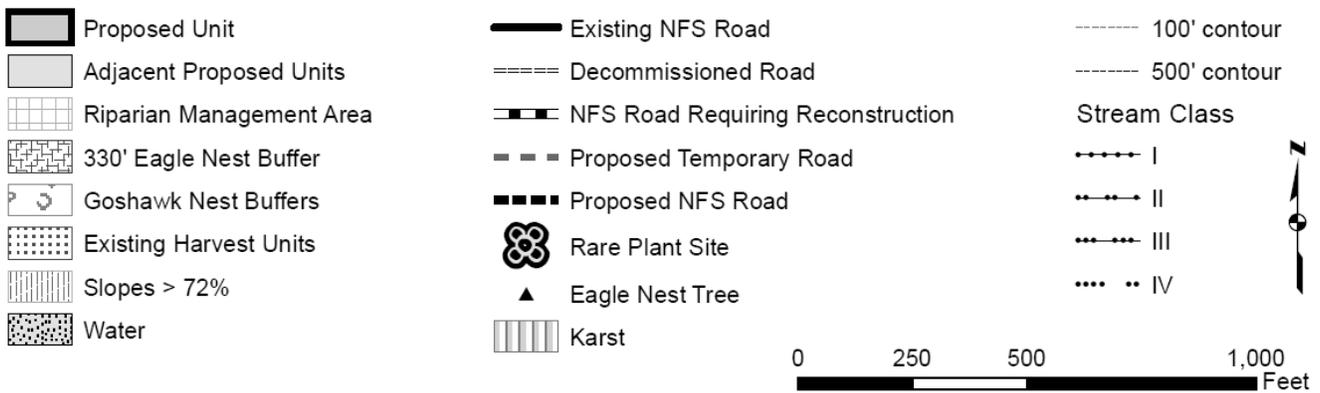
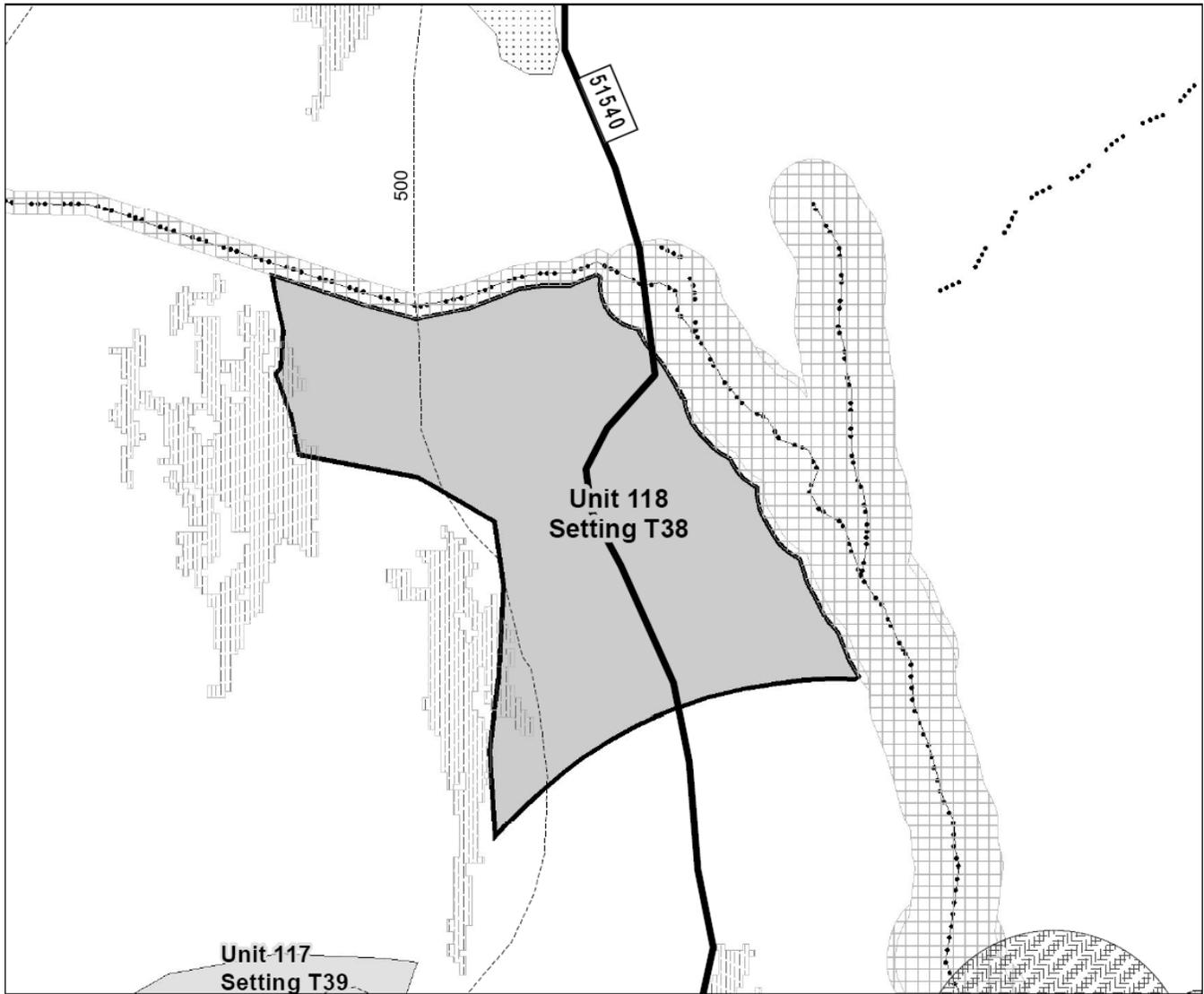
No resource concerns were identified for Roads, Geology, Heritage, Recreation, Botany, Wildlife, and Soils.

Appendix ROD-1

Unit 118

Navy Timber Sale Selected Alternative

20 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: TM	Logging Cable Systems:	Total Unit Acres: 20	Unit Number: 118
		Harvest Acres: 20	Net Harvest Volume (Saw) MBF: 334

SILVICULTURE:
Existing Stand Condition/Vegetation: The stand is a wind-generated multicanopy stand of moderate site productivity, and is low elevation, uneven-aged, with a northeastern exposure. The stem decay and physical defect in trees is moderately high. Mistletoe infections are absent. Windthrow risk was rated as low. Cedar decline was recorded as absent.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.

Silvicultural Prescription: This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with high levels of stem decay and physical defect, resulting in a situation where stand growth is being offset or exceeded by decay. Due to the risk of windthrow, even-aged clearcutting is being prescribed to preclude or minimize the risk of post harvest windthrow, to promote natural regeneration by opening up the canopy, to improve site productivity through increased soil temperature and to remove/minimize defect, and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.

TIMBER/LOGGING: This unit is designed for downhill cable yarding to landings located on the existing 51540 road. Shovel yarding may occur on the east side of the unit.

FISH/WATERSHED:
 There is a Class II, channel types HC1 and MM1, stream on the east and north end of the unit. No harvest within 100 feet (HC) or 120 feet (MM) of the channel (BMP 13.9, 13.16).
 There is a Class III, channel type HC5, section of stream adjacent to the northern unit boundary. No harvest in v-notch. (BMP 13.9, 13.16).
 RAW buffers will be necessary for RMA buffers especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.

SCENERY: Unit is seen from the head of the Anita Bay viewshed, and has an adopted very low SIO. The unit is barely seen, and the proposed prescription will meet a moderate SIO.

SOILS: Unit includes 0.5 acre on the backline with slopes over 72 percent gradient. A slope stability assesment is included in the project record. (BMP 13.5) Based on the field review, over 72 percent gradient will require full suspension to minimize soil disturbance and landslide potential. (BMP 13.9)

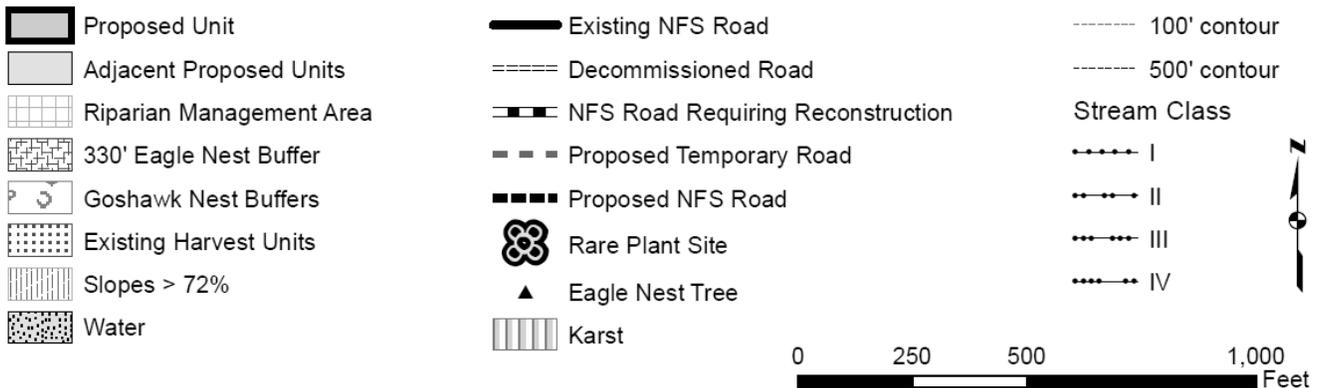
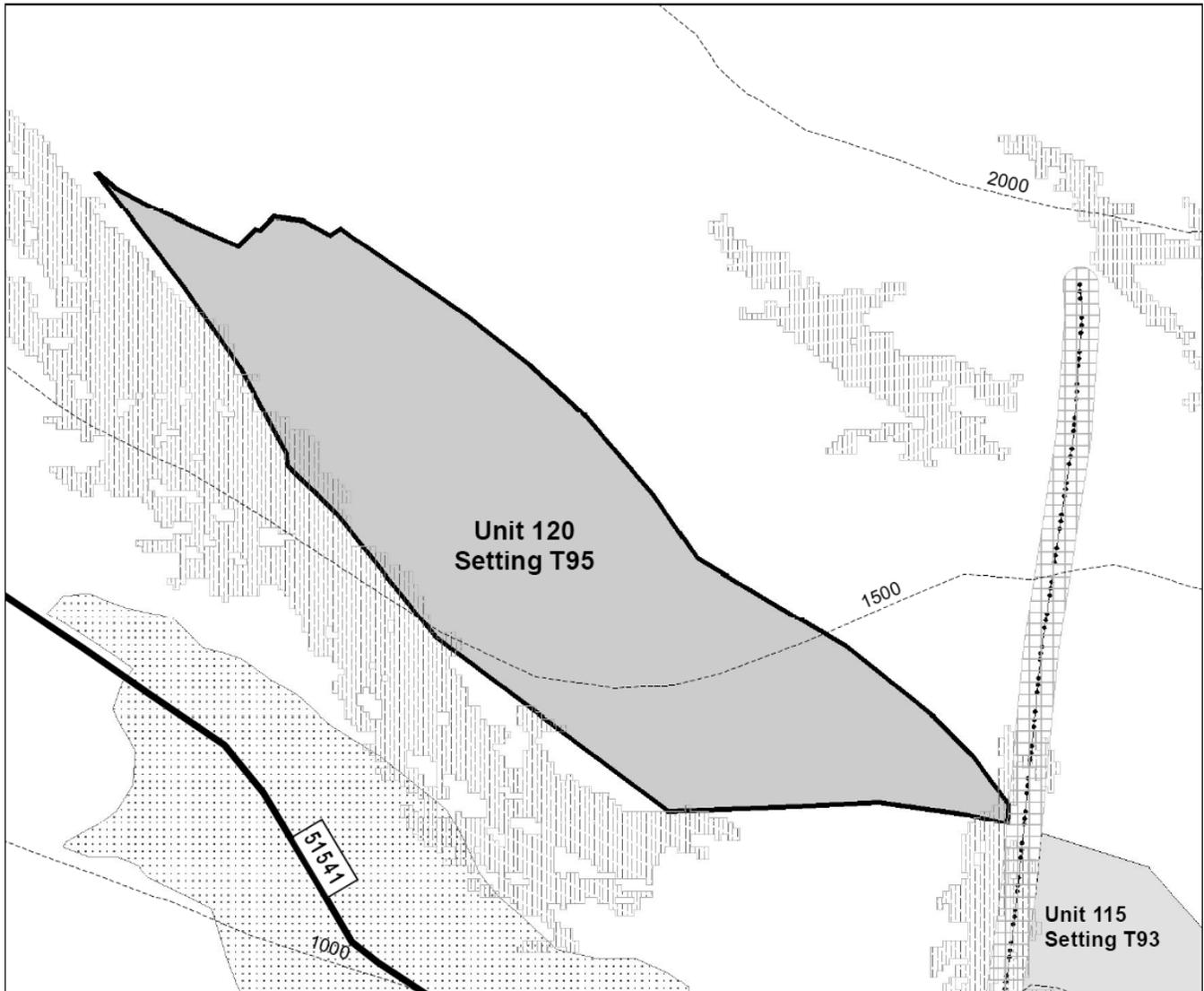
No resource concerns were identified for Roads, Botany, Geology, Heritage, Wildlife and Recreation.

Appendix ROD-1

Unit 120

Navy Timber Sale Selected Alternative

26 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: TM	Logging Systems: Helicopter	Total Unit Acres: 26	Unit Number: 120
		Harvest Acres: 26	Net Harvest Volume (Saw) MBF: 131

SILVICULTURE:

Existing Stand Condition/Vegetation: The stand is a wind-generated multicanopy stand of moderate site productivity, and is high elevation, uneven-aged, with a northeastern exposure. The stem decay and physical defect in trees is light. Mistletoe infections are light and scattered throughout western hemlock. Windthrow risk was rated moderately high. Cedar decline was recorded as heavy distributed throughout the stand.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.

Silvicultural Prescription: Uneven-aged prescription using single-tree selection (STS) retaining at least 70 percent of the unit pretreatment basal area, based on standing live tree total for the unit, uncut. Individual trees selected for harvest may occur in small groups but will generally be evenly distributed across the stand. Any small groups will usually be less than 1 acre but may occasionally go up to 2 acres in size where needed to address insect and disease issues or capitalize on existing advanced regeneration of desirable tree species. Retain at least 50 percent of the cedar and spruce BA to ensure species diversity.

TIMBER/LOGGING: This unit is designed for helicopter yarding to landings along the existing 51541 road.

FISH/WATERSHED:
There is a portion of one Class III, channel type HC5 stream adjacent to the unit on the southeast side. Do not harvest in the v-notch (BMP 13.9, 13.16).

SCENERY: The unit is seen in the background from the head of the Burnett Inlet viewshed. It is not visible from Anita Bay. The adopted SIO for the unit is very low. The proposed prescription will meet a moderate SIO.

SOILS: Unit includes 2 acres with slopes over 72 percent gradient. A slope stability assessment will be conducted during project implementation. (BMP 13.5) Harvest on unstable slopes will be avoided.

WILDLIFE: The 70 percent retention would allow for the elevational migration of wildlife in conjunction with Unit 116.

ROADLESS AREAS: Part of this unit is adjacent to the North Etolin Inventoried Roadless Area (#232).

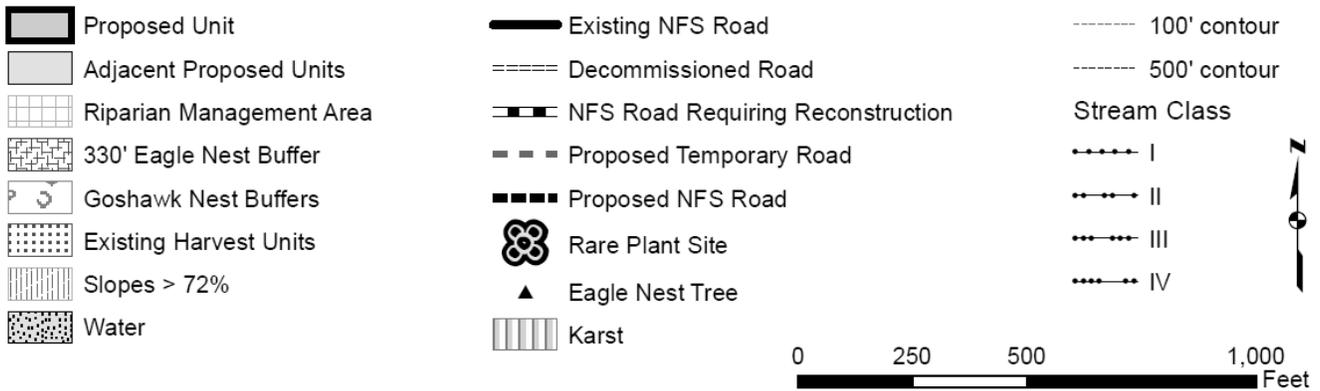
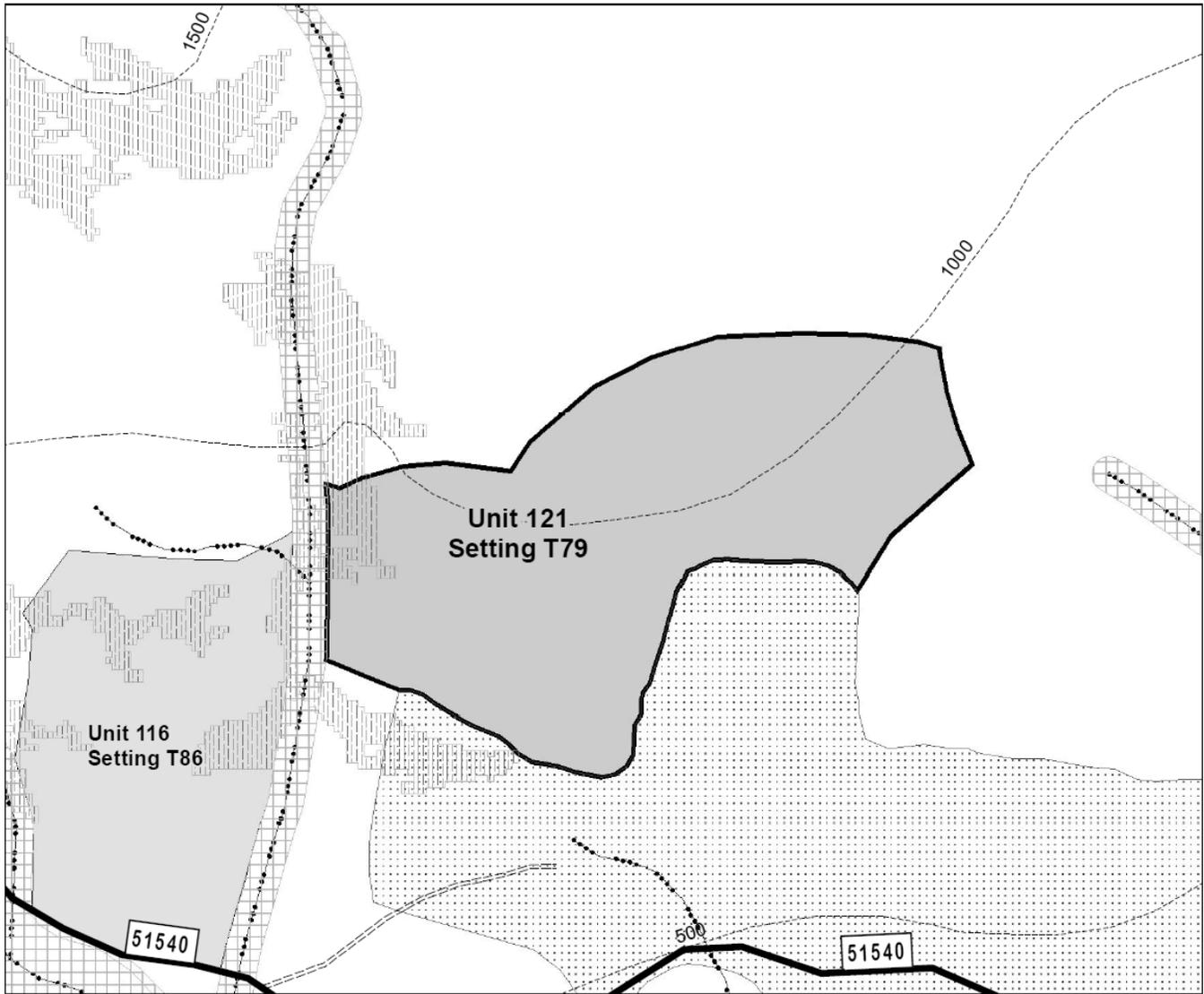
No resource concerns were identified for Roads, Wildlife, Geology, Botany, Recreation, and Heritage.

Appendix ROD-1

Unit 121

Navy Timber Sale Selected Alternative

22 Acres



Unit Data Card – Navy Timber Sale Record of Decision

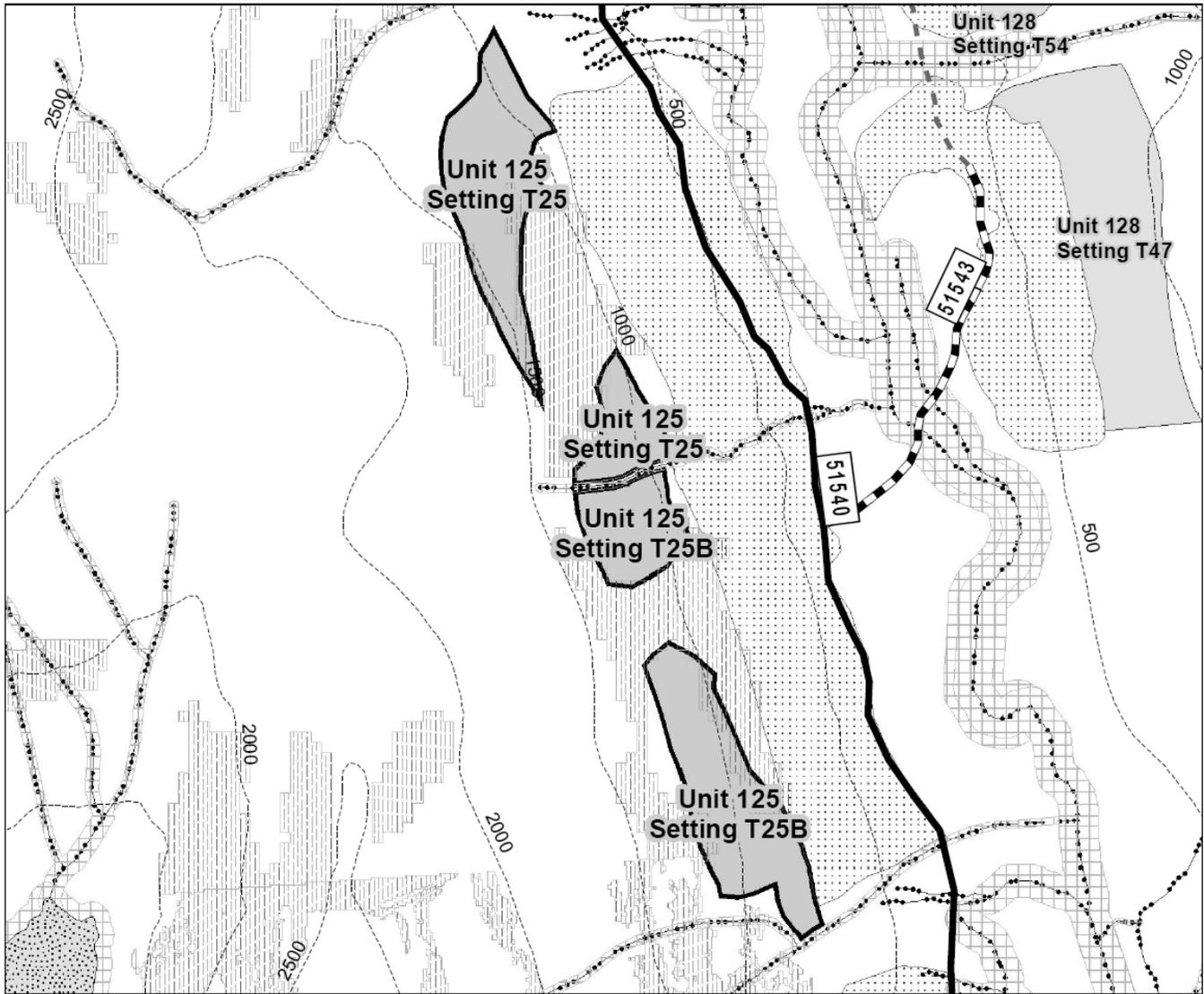
LUD: TM	Logging Systems: Helicopter	Total Unit Acres: 22	Unit Number: 121
		Harvest Acres: 22	Net Harvest Volume (Saw) MBF: 108
<p>SILVICULTURE: <u>Existing Stand Condition/Vegetation:</u> The stand is a wind-generated multicanopy stand of moderate site productivity, and is high elevation, uneven-aged, with a southeastern exposure. The stem decay in trees is light, while physical defect is moderate. Mistletoe infections are light and scattered throughout western hemlock. Windthrow risk was rated moderately high. Cedar decline was recorded as light and scattered throughout the stand.</p> <p><u>Silvicultural Objective/Desired Condition:</u> The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.</p> <p><u>Silvicultural Prescription:</u> Uneven-aged prescription using single-tree selection (STS) retaining at least 70 percent of the unit pretreatment basal area, based on standing live tree total for the unit, uncut. Individual trees selected for harvest may occur in small groups but will generally be evenly distributed across the stand. Any small groups will usually be less than 1 acre but may occasionally go up to 2 acres in size where needed to address insect and disease issues or capitalize on existing advanced regeneration of desirable tree species. Retain at least 50 percent of the cedar and spruce BA to ensure species diversity.</p>			
<p>TIMBER/LOGGING: This unit is designed for helicopter yarding to landings along a temporary road off of the existing 51540 road.</p>			
<p>ENGINEERING/ROADS: Construct 0.15 mile of temporary road that enters an existing managed stand to shorten helicopter turn distances. Road will be decommissioned after the timber sale. The material source is located on Road 51540, mp 6.3. The temporary road will be constructed on an old road prism to minimize environmental impact.</p>			
<p>FISH/WATERSHED: There is one Class III, channel type HC5 stream on the unit boundary. Do not harvest in the v-notch (BMP 13.9, 13.16).</p>			
<p>SCENERY: The unit is seen from the head of the Burnett Inlet and Anita Bay viewsheds. The adopted SIO is very low. The proposed prescription will meet a moderate SIO.</p>			
<p>SOILS: This unit includes 3 acres with slopes over 72 percent gradient. A slope stability assessment will be conducted during project implementation; unit boundary will be adjusted to harvest on unstable slopes adjacent to the stream. (BMP 13.5)</p>			
<p>ROADLESS AREAS: Part of this unit is adjacent to the North Etolin Inventoried Roadless Area (#232).</p>			
<p>No resource concerns were identified for Geology, Heritage, Botany and Wildlife.</p>			

Appendix ROD-1

Unit 125

Navy Timber Sale Selected Alternative

54 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: TM	Logging Systems: Helicopter	Total Unit Acres: 54	Unit Number: 125
		Harvest Acres: 54	Net Harvest Volume (Saw) MBF: 271

SILVICULTURE:

Existing Stand Condition/Vegetation: The stand is a wind-generated multicanopy stand of moderate site productivity, and is high elevation, uneven-aged, with an eastern exposure. The stem decay and physical defect in trees is heavy. Mistletoe infections are light and scattered throughout western hemlock. Windthrow risk was rated moderately high. Cedar decline was recorded as absent.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.

Silvicultural Prescription: Uneven-aged prescription using single-tree selection (STS) retaining at least 70 percent of the unit pretreatment basal area, based on standing live tree total for the unit, uncut. Individual trees selected for harvest may occur in small groups but will generally be evenly distributed across the stand. Any small groups will usually be less than 1 acre but may occasionally go up to 2 acres in size where needed to address insect and disease issues or capitalize on existing advanced regeneration of desirable tree species. Retain at least 50 percent of the cedar and spruce BA to ensure species diversity.

TIMBER/LOGGING: This unit is designed for helicopter yarding to landings along the existing 51540 road.

FISH/WATERSHED:

There are two Class III, channel type HC5, streams adjacent to or within the unit. No harvest in the v-notch (BMP 13.9, 13.16).

SCENERY: The unit is seen in the distance from the head of the Burnett Inlet viewshed, and is not visible from Anita Bay. The adopted SIO is very low. The proposed prescription will meet a moderate SIO.

SOILS: The unit boundary was modified to remove unstable soils. The unit still includes 6 acres with slopes over 72 percent gradient; these acres were determined to be suitable for partial harvest based on the slope stability assessment.

ROADLESS AREAS: Part of this unit is adjacent to the North Etolin Inventoried Roadless Area (#232).

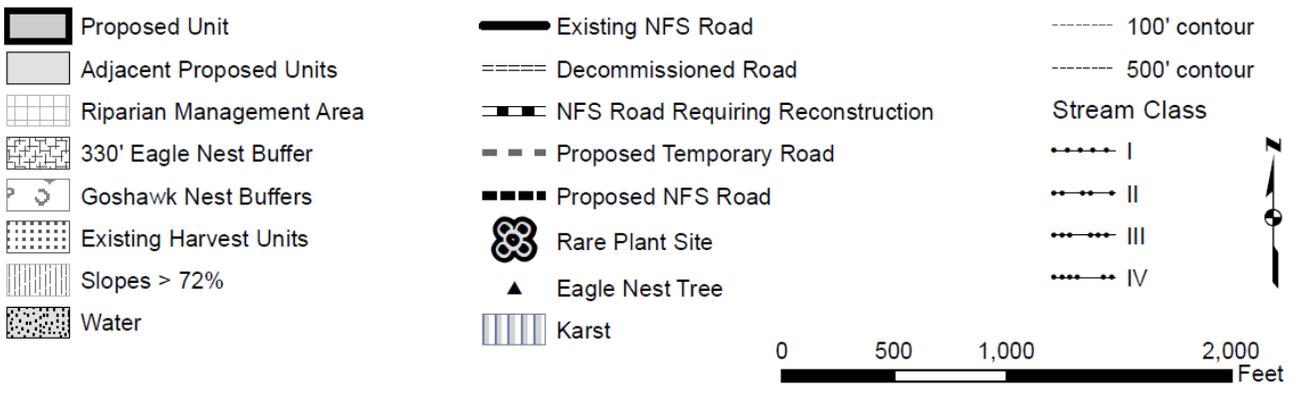
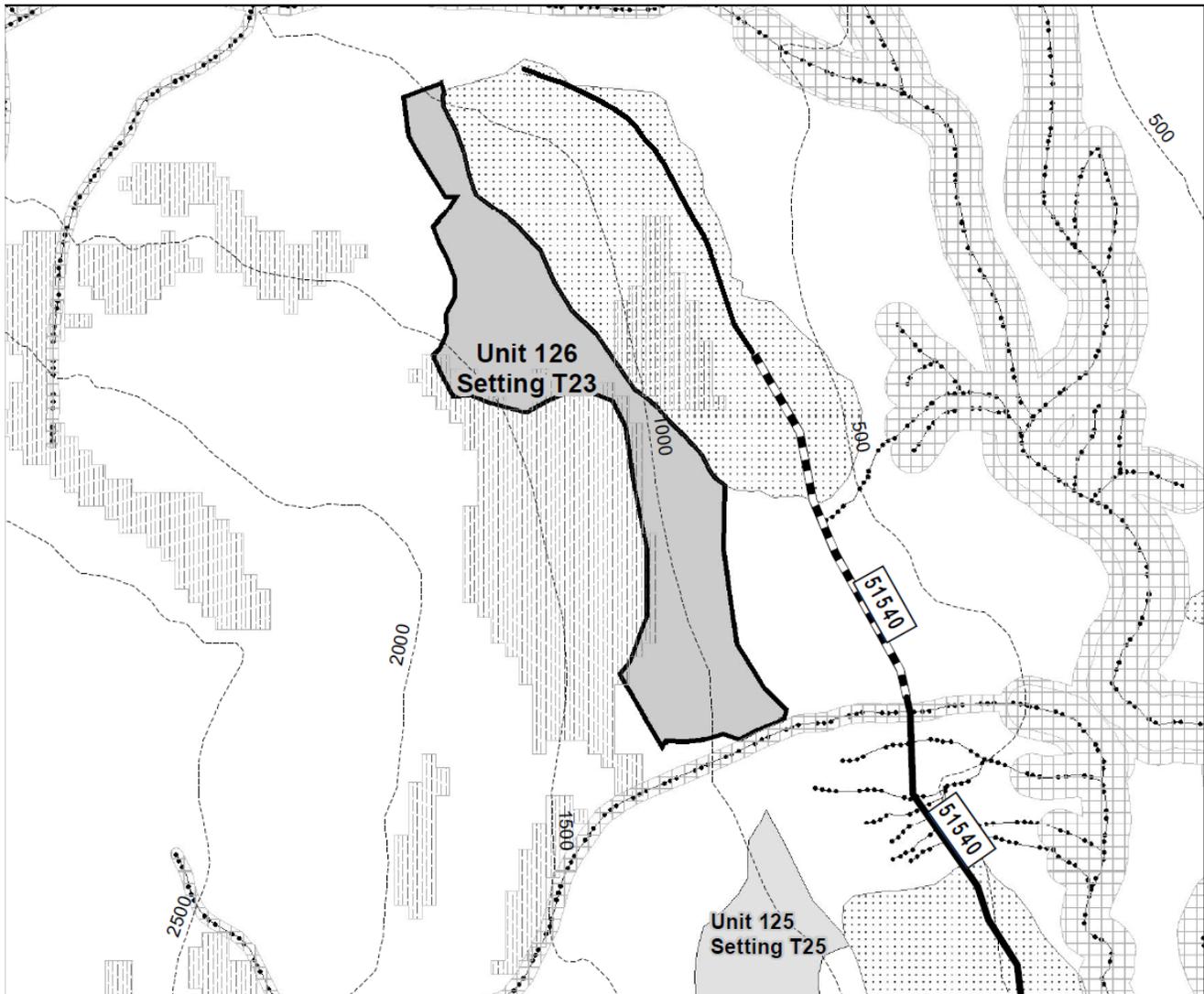
No resource concerns were identified for Roads, Wildlife, Geology, Botany, Recreation, and Heritage.

Appendix ROD-1

Unit 126

Navy Timber Sale Selected Alternative

32 Acres



Unit Data Card – Navy Timber Sale Record of Decision

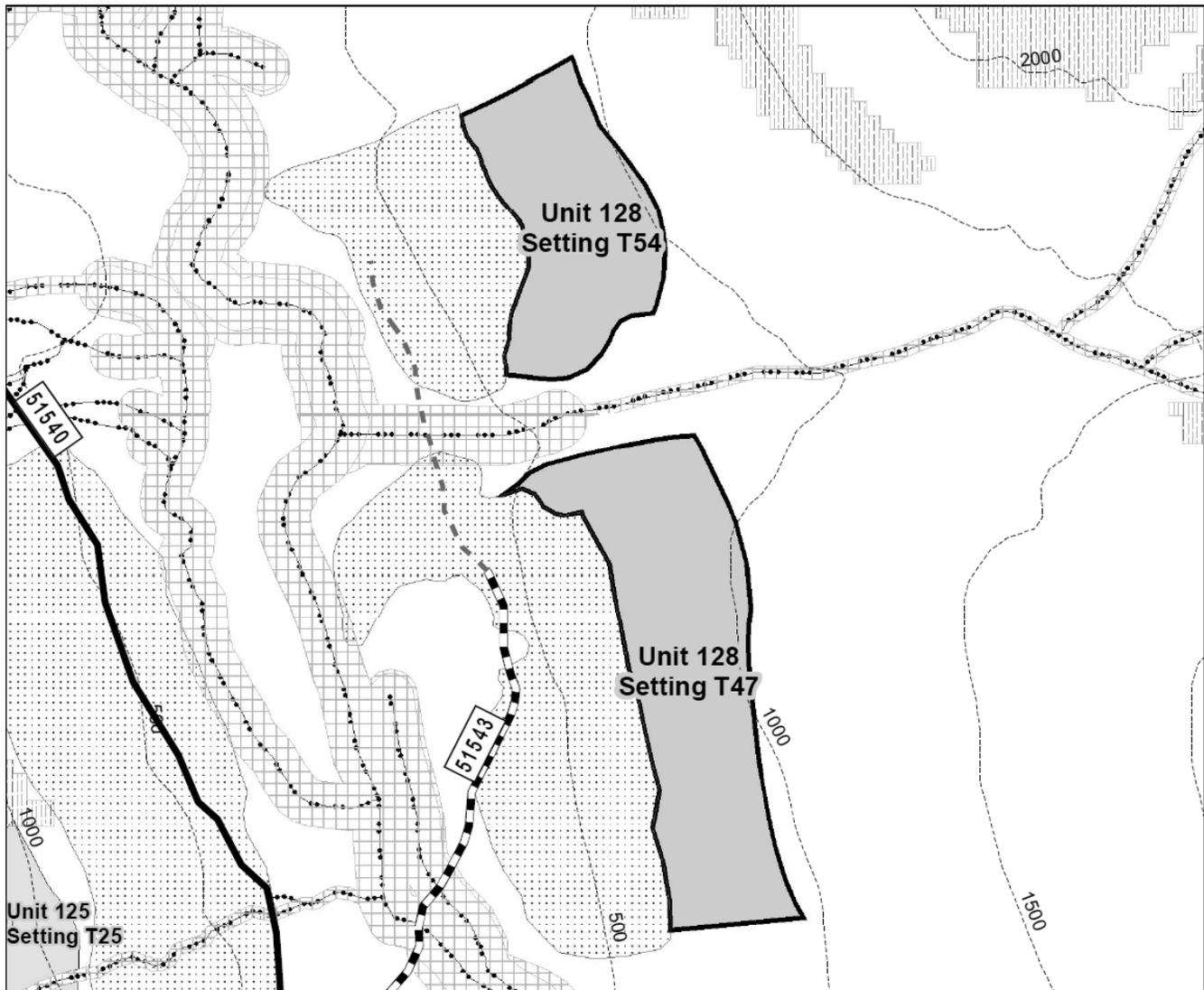
LUD: TM	Logging Systems: Helicopter	Total Unit Acres: 32	Unit Number: 126
		Harvest Acres: 32	Net Harvest Volume (Saw) MBF: 162
<p>SILVICULTURE: <u>Existing Stand Condition/Vegetation:</u> The stand is a wind-generated multicanopy stand of moderate to low site productivity, and is high elevation, uneven-aged, with an eastern exposure. The stem decay and physical defect in trees is moderate. Mistletoe infections are light and scattered throughout western hemlock. Windthrow risk was rated moderately high. Cedar decline was recorded as light and scattered throughout the stand in patches.</p> <p><u>Silvicultural Objective/Desired Condition:</u> The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.</p> <p><u>Silvicultural Prescription:</u> Uneven-aged prescription using single-tree selection (STS) retaining at least 70 percent of the unit pretreatment basal area, based on standing live tree total for the unit, uncut. Individual trees selected for harvest may occur in small groups but will generally be evenly distributed across the stand. Any small groups will usually be less than 1 acre but may occasionally go up to 2 acres in size where needed to address insect and disease issues or capitalize on existing advanced regeneration of desirable tree species. Retain at least 50 percent of the cedar and spruce BA to ensure species diversity.</p>			
<p>TIMBER/LOGGING: This unit is designed for helicopter yarding to landings along the existing 51540 road.</p>			
<p>FISH/WATERSHED: There is a Class III, channel type HC6, stream on the unit boundary. No harvest in the v-notch (BMP 13.9, 13.16).</p>			
<p>SCENERY: Unit is not seen from any visual priority travel route or use area.</p>			
<p>SOILS: Unit includes 3 acres with slopes over 72 percent gradient. A slope stability assessment will be conducted during project implementation. (BMP 13.5) Harvest on unstable slopes will be avoided.</p>			
<p>ROADLESS AREAS: Part of this unit is adjacent to the North Etolin Inventoried Roadless Area (#232).</p>			
<p>No resource concerns were identified for Roads, Wildlife, Geology, Botany, Recreation, and Heritage.</p>			

Appendix ROD-1

Unit 128

Navy Timber Sale Selected Alternative

55 Acres



- | | | |
|--------------------------|-----------------------------------|---------------------|
| Proposed Unit | Existing NFS Road | 100' contour |
| Adjacent Proposed Units | Decommissioned Road | 500' contour |
| Riparian Management Area | NFS Road Requiring Reconstruction | Stream Class |
| 330' Eagle Nest Buffer | Proposed Temporary Road | I |
| Goshawk Nest Buffers | Proposed NFS Road | II |
| Existing Harvest Units | Rare Plant Site | III |
| Slopes > 72% | Eagle Nest Tree | IV |
| Water | Karst | |



Unit Data Card – Navy Timber Sale Record of Decision

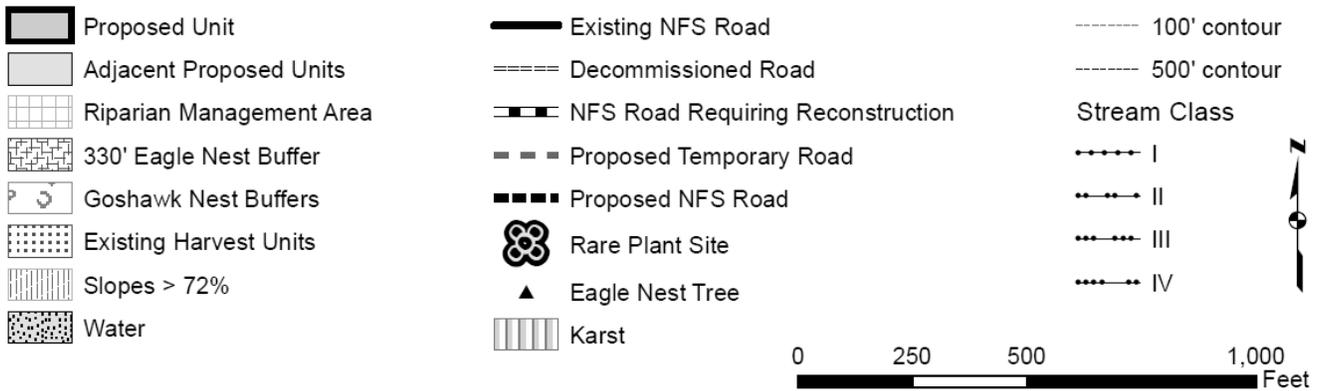
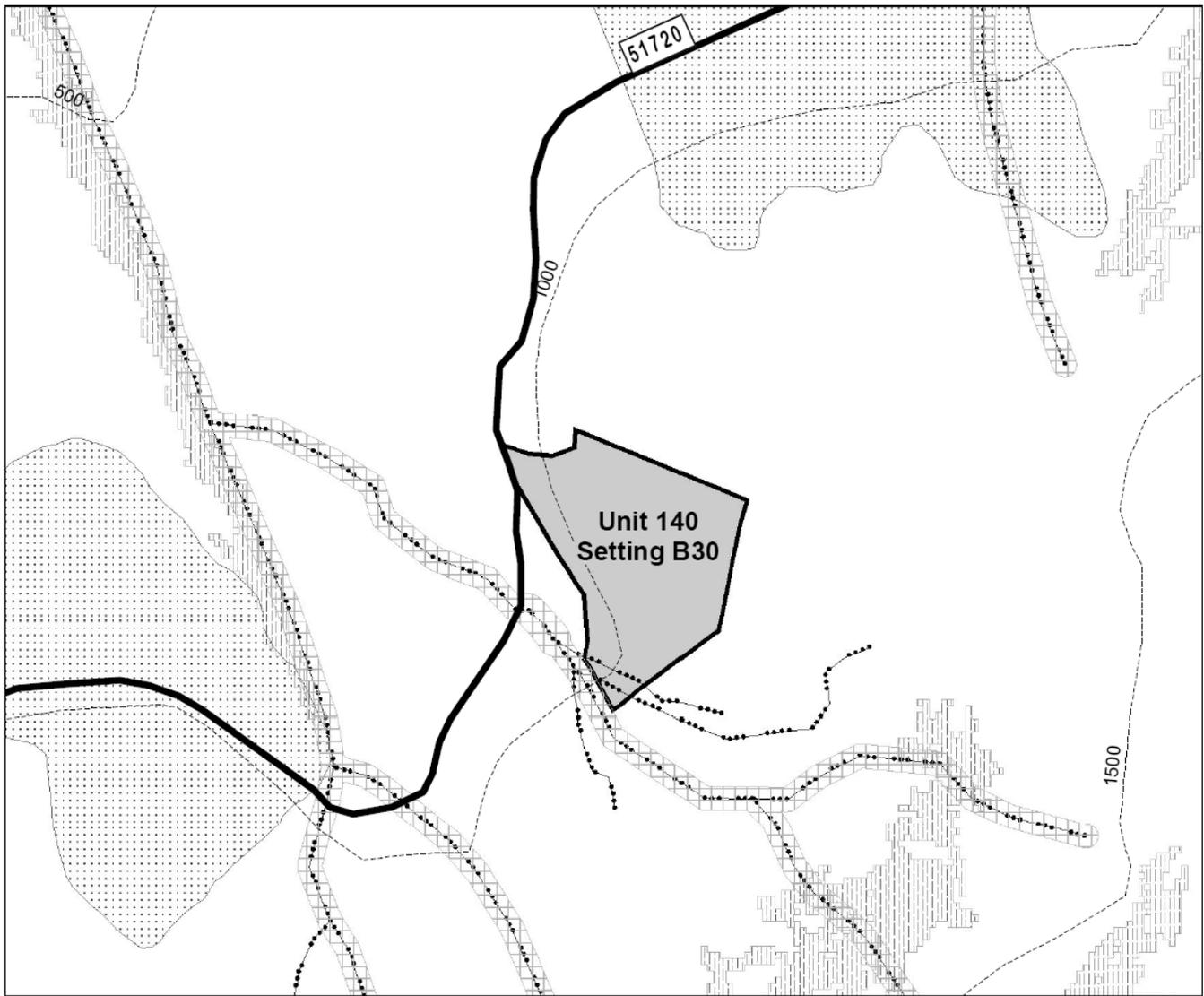
LUD: TM	Logging Systems: Helicopter	Total Unit Acres: 55	Unit Number: 128
		Harvest Acres: 55	Net Harvest Volume (Saw) MBF: 273
<p>SILVICULTURE: <u>Existing Stand Condition/Vegetation:</u> The stand is a wind-generated multicanopy stand of moderate to low site productivity, and is high elevation, uneven-aged, with a western exposure. The stem decay and physical defect in trees is moderate. Mistletoe infections are light and scattered throughout western hemlock. Windthrow risk was rated moderately high. Cedar decline was recorded as light and scattered throughout the stand in patches.</p> <p><u>Silvicultural Objective/Desired Condition:</u> The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.</p> <p><u>Silvicultural Prescription:</u> Uneven-aged prescription using single-tree selection (STS) retaining at least 70 percent of the unit pretreatment basal area, based on standing live tree total for the unit, uncut. Individual trees selected for harvest may occur in small groups but will generally be evenly distributed across the stand. Any small groups will usually be less than 1 acre but may occasionally go up to 2 acres in size where needed to address insect and disease issues or capitalize on existing advanced regeneration of desirable tree species. Retain at least 50 percent of the cedar and spruce BA to ensure species diversity.</p>			
<p>TIMBER/LOGGING: This unit is designed for helicopter yarding to landings along the existing 51543 road (reconstructed) or a temporary extension of this road.</p>			
<p>ENGINEERING/ROADS: Construct 0.31 mile of temporary road. New temporary road construction will take place on an old road prism. Road will be decommissioned after the timber sale. The material source is located on Road 51540 mp 6.3.</p>			
<p>SCENERY: Unit is not seen from any visual priority travel route or use area.</p>			
<p>SOILS: Unit includes 3 acres with slopes over 72 percent gradient. A slope stability assessment will be conducted during project implementation. (BMP 13.5) Harvest on unstable slopes will be avoided.</p>			
<p>ROADLESS AREAS: Part of this unit is adjacent to the North Etolin Inventoried Roadless Area (#232).</p>			
<p>No resource concerns were identified for Roads, Fish/Watershed, Wildlife, Geology, Botany, Recreation, and Heritage.</p>			

Appendix ROD-1

Unit 140

Navy Timber Sale Selected Alternative

33 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: ML	Logging Cable Systems:	Total Unit Acres: 5	Unit Number: 140
		Harvest Acres: 5	Net Harvest Volume (Saw) MBF: 83

SILVICULTURE:

Existing Stand Condition/Vegetation: The stand is a wind-generated multicanopy stand of moderate site productivity, and is low elevation, uneven-aged, with a western exposure. The stem decay and physical defect in trees is light. Mistletoe infections are light and distributed throughout most western hemlock. Windthrow risk was rated as moderately high. Cedar decline was recorded as absent.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.

Silvicultural Prescription: This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with high levels of stem decay and physical defect, resulting in a situation where stand growth is being offset or exceeded by decay. Due to the risk of windthrow even-aged clearcutting is being prescribed to preclude or minimize the risk of post harvest windthrow, to promote natural regeneration by opening up the canopy, to improve site productivity through increased soil temperature and to remove/minimize defect, and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.

TIMBER/LOGGING: This unit is designed for downhill cable yarding to a landing on the existing 51720 road.

FISH/WATERSHED:

There is a Class III, channel type HC5, stream adjacent to the southern portion of the unit. No harvest in the v-notch. (BMP 13.9, 13.16).

There are two Class IV, channel type HC, streams within the unit. Fall timber away from streams if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16).

RAW buffers may be necessary for RMA buffers, especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.

SCENERY: This unit will be visible from Anita Bay viewshed where the adopted SIO is low. The small unit size and irregular terrain will enable this unit to meet a moderate SIO.

WILDLIFE: Consider opportunities to allow for connectivity to the beach buffer.

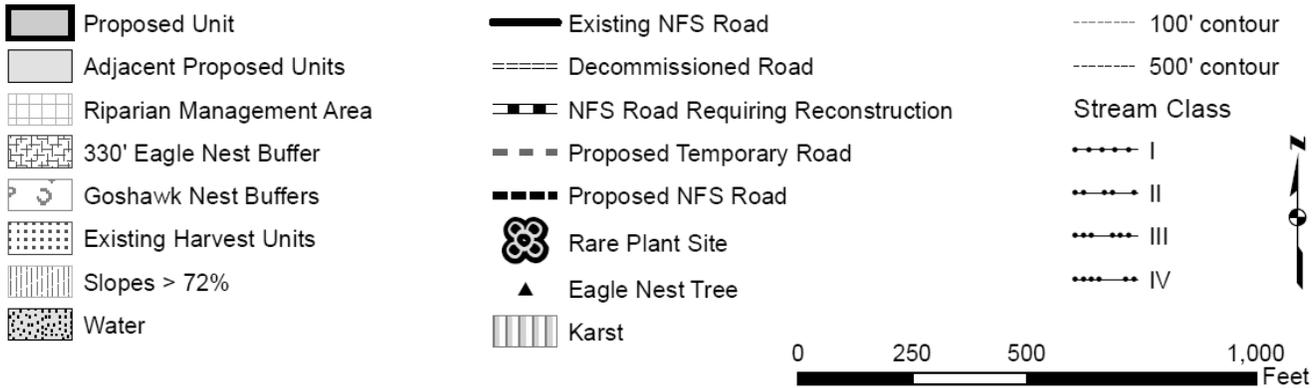
No resource concerns were identified for Roads, Geology, Heritage, Recreation, Botany and Soils.

Appendix ROD-1

Unit 141

Navy Timber Sale Selected Alternative

10 Acres



Unit Data Card – Navy Timber Sale Record of Decision

LUD: ML	Logging Cable Systems:	Total Unit Acres: 10	Unit Number: 141
		Harvest Acres: 10	Net Harvest Volume (Saw) MBF: 158

SILVICULTURE:

Existing Stand Condition/Vegetation: The stand is a wind-generated multicanopy stand of moderate site productivity, and is high elevation, uneven-aged, with a western exposure. The stem decay and physical defect in trees is light. Mistletoe infections are light and distributed throughout most western hemlock. Windthrow risk was rated as moderately high. Cedar decline was recorded as absent.

Silvicultural Objective/Desired Condition: The desired condition for this stand is a highly productive, healthy, windfirm stand grown for timber management that retains residual trees as needed to meet that retains residual trees as needed to meet standards and guides for scenery as well as other objectives.

Silvicultural Prescription: This stand is being recommended for harvest at this time because it's not expected to obtain the desired condition given the current stand condition and growth trajectory. Trees are over-mature with high levels of stem decay and physical defect, resulting in a situation where stand growth is being offset or exceeded by decay. Due to the risk of windthrow even-aged clearcutting is being prescribed to preclude or minimize the risk of post harvest windthrow, to promote natural regeneration by opening up the canopy, to improve site productivity through increased soil temperature and to remove/minimize defect, and disease in the future stand to the maximum extent possible. Refer to the introduction to unit cards, marking guidelines and silvicultural prescription for more information.

TIMBER/LOGGING: This unit is designed for downhill cable yarding to a landing on the existing 51720 road.

FISH/WATERSHED:

There is a Class III, channel type HC5, stream adjacent to the western portion of the unit. No harvest in the v-notch. (BMP 13.9, 13.16).

There is a Class IV, channel type HC, stream within the unit. Fall timber away from streams if feasible. Full suspension or split yard away from streams if feasible, a minimum of partial suspension is required. Remove logging debris from streams (BMP 13.9, 13.16).

RAW buffers may be necessary for RMA buffers, especially on the windward (southeasterly) edge of stream buffers and where windthrow has been historically evident.

SCENERY: This unit will be visible from the Anita Bay viewshed where the adopted SIO is low. The unit's small size and irregular shape combined with irregular terrain will enable it to meet a moderate to low SIO.

SOILS: This unit includes 2 acres with slopes over 72 percent gradient. A slope stability assessment will be conducted during project implementation. (BMP 13.5) Harvest on unstable slopes will be avoided. The unit harvests 2 acres of forested wetlands; cable yarding will minimize soil disturbance.

No resource concerns were identified for Roads, Geology, Heritage, Recreation, Botany and Wildlife.

Appendix ROD-1

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