

*STATE FOREST LAND*  
**SEPA ENVIRONMENTAL CHECKLIST**

***Purpose of checklist:***

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

***Instructions for applicants:***

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use “not applicable” or “does not apply” only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

*Questions in italics are supplemental to Ecology’s standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at <http://www.dnr.wa.gov/sepa>. These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

***Instructions for Lead Agencies:***

Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

***Use of checklist for nonproject proposals:***

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the [SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS \(part D\)](#). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

**A. BACKGROUND**

1. Name of proposed project, if applicable:

*Timber Sale Name:* **BRONCO**  
*Agreement #* **30-100427**

2. Name of applicant: **Washington Department of Natural Resources**

3. Address and phone number of applicant and contact person:

**DNR Northwest Region**  
**919 North Township Street**  
**Sedro Woolley, WA 98284**  
**(360) 856-3500**  
**Contact person: Cory McDonald**

4. Date checklist prepared: **07/10/2020**

5. Agency requesting checklist: **Washington Department of Natural Resources**

6. Proposed timing or schedule (including phasing, if applicable):

*a. Auction Date:*  
**01/27/2021**

*b. Planned contract end date (but may be extended):*  
**03/31/2023**

*c. Phasing:*  
**None.**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

*No, go to question 8.*

*Yes, identify any plans under A-7-a through A-7-d:*

*a. Site Preparation:*

**Portions of the proposal may be treated with herbicides prior to planting. Assessment for treatment will occur after completion of harvest.**

*b. Regeneration Method:*

**Hand plant conifer seedlings within two years after completion of harvest. The reforestation method is tentatively scheduled for planting seedlings, with the possibility of future FPA amendment to allow for natural regeneration. An onsite survey will be conducted to determine the suitability for natural regeneration.**

*c. Vegetation Management:*

**Treatment to be assessed in 3-5 years. Competing vegetation may be treated by manual cutting and/or herbicide. Treatment to be assessed in 10 to 15 years for pre-commercial thinning. A commercial thinning is possible in 25 to 45 years.**

*d. Other:*

**Road maintenance assessments will be conducted and may include periodic ditch and culvert cleanout, and grading as necessary. Onsite rock may be used for road construction, if rock sources are discovered along haul routes or within the sale area.**

**The NF-ML, SM-ML, NF-62, NF-6206, SM-40 and SM-4003 roads will continue to be used for future timber sales and forest management activities.**

**The S1100 Pit will continue to be used for future road construction and road maintenance activities.**

**Firewood from piled material, if available, may be sold following the completion of harvest activities.**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. *Note: All documents are available upon request at the DNR Region Office.*

303 (d) – listed water body in WAU: **North Fork Nooksack River, Racehorse Creek**

*temp*

*sediment*

*completed TMDL (total maximum daily load)*

*Landscape plan:*

*Watershed analysis:* **Warnick Watershed Analysis**

*Interdisciplinary team (ID Team) report:*

*Road design plan:* **See the Bronco Road Plan**

*Wildlife report:* **See Biological Memorandum, dated 7/21/2020.**

*Geotechnical report:*

*Other specialist report(s):* **See Geological Memorandum, dated 8/14/2020.**

*Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):*

*Rock pit plan:*

*Other:* **State Soil Survey, 1992; Policy for Sustainable Forests, December 2006; Final Habitat Conservation Plan (HCP) & Environment Impact Statement, September 1997; ICN#131240**

**Referenced documents may be obtained at the region office responsible for this proposal.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

**None known.**

10. List any government approvals or permits that will be needed for your proposal, if known.

- FPA # \_\_\_\_\_       FPHP       Board of Natural Resources Approval  
 Burning permit       Shoreline permit       Existing HPA  
 Other:

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

*a. Complete proposal description:*

**The proposal area is a two unit variable retention harvest (VRH). The total estimated harvest removal volume is 4,566 MBF of timber. Harvest removals will utilize a combination of ground-based, tethered/cable assisted and cable yarding systems. All harvest is on State managed trust lands, and is adjacent to both State and private land.**

**Approximately 150 acres were considered for this proposal; this has been reduced to approximately 113.8 net harvest acres due to adjacent riparian and wetland management zones, leave tree areas, potentially unstable slopes and operational feasibility.**

**A rock pit will be utilized with this proposal. Rock pit name is listed in A.7.  
Road work will be completed as part of this proposal, as listed in A.11.c.**

*Describe the stand of timber pre-harvest (include major timber species and origin date), type of harvest and overall unit objectives.*

**Pre-Harvest Stand Description:**

**Unit 1, Stand 1**

- According to agency data, stand origin date ranges from 1931-1950.
- Dominant heights range from approximately 140 to 180 feet.
- A mixed stand, primarily dominated by western hemlock with scattered pockets dominated by Douglas-fir, and scattered western redcedar throughout. There are also areas with scattered red alder and bigleaf maple.

**Unit 2, Stand 1 (eastern half of unit):**

- According to agency data, an approximate stand origin date of 1931.
- Dominant heights range from approximately 60 to 100 feet.
- Densely stocked conifer stand growing on a high elevation (approximately 3,000 feet) ridgetop. Equally composed of western hemlock, Douglas-fir, and western redcedar with pockets of Pacific silver fir.

**Unit 2, Stand 2 (western half of unit):**

- According to agency data, an approximate stand origin date of 1925.
- Dominant heights range from approximately 90 to 160 feet.
- Dominated by western hemlock, with an increased Douglas-fir component in the lower elevations. Scattered western redcedar throughout with the occasional pocket of Pacific silver fir.

**Type of Harvests:**

- Variable Retention Harvest (VRH): Even-aged harvest with a leave tree retention component.

**Overall Unit Objectives:**

- Generate revenue for the State trust beneficiaries.
- Protect water quality, maintain site productivity, and maintain wildlife habitat through a leave tree retention strategy.
- This proposal meets or exceeds all guidelines set forth in the DNR Habitat Conservation Plan (HCP), Riparian Forest Restoration Strategy, Policy for Sustainable Forests, and Forest Practices Rules and Regulations.

b. Describe planned road activity. Include information on any rock pits that will be used in this proposal. See associated forest practice application (FPA) for maps and more details.

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		5,643	2.07	0
Reconstruction		0		0
Abandonment		3,719	1.37	0
Pre-Haul Maintenance		63,720	23.41	0
Bridge Install/Replace	0			0
Stream Culvert Install/Replace (fish)	0			0
Stream Culvert Install/Replace (no fish)	1			
Cross-Drain Install/Replace	22			

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist (See “WAU Map(s)” and “Timber Harvest Unit Adjacency Map(s)” as referenced on the DNR website: <http://www.dnr.wa.gov/sepa>. Click on the DNR region of this proposal under the Topic “Current SEPA Project Actions - Timber Sales.” Proposal documents also available for review at the DNR Region Office.)

a. Legal description:

**Includes harvest area, road work and rock pit:**

**Township 39 North, Range 5 East, Section 12**

**Township 39 North, Range 6 East, Sections 5 and 7**

**Township 40 North, Range 6 East, Section 32**

**Includes pre-haul maintenance:**

**Township 39 North, Range 5 East, Sections 1, 2, 10, 11, 12, and 15**

**Township 39 North, Range 6 East, Sections 5, 6, 7, and 8**

**Township 40 North, Range 6 East, Sections 31 and 32**

b. Distance and direction from nearest town:

**This proposal is located approximately 15 miles northeast of Deming, WA**

13. Cumulative Effects

a. Briefly describe any known environmental concerns that exist regarding elements of the environment in the associated WAU(s). (See WAC 197-11-444 for what is considered an element of the environment).

Small shallow slope failures are known to exist in the Racehorse Creek and Warnick WAU's, associated with over-steepened slopes and inner gorge stream channels. The potential for natural delivery of sediment to typed waters is present, especially during peak flow events. There is a marbled murrelet occupied within the Racehorse Creek WAU.

*b. Briefly describe existing plans and programs (i.e. the HCP, DNR landscape plans, retention tree plans) and current forest practice rules that provide/require mitigation to protect against potential impacts to environmental concerns listed in question A-13-a.*

**This proposal meets or exceeds all guidelines set forth in the DNR Habitat Conservation Plan (HCP), Policy for Sustainable Forests, and Forest Practices Rules and Regulations.**

The Department's Habitat Conservation Plan (HCP) outlines strategies to protect federally listed threatened and endangered species, and species that are in danger of being listed in the future, as well as uncommon habitat types found on forest lands in western Washington. HCP riparian buffers intended to protect salmon and trout habitat were applied to this proposal, and will be applied to all future sales in the vicinity. The HCP identifies large, structurally unique trees and snags as uncommon habitats that need to be protected. An average of 8 trees per acre will be left in the proposed harvest area. These trees will function for future snag and large structurally unique tree recruitment. Placement of these trees also provides protection for other unique habitat elements in the proposal area.

*c. Briefly describe any specific mitigation measures proposed, in addition to the mitigation provided by plans and programs listed under question A-13-b.*

**See mitigation measures outlined below in B-1-d-2 and B-5-d**

*d. Based on the answers in questions A-13-a through A-13-c, is it likely potential impacts from this proposal could contribute to any environmental concerns listed in question A-13-a?*

**No.**

*e. Complete the table below with the reasonably foreseeable future activities within the associated WAU(s) (add more lines as needed). Future is generally defined as occurring within the next 7 years. This data was obtained from DNR's Land Resource Manager System on the date of processing this checklist and may be subject to change.*

WAU Name	Total WAU Acres	DNR-managed WAU Acres	Acres of DNR proposed even-aged harvest in the future	Acres of DNR proposed uneven-aged harvest in the future	Acres of proposed harvest on non-DNR-managed lands currently under active FP permits
WARNICK	14,374	8,303	443	654	104
RACEHORSE CREEK	12,534	9,601	582	120	171

**Other management activities, such as stand and road maintenance, will likely occur within the associated WAU(s).**

**B. ENVIRONMENTAL ELEMENTS**

**1. Earth**

a. General description of the site (check one):

Flat,  Rolling,  Hilly,  Steep Slopes,  Mountainous,  Other:

1. *General description of the associated WAU(s) or sub-basin(s) within the proposal (landforms, climate, elevations, and forest vegetation zone).*

<b>WAU:</b>	WARNICK
<b>WAU Acres:</b>	14,374
<b>Elevation Range:</b>	463 – 5,046 ft.
<b>Mean Elevation:</b>	2401 ft.
<b>Average Precipitation:</b>	72 in./year
<b>Primary Forest Vegetation Zone:</b>	Pacific Silver Fir

<b>WAU:</b>	RACEHORSE CREEK
<b>WAU Acres:</b>	12,534
<b>Elevation Range:</b>	305 - 5011 ft.
<b>Mean Elevation:</b>	2,160 ft.
<b>Average Precipitation:</b>	78 in./year
<b>Primary Forest Vegetation Zone:</b>	Western Hemlock

2. *Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).*

**This proposal is a representative example of the WAUs at the same elevation and aspect.**

b. What is the steepest slope on the site (approximate percent slope)?

**93%**

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

*Note: The following table is created from state soil survey data. It is an overview of general soils information for the soils found in the sale area. The actual soil conditions in the sale*

area may vary considerably based on land-form shapes, presence of erosive situations, and other factors.

State Soil Survey #	Soil Texture
0125	V.GRAVELLY LOAM
5603	V.GRAVELLY LOAM
0695	V.GRAVELLY LOAM
5604	V.GRAVELLY LOAM
5711	SILT LOAM

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No, go to question B-1-e.

Yes, briefly describe potentially unstable slopes or landforms in or around the area of the proposal site. For further information, see question A-8 for related slope stability documents and question A-10 for the FPA number(s) associated with this proposal.

**Inner gorge stream channels, bedrock hollows, a convergent headwall, and a Category E bedrock deep-seated landslide are located around the proposal. There is also evidence of small shallow slope failures and channelized debris flows within these Forest Practices Rule-Identified Landforms. Unit 1 is located on the runout deposits of two relict to dormant-distinct bedrock deep-seated landslide complexes. Unit 2 is located on four relict bedrock deep-seated landslides. No shallow failures with potential for sediment delivery to a public resource are within the harvest activity areas of the proposal.**

The statewide landslide inventory (LSI) screening tool was reviewed using GIS. GIS shows LSI polygons #30465, #33776, #30371, #33790, and #16178 as present with in the proposal but are drawn inaccurately. LSI shows several other landslide polygons immediately adjacent to the sale area.

**This landslide database is maintained by the Washington State Department of Natural Resources, Forest Practices Division. The LSI includes landslides mapped during many different projects including large-scale geologic mapping, watershed analyses, landscape planning, and landslide hazard zonation, in addition to other case studies and mapping efforts. A large majority of landslides identified by these projects are mapped by remote review with minimal field verification. In addition, dormant and ancient deep-seated landslides are mapped in many projects included in the LSI. A large number of the remotely identified landslides and deep-seated features have been mapped with a questionable, probable, or unknown certainty. As a result, the LSI database is meant to be used as a screening tool and field verification is a necessary step in confirming the absence, presence, and extent of mapped features, as well as their actual level of activity/instability.**

1) Does the proposal include any management activities proposed on potentially unstable slopes or landforms?

No  Yes, describe the proposed activities:

2) Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.

**A DNR State Lands Geologist field reviewed the proposal on October 30, 2019 and December 3, 2019, December 13, 2019, and May 29, 2020 and did not observe potentially unstable landforms within the proposal area.**

**Timber sale boundaries have been designed to exclude all inner gorge stream channels, bedrock hollows, a convergent headwall, and a Category E bedrock deep-seated landslide. Sale boundaries are also located to exclude shallow slope failures with moderate to high potential for sediment delivery to a public resource.**

**New roads are located on existing grades and gentle terrain. They are designed to minimize ground-based yarding distances and access landing areas requiring cable yarding.**

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

*Approx. acreage new roads:* **2.07**

*Approx. acreage new landings:* **3.0**

*Fill Source:* **Native materials**

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.  
**Yes. Some erosion could occur as a result of building new roads, installing culverts, and hauling timber.**

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*

**Approximately 2% of the site will remain as gravel roads.**

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:  
*(Include protection measures for minimizing compaction or rutting.)*

**The following timing and access restrictions will be applied to the project:**

- **Road construction, timber/rock haul and ground-based timber harvesting/yarding will be restricted between November 1 and March 31 unless the operator formulates an adequate plan to prevent erosion from entering surface waters.**
- **During the operating seasons indicated above, none of these activities will occur during times of heavy precipitation and/or soil saturation unless the operator formulates an adequate plan to prevent erosion from entering surface waters.**

The following strategies will be applied to proposed road work/maintenance:

- Soils that are exposed by road work will be revegetated the year road work is performed.
- Cross-drain culverts will be adequate in size and frequency to prevent concentration of road runoff to the extent that it would cause gullyng of stream drainages. Cross drain culverts will be placed in order to minimize the amount of ditch water that flows into surface waters. Riprap will be utilized at culvert inlets and outlets as necessary to prevent erosion at these vulnerable points. Existing roads will be maintained so that drainage structures remain functional.
- Storm patrols will be conducted as necessary on existing roads to identify and address potential erosion problems.
- Soils exposed within 25 feet of streams that may deliver to typed water will be mulched or waterbarred.

The following strategies will be applied to the proposed timber harvest:

- Riparian (RMZ) buffers as described in B-3-a-1-b and B-3-a-1-c, will be retained.
- The leading end of logs will be suspended when being yarded to reduce soil disturbance.
- Standard ground-based yarding equipment will be restricted to operating on sustained slopes of 40% or less.
- Specialized self-leveling equipment will be restricted to operating on sustained slopes 55% or less.
- Tethered/cable-assisted equipment may be used on steeper slopes, but in areas with low erosion potential.
- Equipment trails will be water-barred as necessary.

## 2. Air

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

**Minor amounts of engine exhaust from logging and road construction equipment and dust from vehicle traffic on roads will be emitted during proposed activities. If landing debris is burned after harvest is completed, smoke will be generated. There will be no emissions once the proposal is complete.**

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.  
**None known.**

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:  
**If landing debris is burned, it will be in accordance with Washington State's Smoke Management Plan. A burn permit will be obtained before burning occurs.**

## 3. Water

- a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. (See “WAU Map(s)” and “Timber Harvest Unit Adjacency Map(s)” as referenced on the DNR website: <http://www.dnr.wa.gov/sepa>. Click on the DNR region of this proposal under the Topic “Current SEPA Project Actions - Timber Sales.” Proposal documents also available for review at the DNR Region Office.)

No  Yes, describe in 3-a-1-a through 3-a-1-c below

a. Downstream water bodies: **Racehorse Creek and North Fork Nooksack River**

b. Complete the following riparian & wetland management zone table:

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in feet (per side for streams)
Unnamed streams	4	5	100'
Unnamed streams	5	9	30' Equipment Limitation Zone
Wetland (greater than 0.25 and less than 1.0 acre in size)	Forested	1	100'

c. List any additional RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures and wind buffers.

**RMZ/WMZ buffers as listed in B.3.a.1.b. as well as the proposed measures to reduce or control erosion described in B.1.h provide protection measures for the surface waters in the vicinity of the proposal area.**

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No

Yes (See RMZ/WMZ table above and timber sale maps which are available on the DNR website: <http://www.dnr.wa.gov/sepa>. Timber sale maps are also available at the DNR region office.) (**Note: Timber Sale maps are DRAFT at the point of submission of this SEPA.**)

Description (include culverts):

**Timber will be felled immediately adjacent to the RMZs as described in the table in B-3-a-1-b.**

**Timber will be felled and yarded away from type 5 streams where safely practicable. All timber will have the leading end of the logs elevated during yarding to reduce soil disturbance near these features. There are 30-foot equipment limitation zones applied to all type 5 streams in the proposal. Temporary, ground-based equipment crossings may be utilized to cross type 5 streams.**

**One road with a type 4 stream crossing will be constructed as part of this proposal. A culvert will be installed at the crossing and will be installed to the specifications listed in the Bronco Road Plan. Reference the Bronco Road Plan for further details.**

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

**None.**

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. *(Include diversions for fish-passage culvert installation.)*

No       Yes, description:

**All water flow may be temporarily diverted through bypass culverts or retained behind (or pumped around) coffer dams during culvert installations.**

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No       Yes, describe activity and location:

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.  
**It is not likely that any waste materials will be discharged into the surface water(s). However, minor amounts of oil, fuel, and other lubricants may inadvertently be discharged to the adjacent surface water(s) as a result of heavy equipment use or mechanical failure. No lubricants will be disposed of on-site.**

- 7) *Is there a potential for eroded material to enter surface water as a result of the proposal considering the protection measures incorporated into the proposal's design?*

No       Yes, describe:

**Soils and terrain susceptible to surface erosion are generally located on slopes steeper than 70%. The potential for eroded material to enter surface water is minimized due to the erosion control measures and operational procedures outlined in B-1-h.**

- 8) *What are the approximate road miles per square mile in the associated WAU(s)?*

**WARNICK = 3.0 (mi./sq. mi.), RACEHORSE CREEK = 2.2 (mi./sq. mi.)**

- 9) *Are there forest roads or ditches within the associated WAU(s) that deliver surface water to streams, rather than back to the forest floor?*

No       Yes, describe:

**It is likely some roads or road ditches within the WAU intercept sub-surface flow**

**and deliver surface water to streams, however current road construction, reconstruction, and/or maintenance standards will be applied that address this issue by installing cross-drains to deliver ditch water to stable forest floors.**

10) *Is there evidence of changes to channels associated with peak flows in the proposal area (accelerated aggradations, surface erosion, mass wasting, decrease in large organic debris (LOD), change in channel dimensions)?*

No             Yes, describe observations:

**There is evidence of changes to channels across the WAU(s). These changes are a result of natural events such as spring runoff from snowmelt and significant storm events. Channel migration, scouring, and deposition of material can be seen in channels across the WAU(s); this indicates those channels historically experience higher water levels and peak flows.**

11) *Describe any anticipated contributions to peak flows resulting from this proposal's activities which could impact areas downstream or downslope of the proposal area. It is not likely the proposed activity will change the timing, duration, or volume of water during a peak flow event. This proposal limits harvest unit size and proximity to other recent harvests, minimizes the extent of the road network, incorporates road drainage disconnected from stream networks, and implements wide riparian buffers which all have mitigating effects on the potential for this proposal to increase peak flows that could impact areas downstream or downslope of the proposal area.*

**The Warnick WAU does have a completed watershed analysis and states that its associated sub basins have a low sensitivity to hydrologic change.**

12) *Is there a water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity?*

No             Yes, describe the water resource(s):

*a. Is it likely a water resource or an area of slope instability listed in B-3-12 (above) will be affected by changes in amounts, quality or movements of surface water as a result of this proposal?*

No             Yes, describe possible impacts:

13) *Describe any protection measures, in addition to those required by other existing plans and programs (i.e. the HCP, DNR landscape plans) and current forest practice rules included in this proposal that mitigate potential negative effects on water quality and peak flow impacts.*

**As stated in B-3-a-11, this proposal is not expected to cause a significant increase in peak flows. In order to minimize the risk of road failures during peak flow events, all culverts and ditches will be maintained so that they remain functional.**

**Additional relief culverts will be installed on existing roads to disperse ditch water**

**across the hillslope. On particularly sensitive slopes, road running surfaces may be outsloped to further decrease the potential to concentrate/re-direct water. Storm patrols will be conducted as necessary on existing and newly constructed roads to identify and address potential erosion problems.**

b. Ground Water:

- 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

**No water will be withdrawn or discharged.**

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

**Minor amounts of oil, fuel, and other lubricants may inadvertently be discharged to the ground as a result of heavy equipment use or mechanical failure. No lubricants will be disposed of on-site. All spills are required to be contained and cleaned-up. This proposal is expected to have no impact on ground water.**

- 3) *Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity?*

No       Yes, describe:

*a. Is it likely a water resource or an area of slope instability listed in B-3-b-3 (above) could be affected by changes in amounts, timing, or movements of groundwater as a result this proposal?*

No       Yes, describe possible impacts:

*Note protection measures, if any:*

c. Water runoff (including stormwater):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

**Water runoff, including storm water, from road surfaces will be collected by roadside ditches and diverted onto the forest floor via ditch-outs and cross drain culverts.**

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

No             Yes, describe:

**No waste materials are anticipated to enter any surface water.**

*Note protection measures, if any:*

**No additional protection measures will be necessary to protect these resources beyond those described in B-1-d-2, B-1-h, B-3-a-2, and B-3-a-13.**

- 3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

**No changes to drainage patterns are expected.**

- d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

**See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-13, B-3-b-3, and B-3-c-2.**

#### 4. Plants

- a. Check the types of vegetation found on the site:

Deciduous tree:

Alder    Aspen    Birch    Cottonwood    Maple    Western Larch

Other:

Evergreen tree:

Douglas-Fir             Engelmann Spruce    Grand Fir             Lodgepole Pine

Mountain Hemlock    Noble Fir             Pacific Silver Fir    Ponderosa Pine

Sitka Spruce             Western Hemlock    Western Redcedar    Yellow Cedar

Other:

Shrubs:

Huckleberry    Rhododendron    Salmonberry    Salal

Other:

Ferns

Grass

Pasture

Crop or Grain

Orchards    Vineyard    Other Permanent Crops

Wet Soil Plants:

Bullrush    Buttercup    Cattail    Devil's Club    Skunk Cabbage

Other:

Water plants:

Eelgrass    Milfoil    Water Lily

Other:

Other types of vegetation:

Plant communities of concern:

- b. What kind and amount of vegetation will be removed or altered? (Also see answers to questions A-11-a, A-11-b and B-3-a-2).

**Second-growth conifer and hardwoods will be removed via Variable Retention Harvest methods. Some immature trees and snags may be left unless they need to be felled for safety or operational reasons. This stand will retain an average of 8 snags dominant and co-dominant and/or structurally unique trees via clumped and scattered trees.**

- 1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See “WAU Map(s)” and “Timber Harvest Unit Adjacency Map(s)” on the DNR website: <http://www.dnr.wa.gov/sepa>. Click on the DNR region of this proposal under the Topic “Current SEPA Project Actions - Timber Sales.” Proposal documents also available for review at the DNR Region Office.)

**The adjacent timber types are uniform second and third growth mixed conifer stands, ranging from 15-90 years old.**

- c. List threatened and endangered *plant* species known to be on or near the site.

TSU Number	Common Name	Federal Listing Status	State Listing Status
BRONCO 1	western jewel-weed	None	Threatened

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

**An average of 8 trees per acre will be retained as scattered leave trees and in leave tree clumps that are distributed across the proposal area. Retention trees were selected and distributed in areas that will increase horizontal and vertical structure over the landscape, protect unique biological microsites such as large downed logs, and protect sensitive areas such as wet and/or erodible soils and Type 5 streams.**

**Additionally, the site will be planted with conifer seedlings after harvest.**

- e. List all noxious weeds and invasive species known to be on or near the site.

**None found in corporate database. However, Himalayan blackberry is found on the site.**

**5. Animals**

a. List any birds and other animals or unique habitats which have been observed on or near the site or are known to be on or near the site. Examples include:

birds:

eagle  hawk  heron  owls  songbirds

other: **marbled murrelet**

mammals:

bear  beaver  coyote  cougar  deer  elk

other:

fish:

bass  herring  salmon  shellfish  trout

other:

amphibians/reptiles:

frog  lizard  salamander  snake  turtle

other:

unique habitats:

balds  caves  cliffs  mineral springs  oak woodlands  talus slopes

other:

b. List any threatened and endangered species known to be on or near the site (include federal- and state-listed species).

TSU Number	Common Name	Federal Listing Status	State Listing Status
BRONCO 2	Marbled murrelet	Threatened	Endangered

c. Is the site part of a migration route? If so, explain.

Pacific flyway  Other migration route:

Explain:

**All of Washington State is considered part of the Pacific Flyway. No impacts are anticipated as a result of this proposal.**

d. Proposed measures to preserve or enhance wildlife, if any:

*Note existing or proposed protection measures, if any, for the complete proposal described in question A-11.*

Species /Habitat: **Riparian Habitat**

Protection Measures: **Stream protection measures listed in B.3.a.1.b. and c., B.3.a.2.; soil protection measures in B.1.h.; slope stability protection in B.1.d.5; and peak flows protection in B.3.a.16.**

Species /Habitat: **Mature Forest Components**

Protection Measures: **Retention tree measures outlined in B-4-d.**

Species /Habitat: **Marbled Murrelet Occupied Site**

Protection Measures: **The boundaries of Unit 2 have been modified to preserve and protect the adjacent occupied site and its associated 100-meter buffer. No activities will occur within the occupied site or the associated 100-meter buffer.**

Species /Habitat: **Non-Forested Talus**

Protection Measures: **The boundaries of the non-forested talus feature adjacent to Unit 1 have been protected with a 100-foot no-harvest buffer.**

- e. List any invasive animal species known to be on or near the site.  
**None found in corporate database or on site.**

## **6. Energy and natural resources**

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.  
**Petroleum fuel (diesel or gasoline) will be used for heavy equipment during active road building, timber harvest operations, and for transportation. No energy sources will be needed following project completion.**
- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.  
**No.**
- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:  
**None.**

## **7. Environmental health**

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.
- 1) Describe any known or possible contamination at the site from present or past uses.  
**None known.**
  - 2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.  
**None known.**
  - 3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

**Petroleum-based fuel and lubricants may be used and stored on site during the operating life of this project.**

- 4) Describe special emergency services that might be required.  
**The Department of Natural Resources, private, and fire protection district suppression crews may be needed in case of wildfire. In the event of personal injuries, emergency medical services may be required. Hazardous material spills may require Department of Ecology and/or county assistance.**
- 5) Proposed measures to reduce or control environmental health hazards, if any:  
**No petroleum-based products will be disposed of on site. If a spill occurs, containment and cleanup will be required. Spill kits are required to be onsite during all heavy equipment operations. The cessation of operations may occur during periods of increased fire risk. Fire tools and equipment, including pump trucks and/or pump trailers, will be required on site during fire season.**

*NOTE: If contamination of the environment is suspected, the proponent must contact the Department of Ecology.*

b. Noise

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?  
**None.**
- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.  
**There will be short term, low level and high level noise created by the use of harvesting equipment and hauling operations within the proposal area. This type of noise has been historically present in this geographical area.**
- 3) Proposed measures to reduce or control noise impacts, if any:  
**None.**

**8. Land and shoreline use**

- a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. *(Site includes the complete proposal, e.g. rock pits and access roads.)*  
**Current use of site and adjacent land types: working industrial forests.**

**This proposal will not change the use of or affect the current/long term land use of areas associated with this sale.**

- b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?  
**This proposal site has been used as working forest lands. This proposal will retain the site in working forest lands.**
- 1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:  
**No.**
- c. Describe any structures on the site.  
**None.**
- d. Will any structures be demolished? If so, what?  
**No.**
- e. What is the current zoning classification of the site?  
**Commercial Forestry.**
- f. What is the current comprehensive plan designation of the site?  
**Forestry/Mining/Fishing.**
- g. If applicable, what is the current shoreline master program designation of the site?  
**Not applicable.**
- h. Has any part of the site been classified as a critical area by the city or county? If so, specify.  
**No.**
- i. Approximately how many people would reside or work in the completed project?  
**None.**
- j. Approximately how many people would the completed project displace?  
**None.**
- k. Proposed measures to avoid or reduce displacement impacts, if any:  
**Does not apply.**
- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:  
**This project is consistent with current comprehensive plans and zoning classifications.**
- m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:  
**None.**

## 9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.  
**Does not apply.**
- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.  
**Does not apply.**
- c. Proposed measures to reduce or control housing impacts, if any:  
**None.**

## 10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?  
**Does not apply.**
- b. What views in the immediate vicinity would be altered or obstructed?
  - 1) *Is this proposal visible from a residential area, town, city, recreation site, major transportation route or designated scenic corridor (e.g., county road, state or interstate highway, US route, river or Columbia Gorge SMA)?*  
 No       Yes, name of the location, transportation route or scenic corridor:  
**WA State Highway 542 (Mt. Baker Highway)**
  - 2) *How will this proposal affect any views described above?*  
**This proposal will add to the existing matrix of multi-cohort forestland across the landscape. Within the vicinity of this proposal, there are many large tracts of State and private lands that have been actively managed for decades.**
- c. Proposed measures to reduce or control aesthetic impacts, if any:  
**Retention trees as described in B-4-d and RMZ buffers as described in B-3-a-1-b will reduce the aesthetic impacts of the harvest. Seedlings will be planted within two years.**

## 11. Light and glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?  
**None.**

- b. Could light or glare from the finished project be a safety hazard or interfere with views?  
**No.**
- c. What existing off-site sources of light or glare may affect your proposal?  
**None.**
- d. Proposed measures to reduce or control light and glare impacts, if any:  
**None.**

## 12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?  
**Only informal recreational opportunities exist on State property in this area. These include hiking, mountain biking, hunting, ORV use, berry picking, and mushroom picking.**
- b. Would the proposed project displace any existing recreational uses? If so, describe.  
**There may be some disruptions to recreational use during periods of harvesting and hauling.**
- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:  
**None.**

## 13. Historic and cultural preservation

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.  
**None known.**
- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.  
**None known.**
- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.  
**Measures include review of DNR Special Concerns reports, consultation with affected tribes (Lummi Nation and Nooksack Indian Tribe), review of historic GLO and USGS maps, and screening by a cultural resource technician. No concerns have been raised at this time.**
- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.  
**If a presently-unknown cultural resource is discovered during project operations, DNR will comply with the Cultural Resources Inadvertent Discovery Guidance.**

## 14. Transportation

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.  
**Please see WAU and adjacency maps on the DNR website under “SEPA”. There are no public streets or highways that serve the site. There will be no addition of public roads to access the site as a result of this proposal.**
- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?  
**No. Nearest transit spot is approximately 15 miles away.**
- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?  
**None.**
- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).  
**Yes, see A-11-c.**
  - 1) *How does this proposal impact the overall transportation system/circulation in the surrounding area and any existing safety problem(s), if at all?*  
**This project will have minimal to no additional impacts on the overall transportation system in the area.**
- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.  
**No.**
- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and non-passenger vehicles). What data or transportation models were used to make these estimates?  
**Approximately 10 to 15 truck trips per day while the operation is active. Peak volumes would occur during the yarding and loading activities between 4:00 a.m. and 4:00 p.m. of the operating period. The completed project will generate less than one vehicular trip per day. Estimates are based on the observed harvest traffic of past projects.**
- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.  
**No.**
- h. Proposed measures to reduce or control transportation impacts, if any:  
**None.**

**15. Public services**

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

**No.**

b. Proposed measures to reduce or control direct impacts on public services, if any.

**None.**

**16. Utilities**

a. Check utilities currently available at the site:

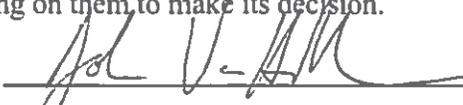
- electricity     natural gas     water     refuse service     telephone     sanitary sewer  
 septic system     other:

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

**None.**

**C. SIGNATURE**

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: 

Name of signee John Van Holbeke

Position and Agency/Organization NRS2, WA State Dept. of Natural Resources

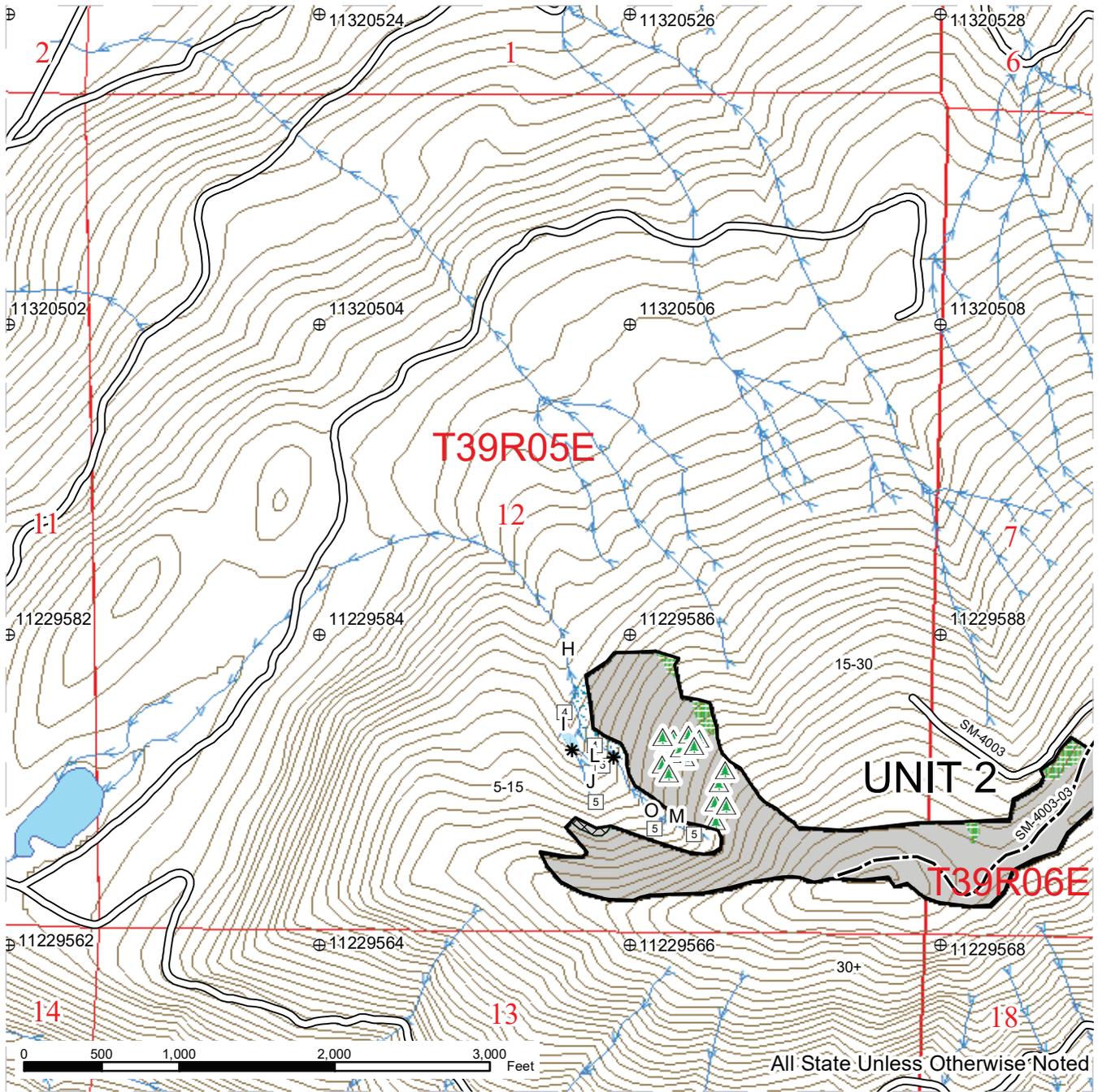
Date Submitted: \_\_\_\_\_

BRONCO

# FOREST PRACTICES ACTIVITY MAP

SALE NAME: BRONCO  
 APPLICATION #: TBD by FP Staff

COUNTY(S): Whatcom  
 TOWNSHIP(S): T39R5E



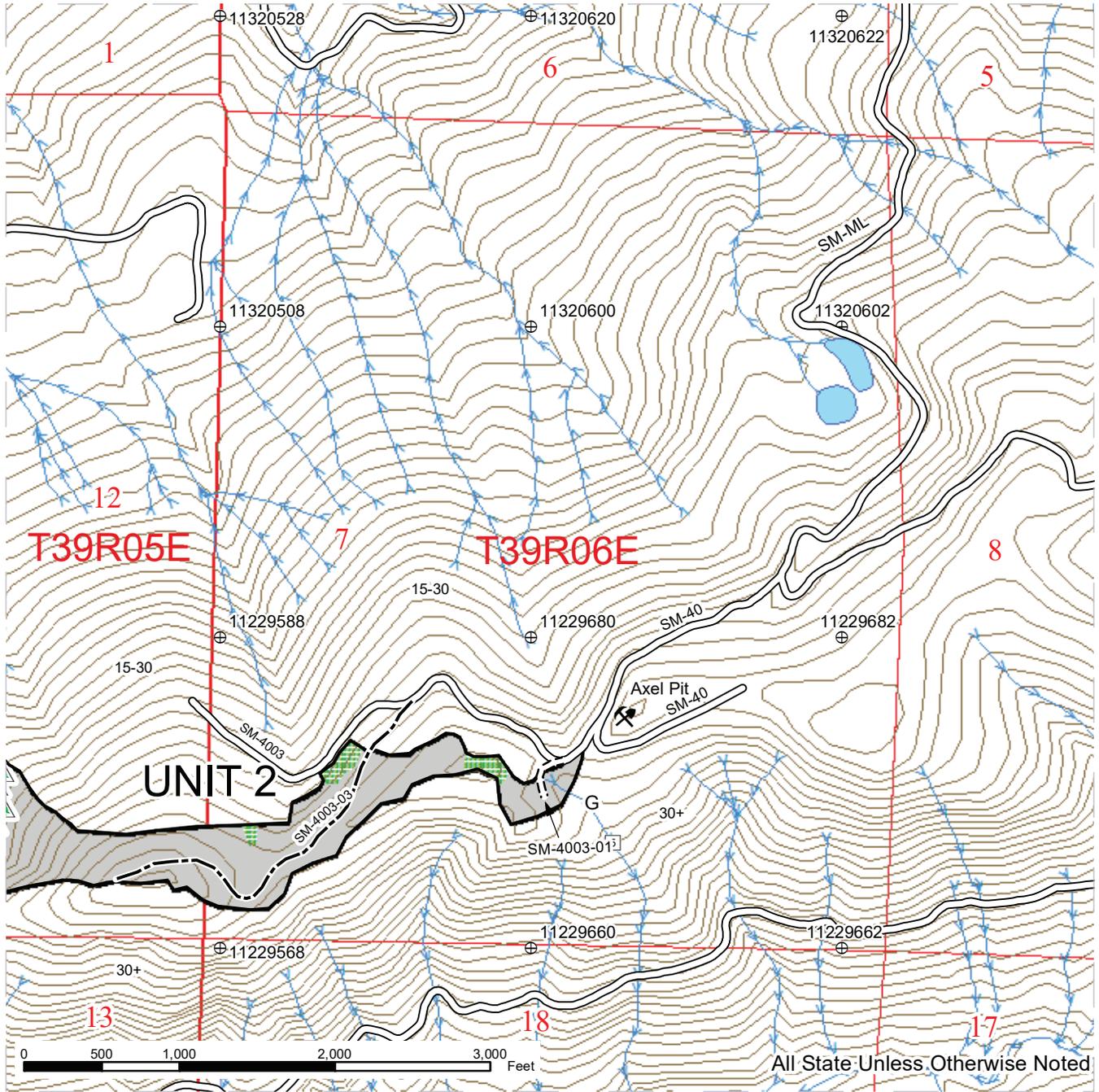
Even-aged Harvest	Right-of-Way	Non-Tradeable LT's
Leave Tree Area	Existing Roads	Stream Type
Riparian Mgt Zone	Temporary Construction	Stream Type Break
Forested Wetland	Streams	Tics - 2000' Interval
Wetland Mgt Zone	A,B,C... Stream Identifier	Gates (Corporate)
Non-tradeable LTA		Survey Monument



# FOREST PRACTICES ACTIVITY MAP

SALE NAME: BRONCO  
 APPLICATION #: TBD by FP Staff

COUNTY(S): Whatcom  
 TOWNSHIP(S): T39R6E

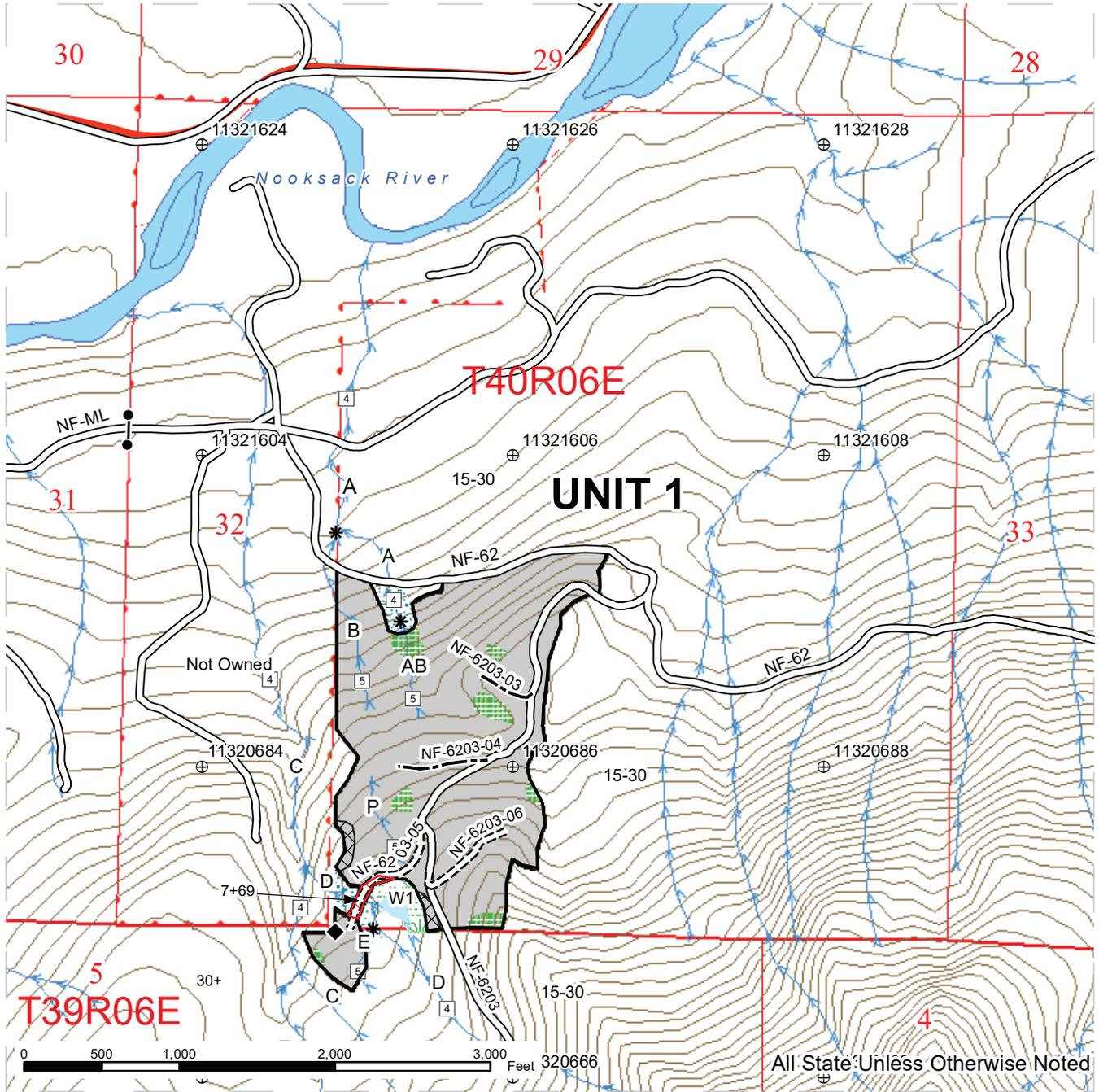


Even-aged Harvest	Right-of-Way	Non-Tradeable LT's
Leave Tree Area	Existing Roads	Stream Type
Riparian Mgt Zone	New Construction	Stream Type Break
Forested Wetland	Temporary Construction	Tics - 2000' Interval
Wetland Mgt Zone	Streams	Gates (Corporate)
A,B,C... Stream Identifier		Survey Monument
		Rock Pit

# FOREST PRACTICES ACTIVITY MAP

SALE NAME: BRONCO  
 APPLICATION #: TBD by FP Staff

COUNTY(S): Whatcom  
 TOWNSHIP(S): T40R6E

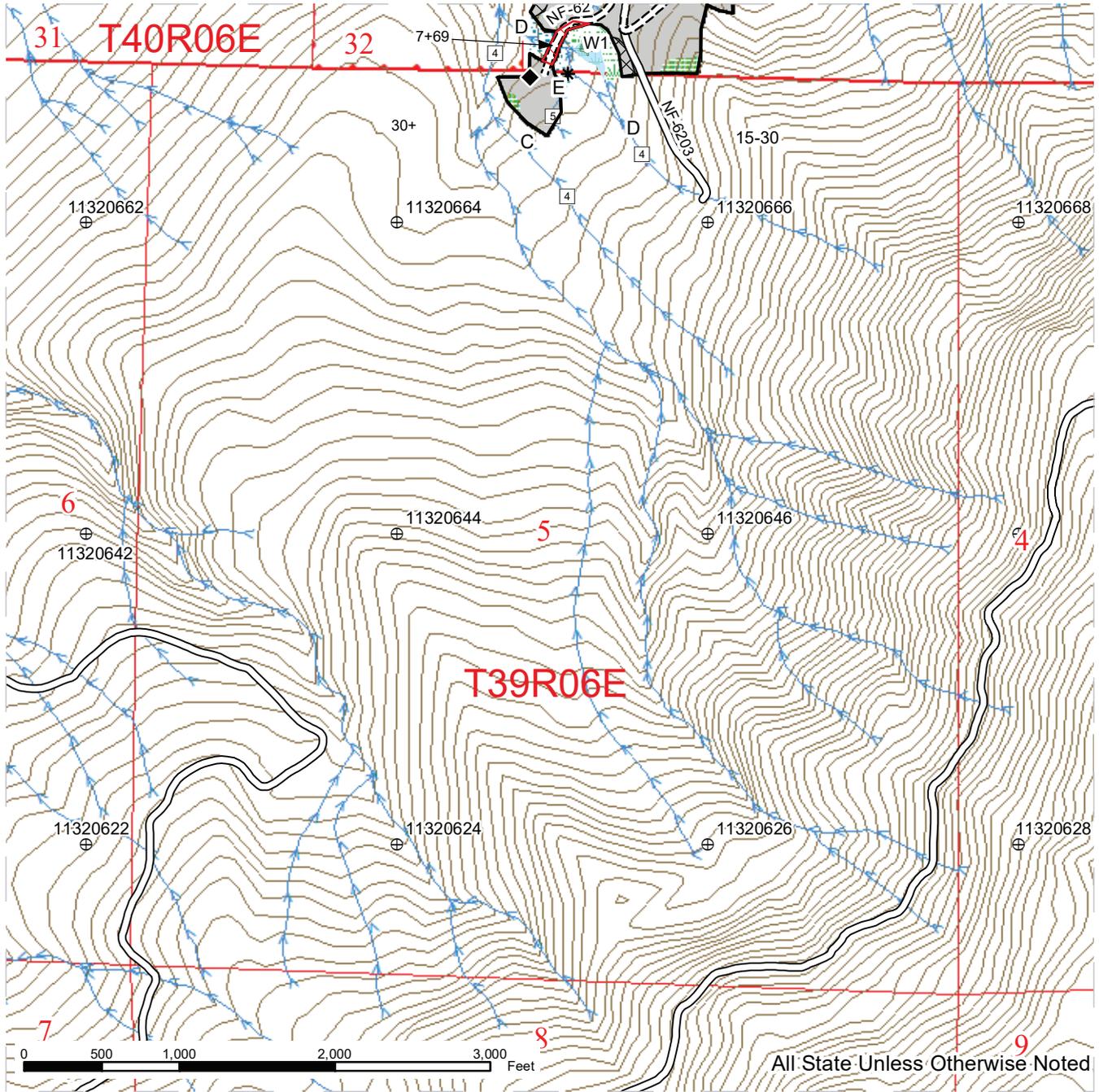


Even-aged Harvest	Right-of-Way	Non-Tradeable LT's
Leave Tree Area	Existing Roads	Stream Type
Riparian Mgt Zone	New Construction	Stream Type Break
Forested Wetland	Temporary Construction	Tics - 2000' Interval
Wetland Mgt Zone	Streams	Gates (Corporate)
Non-tradeable LTA	A,B,C... Stream Identifier	Survey Monument

# FOREST PRACTICES ACTIVITY MAP

SALE NAME: BRONCO  
 APPLICATION #: TBD by FP Staff

COUNTY(S): Whatcom  
 TOWNSHIP(S): T39R6E

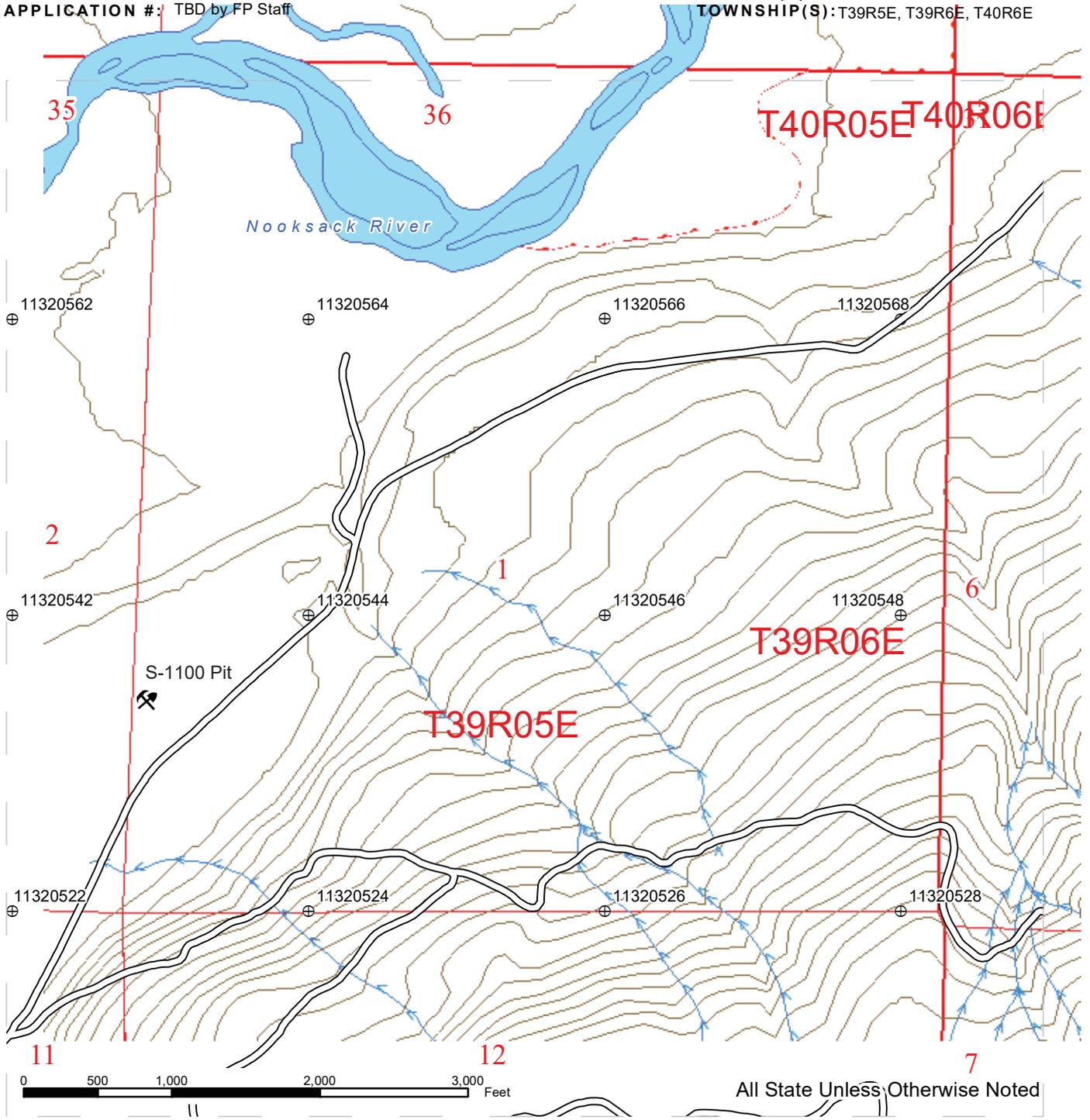


Even-aged Harvest	Right-of-Way	Non-Tradeable LT's
Leave Tree Area	Existing Roads	Stream Type
Riparian Mgt Zone	New Construction	Stream Type Break
Forested Wetland	Streams	Tics - 2000' Interval
Wetland Mgt Zone	A,B,C... Stream Identifier	Gates (Corporate)
Non-tradeable LTA		Survey Monument

# FOREST PRACTICES ACTIVITY MAP

SALE NAME: BRONCO  
 APPLICATION #: TBD by FP Staff

COUNTY(S): Whatcom  
 TOWNSHIP(S): T39R5E, T39R6E, T40R6E



	Leave Tree Area		Right-of-Way		Non-Tradeable LT's
	Riparian Mgt Zone		Existing Roads		Stream Type
	Forested Wetland		Streams		Stream Type Break
	Wetland Mgt Zone				Tics - 2000' Interval
					Gates (Corporate)
					Survey Monument
					Rock Pit
	A,B,C... Stream Identifier				

