

United States Government

Department of Energy
Bonneville Power Administration

memorandum

DATE: August 29, 2002

REPLY TO
ATTN OF: KEP-4

SUBJECT: Supplement Analysis for the Transmission System Vegetation Management Program FEIS
(DOE/EIS-0285/SA-97-Rocky Reach – Maple Valley No. 1)

TO: Don Atkinson – TFN/Snohomish

Proposed Action: Vegetation Management along the Rocky Reach – Maple Valley No. 1, 500 kV transmission line from structure 74/4 through structure 91/3. Corridor width is 150 to 300 feet. The project area is located within King County and Kittitas County, Washington.

Proposed by: Bonneville Power Administration (BPA).

Description of the Proposal: BPA proposes to remove unwanted vegetation along the right-of-way, access roads and around tower structures along the subject transmission line corridor. Approximately 390 acres will be treated using selective and non-selective methods that include hand cutting, mowing and herbicide treatments. Vegetation management is required for unimpeded operation and maintenance of the subject transmission line. Noxious weed treatment will also occur on USDA-Forest Service lands within the Okanogan-Wenatchee National Forests located within Kittitas County. See Section 1 of the attached checklist for a complete description of the proposal.

Analysis: Please see the attached checklist for the resources present. Applicable findings and mitigation measures are discussed below.

Planning Steps:

1. Identify facility and the vegetation management need.

Unwanted vegetation, reclaim trees and danger trees will be removed and/or controlled using selective and nonselective methods that will include hand cutting, mowing, and herbicidal treatment. Noxious weeds will also be treated on USDA Forest Service lands. All methods of herbicide treatment will be used (except aerial) dependent on site conditions/restrictions.

2. Identify surrounding land use and landowners/managers and any mitigation.

The subject corridor traverses residential, rural, grazing lands, industrial forestlands and Washington State DNR lands, and lands administered by the USDA Forest Service. The Mt. Baker National Forest (FS) office was contacted previously. (See DOE/EIS-0285/SA80). The Okanogan-Wenatchee National Forests, Cle Elum Ranger District was contacted for this SA for permission to treat noxious weeds within Kittitas County. Their approval letter is included in the attached checklist.

3. *Identify natural resources and any mitigation.*

Section 3 of the attached checklist identifies the natural resources present in the area of the proposed work. The following resources found along with applicable mitigation measures:

Plant Species (All): The project areas between towers 89/5 to 92/4, and, 97/1 to 97/2 are in or within ¼ mile of habitat suitable for endangered, threatened, proposed, or sensitive plant species. The proposed activities only occur within areas previously highly disturbed. These areas include existing access roads and tower sites. The FS has previously concluded that no sensitive plants or survey and manage species will occur in these areas (See FS Document *South End Road Maintenance and Bridge Closure Plant Biological Evaluation*, April 23, 2001).

Plant Species Mitigation: None, for the proposed activity of clearing unwanted vegetation from pre-existing, highly, disturbed area. If any vegetation management activities occur outside of these areas, a plant biological evaluation must be undertaken prior to the commencement of any work.

Riparian Habitat: Includes all wetlands, streams, and creeks meeting the definition of riparian habitat. Many areas were identified. See Section 3.1 for a complete listing.

Riparian Habitat Mitigation:

- County or private lands, within 30.5 m (100 ft.) of a stream or open water. Available: all manual, spot and localized herbicide, and biological treatments, except grazing. On slopes less than 20% there will be no disturbance within 35ft. of the stream or wetland. On slopes greater than 20% there will be no disturbance within the buffer.
- Within 50 ft. to edge of surface water only cut-stump and localized chemical treatments using practically non-toxic to slightly toxic formulations of glyphosate, imazapyr, and metsulfuron-methyl (Escort). Moderately toxic to very highly toxic herbicides (to aquatic species) or those herbicides containing a groundwater or surface water label advisory will not be used in this zone. Triclopyr (Garlon 4) may be used only more than 100 ft. from streams or water.

Terrestrial Species (Marbled Murrelet): The project areas between towers 89/5 to 90/2, and, 90/5 to 91/3 are in or within ¼ mile of Marbled Murrelet Habitat Unit WA-10-C. While no murrelet nests have been identified within the project area, the habitat must be protected. (See Section 3.3 of the attached checklist for specific locations.)

Terrestrial Species Mitigation (Marbled Murrelet):

- *If a tree needing removal is greater than 80 cm (32 in.) diameter at breast height and has suitable nest tree characteristics, initiate formal consultation with the USFWS.*
- *During core breeding season, from April 1- August 5, do not carry out maintenance activities (e.g., chainsaw work) that produce noise above ambient noise levels, within 0.4 km (0.25 mi.) of known marbled murrelet habitat or occupancy (based on marbled murrelet maps).*

- *During the late breeding season, from August 6 - September 15, do not carry out maintenance activities using motorized equipment within 0.4 km (0.25 mi.) of marbled murrelet habitat or occupancy within two hours after sunrise or within two hours before sunset.*
- *If planning herbicide use in marbled murrelet habitat, further consultation is required.*

Terrestrial Species (Spotted Owl): The project areas between towers 85/3 to 87/2 and 90/1 to 91/3 are in or within ¼ mile of Spotted Owl Habitat Unit 166. While no owl nests have been identified within the project area, the habitat must be protected. (See Section 3.3 of the attached checklist for specific locations.)

Terrestrial Species Mitigation (Spotted Owl):

- *Where opportunity exists, suspend vegetation management activities within 0.4 km (0.25 mi.) of spotted owl critical habitat between March 1 and June 30, unless the owls are shown not to be nesting.*
- *Examine any large trees (greater than 8” diameter at breast height East of the Cascades or 11” diameter at breast height West of the Cascades) that need to be removed in spotted-owl habitat for evidence of owls. If a tree has evidence of owl nesting activity, conduct formal consultation with the USFWS.*
- *In case of an emergency danger tree removal—a tree suddenly becoming an imminent threat to the line, posing a danger to life and property—immediately examine the felled tree for evidence of owl nesting. If such evidence is found, start emergency consultation with the USFWS, or, if the situation occurs during off-duty hours, conduct after-the-fact emergency consultation the next business day.*
- *If planning herbicide use in spotted owl habitat, further consultation is required.*

Aquatic Species (Bull Trout and Anadromous Fish): Aquatic T&E species, bull trout (threatened), have been identified in the Kachess River at structures 74/4 +470 through 74/5 +830, and, in the Yakima River at structures 80/1 +90 through 80/1 +860. See Section 3.3 of the attached checklist.

Aquatic Species Mitigation (Bull Trout and Anadromous Fish): The USFWS has not established critical habitat or recovery plans for the bull trout. Washington Department of Fish and Wildlife has prepared a management plan outlining its goals and strategies for the protection of bull trout (WDFW, Bull Trout and Dolly Varden Management Plan, September 2000). While this plan does not offer specific protective mitigation measures, it does refer to consistency with future recovery plans and other management recommendations with respect to T&E species and priority riparian habitat. In this case, the most protective measure is to establish a 76 m (250 ft.) buffer zone, perpendicular to the high water mark (bank full level) of each side of a stream or river (WDFW, Management Recommendations for Washington’s Priority Habitats *Riparian*, December 1997) supporting a T&E specie where recovery plans have not been developed. In addition to the Riparian Habitat Mitigation listed above, the following mitigation measures will apply for the protection of bull trout and their potential critical habitat:

- BPA, county, state, or private lands, within 76 m (250 ft.) of a listed bull trout stream. Available: all manual, except grazing. No mechanical treatments except along access roads and around structures. On slopes less than 20% there will be no disturbance within 35ft. of the stream or wetland. On slopes greater than 20% there will be no disturbance within the buffer.
- No chemical treatments allowed within 76 m (250 ft.) of the high water mark of stream or river.
- NOTE: Bull Trout mitigation measures are more restrictive than those for anadromous fish, therefore, the bull trout mitigation measures will also apply for anadromous fish.

4. *Determine vegetation control and debris disposal methods.*

Vegetation will be removed using manual and/or mechanical methods. No herbicides will be used on this project. Debris will be disposed of using either chip, lop and scatter or mulch techniques as described in Section 5 of the attached checklist.

5. *Determine revegetation methods, if necessary.*

Re-vegetation needs will be determined onsite. The purpose of the project is to remove vegetation for vehicle access and to provide unencumbered access to tower sites. Any areas identified with limited ground cover will be replanted with the plant species identified in Section 5 of the attached checklist.

6. *Determine monitoring needs.*

The line will be patrolled annually after treatment to monitor the effectiveness of the treatment measures.

7. Prepare appropriate environmental documentation.

Findings: This Supplement Analysis finds that 1) the proposed actions are substantially consistent with the Transmission System Vegetation Management Program FEIS (DOE/EIS-0285) and ROD, and; 2) there are no new circumstances or information relevant to environmental concerns and bearing on the proposed actions or their impacts. This Supplement Analysis also finds the proposed actions will not affect T&E Plants, Marbled Murrelets, Spotted Owls, Bull Trout Anadromous Fish or their combined habitats since the mitigation measures in place for this project are more protective of similar species in identical working situations having previous findings of no affect. Therefore, no further NEPA or ESA documentation is required.

/s/ Mark W. Hermeston
 Mark W. Hermeston
 Environmental Scientist (Environmental)
 Licensed Hydrogeologist (WA 663)

CONCUR: /s/ Thomas C. McKinney
 Thomas C. McKinney
 NEPA Compliance Officer

DATE: 09/09/2002

Attachment

cc:

L. Croff – KEC-4
 T. McKinney – KEC-4
 M. Hermeston – KEP-4
 J. Meyer – KEP-4
 M. Martin – KEPR/Covington
 J. Sharpe – KEPR-4
 P. Key – LC-7
 M. Johnson – TF/DOB-1
 D. Sjoquist – TFN/Snohomish
 L. Alvarez – TFN/Snohomish
 R. Sweet – TFNF/Snohomish
 Environmental File – KEC
 Official File – KEP-4 (EQ-14)

Vegetation Management Checklist
Rocky Reach – Maple Valley No. 1
74/4 – 91/3

Prepared By: **Don Atkinson**
Natural Resource Specialist
July 24, 2002

1. IDENTIFY FACILITY AND THE VEGETATION MANAGEMENT NEED

1.1 Describe Right-of-way.

Corridor Name	Corridor Length & kV	Easement width	Miles of Treatment
Rocky Reach – Maple Valley No. 1	74/4 to 91/3 500kv	150' to 300'	Approx. 17 miles

See Handbook — List of Right-of-way Components for checkboxes and the requirements for the components Rights-of-way, Access Roads, Switch Platforms, Danger Trees, and Microwave Beam paths.

Right Of Way:

Right-Of-Way – Clearing trees and brush within the right-of-way and treating with herbicides. The right-of-way will be treated using selective and non-selective methods that include hand cutting, mowing and herbicide treatments. Herbicide treatments will include spot treatment (stump treatment, basal treatment, and/or spot foliar), or localized treatments (including broadcast application and cut stubble treatments). The total project area consists of approximately 390.2 acres. It is estimated that approximately 300 acres of the project area will be cut.

Access Road Clearing – Access Roads were mowed this summer as part of the Rocky Reach road project. This includes both on right-of-way and off right-of-way roads.

Transmission Structures – Approximately 80 tower sites were treated using selective and non-selective methods that included hand cutting, mowing and herbicide treatments this summer as part of the Rocky Reach road project.

Clearing Requirements:

- Control all tree and brush species within about 30 ft. of transmission structures. Cut stumps are not to be taller than 2 – 4 inches.
- Pull all debris and slash out of the 30-ft. area around transmission structures.
- Access Road Clearing Requirements: - (there are approximately miles 30 of machine and hand cutting)
- Control all vegetation except grasses, to enable safe driving.
- The access road is to be 14 to 25 ft. wide with a 15-ft.- high clearance. Limbs should not hang down into the access road.
- Cut stumps are not to be taller than 2 – 4 inches in the roadbed.
- Cut stumps horizontal to the ground to prevent personal injuries and tire puncture.
- Trim limbs back as flush to the trunk as possible when trees are rooted outside of the access road.
- Pull all debris back from the access road as prescribed.
- Cut stumps horizontal to the ground to prevent personal injuries and tire puncture.
- Trim limbs back as flush to the trunk as possible when trees are rooted outside of the access road.
- Pull all debris back from the access road as prescribed.

Reclaim (“C”) Trees – C trees will be cut as part of this project.

Danger Trees (off right-of-way): – All off-right-of-way trees (danger trees) that are marked as potentially unstable, or trees that are identified during the project, that would fall within the minimum approach distance (MAD) or into the safety zone of the power line, will be cut as part of this project. Danger trees may be treated with herbicides to prevent resprouting.

1.2 Describe the vegetation needing management.

See handbook — **List of Vegetation Types, Density, Noxious Weeds** for checkboxes and requirements.

Vegetation Types:

Western Red Cedar

Douglas fir

Grand fir

Hemlock

Alder

Willows – mid span or where ground to conductor clearance is low

Cottonwoods

Scotchbroom – along access roads and around structures or mid span where ground to conductor clearance is low

Blackberrys - along access roads and around structures or mid span where ground to conductor clearance is low

Density:

The density is variable through the project and ranges from Low (50 stems or less per acre) to as High (250 + stems per acre).

1.3 List measures you will take to help promote low-growing plant communities. If promoting low-growing plants is not appropriate for this project, explain why.

See Handbook — for requirements and checkboxes.

Vegetation that will grow tall will be selectively eliminated *before* it reaches a height or density to begin competing with low-growing species. Desirable low-growing plants will not be disturbed. Only selective vegetation control methods that have little potential to harm non-target vegetation will be used.

Cut-stump or follow-up spot herbicide treatments on species that re-sprout will be carried out to ensure that the roots are killed (follow-up treatment may take place during the next growing season). Herbicides will not be applied using high volume methods to ensure that non target species are not treated.

1.4 Describe overall management scheme/schedule.

See Handbook - Overall Management Scheme/Schedule.

Description of the Proposed Action: The project consists of clearing unwanted vegetation within the right-of-way that may impede the operation and maintenance of the subject transmission line. All work will be in accordance with the National Electrical Safety Code and BPA standards. It is the goal of this project to remove the tall growing vegetation that is currently or will soon be a hazard to the transmission line. The overall goal is to develop low-growing plant communities within the right-of-way.

Initial entry – Using hand cutting or mechanical mowers, BPA will complete brush management activities on the right-of-way. Within the right-of-way, access roads, and towers sites, BPA will chemically treat stumps and stubbles with herbicides (spot, localized, and broadcast treatments) to ensure that the roots are killed preventing new sprouts and selectively eliminating vegetation that prevents access to the power lines where possible. Areas may be replanted or re-seeded with low-growing vegetation or grasses if there is limited vegetation for re-establishment of the site. Cut, lop and scatter, and stump treatment (where possible to prevent re-sprouting) are the preferred methods on State and Private lands. Areas where densities are high, or that have a lot of Scotch Broom and /or blackberries will be mowed using a track mounted mowing head. Access roads and structure sites will also be mowed and chemically treated.

Subsequent entries – Follow-up/re-treatment, within the right-of-way, around structure sites, and along access roads, is planned within the next growing season. This will be done with herbicides in areas that were not treated due to adverse weather conditions, there was not a good kill, or that were not treated in the initial entry.

Future cycles – This area is being managed on a 3 to 5 year maintenance free cycle for brush and danger trees. During routine patrol, the right-of-way will be examined for tall growing trees on the right-of-way and danger trees (DT's) off the right-of-way. The overall vegetation management scheme will be to cut and treat all encumbering vegetation on the right-of-way using a combination of manual, mechanical and herbicide treatments as outlined in the initial treatment every 3 to 5 years.

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

2.1 List the types of landowners and land uses along your corridor.

See Handbook — Landowners/Managers/Uses for requirements, and List of Landowners/Managers/Uses for a checkbox list.

Wenatchee National Forest, Plum Creek, private landowners, and private forest lands.

2.2 Describe method for notifying right-of-way landowners and requesting information (i.e., doorhanger, letter, phone call, e-mail, and/or meeting). Develop landowner mail list, if appropriate.

See Handbook — Methods for Notification and Requesting Information for requirements.

Letters or Personal contact by BPA and/or the Contractor along with door hangers. This will be done before and during the project. The Prescription/Cut Sheets will be modified as needed based on any input received during the project.

2.3 List the specific land owner/land use measures — determined from the handbook or through your consultations with the entities — that will be applied.

See handbook — Requirements and Guidance for Various Landowners/Uses for requirements and guidance, also Residential/Commercial, Agricultural, Tribal Reservations, FS-managed lands, BLM –managed lands, Other federal lands, State/ Local Lands.

*Note-not all areas within the project area will be treated with chemicals, riparian areas, Forest Service Lands, and areas where private landowners who do not want chemicals used will not be treated. However we will use chemical to treat noxious weeds on Forest Service land per their request. (See attached letter)

2.4 Review any existing landowner agreements (e.g. tree/brush Permits or Agreements). List in table above any provisions that need to be followed and where they are located.

See handbook — Landowner Agreements for requirements.

None within the rights-of-way.

2.5 List any known casual informal use of the right-of-way by non-owner publics. List any constraints or measure’s to take due to the informal use.

See handbook — Casual Informal Use of Right-of-way for requirements.

The only casual use is four wheeling or motorcycle use.

2.6 List other potentially affected people, agencies, or tribes (that are not landowners/managers) that need to be notified or coordinated with. Describe method of notification and coordination.

See handbook — Other Potentially Affected Publics for requirements and suggestions.

None known within the project area.

3. IDENTIFY NATURAL RESOURCES

See Handbook — Natural Resources

3.1 List any water resources (streams, rivers, lakes, wetlands) that may be impacted by vegetation control activities. For each water body describe the control methods and requirements or mitigation measures that will be used.

See Handbook — Water Resources for requirements for working near water resources including buffer zones.

Rocky Reach – Maple Valley No. 1 (See attached maps for locations)

Span		Waterbody	T&E?	Treatment Zone	Herbicide	Application Technique	Buffer	Other
From	To							
74/4 + 470	74/5 + 830	Kachess River	yes	Riparian T&E	See below	See below	See below	Bull Trout & Anadromous Fish
75/2 + 1100	75/3 + 1250	Wetland	no	Riparian	See Below	See below	See below	
76/3 + 550	76/4 + 170	Draw	no	Riparian	See below	See below	See below	

76/5 + 550	76/5 + 1110	Creeks	no	Riparian	See below	See below	See below	
76/6 + 150	76/6 + 400	Creek	no	Riparian	See below	See below	See below	
77/1 + 70	77/1 + 270	Creek	no	Riparian	See below	See below	See below	
77/2 + 480	77/2 + 800	Creek	no	Riparian	See below	See below	See below	
78/2 + 500	78/2 + 770	Creek	no	Riparian	See below	See below	See below	
79/3 + 320	79/3 + 1275	Wetland	no	Riparian	See below	See below	See below	
79/4 + 150	79/4 + 370	Creek	no	Riparian	See below	See below	See below	
79/5 + 230	79/5 + 930	Wetland	no	Riparian	See below	See below	See below	
80/1 + 90	80/1 + 860	Yakima River	yes	Riparian T&E	See below	See below	See below	Bull Trout & Anadromous Fish
81/1 + 290	81/1 + 530	Creek	no	Riparian	See below	See below	See below	
82/3 + 1160	82/3 + 1390	Creek	no	Riparian	See below	See below	See below	
82/4 + 450	82/4 + 780	Creek	no	Riparian	See below	See below	See below	
82/5 + 1075	82/5 + 1275	Meadow Creek	no	Riparian	See below	See below	See below	
83/4 + 750	83/4 + 1050	Creek	no	Riparian	See below	See below	See below	
84/4 + 300	84/4 + 570	Creek	no	Riparian	See below	See below	See below	
85/2 + 460	85/2 + 660	Creek	no	Riparian	See below	See below	See below	
85/3 + 0	85/3 + 220	Creek	no	Riparian	See below	See below	See below	
85/5 + 950	85/5 + 1150	Creek	no	Riparian	See below	See below	See below	
86/2 + 490	86/2 + 900	Creeks	no	Riparian	See below	See below	See below	
86/2 + 1580	86/3 + 160	Creek	no	Riparian	See below	See below	See below	

86/4 + 490	86/4 + 700	Creek	no	Riparian	See below	See below	See below	
86/4 + 990	87/1 + 140	Creek	no	Riparian	See below	See below	See below	
87/3 + 330	87/3 + 930	Mill Creek	no	Riparian	See Below	See Below	See Below	
88/2 + 540	88/2 + 750	Creek	no	Riparian	See Below	See Below	See Below	
88/2 + 960	88/2 + 1170	Creek	no	Riparian	See below	See below	See below	
88/3 + 470	88/3 + 690	Creek	no	Riparian	See below	See below	See below	
89/4 + 110	89/4 + 1750	Rockdale Creek	no	Riparian	See below	See below	See below	
90/4 + 40	90/5 + 550	Creeks	no	Riparian	See below	See below	See below	
91/2 + 860	91/2 + 1130	Humpback Creek	no	Riparian	See below	See below	See below	
91/3 + 160	91/3 + 430	Spring	no	Riparian	See below	See below	See below	
91/3 + 590	91/3 + 800	Creek	no	Riparian	See below	See below	See below	
Riparian	<p>RIPARIAN: County or private lands, within 30.5 m (100 ft.) of a stream or open water. Available: all manual, spot and localized herbicide, and biological treatments, except grazing. On slopes less than 20% there will be no disturbance within 35ft. of the stream or wetland. On slopes greater than 20% there will be no disturbance within the buffer.</p> <p>Herbicides: Within 50 ft. of a stream, only cut-stump and localized treatments using practically toxic or Slightly toxic formulations of glyphosate, imazapyr, and Escort can be used up to the waters edge. Highly Toxic and very highly toxic (to fish) herbicides will not be used in this zone. Triclopyr (Garlon 4) may be used only more than 100 ft. from streams or water. See Table 111-1: Buffer width to Minimize Impacts on non-target Resources. (Transmission Vegetation Management EIS)</p>							
Riparian T&E	<p>RIPARIAN SALMON: BPA, county, or private lands, within 91.5 m (300 ft.) of a listed salmon stream. Available: all manual, spot and localized herbicide, and biological treatments, except grazing. On slopes less than 20% there will be no disturbance within 35ft. of the stream or wetland. On slopes greater than 20% there will be no disturbance within the buffer.</p> <p>Herbicides: No herbicides within 200 feet from the waters edge. From 100 to 200 feet away for stream or water, Escort, clopyralid, imazapyr, practically toxic or Slightly toxic formulations of glyphosate, and triclopyr (Garlon 3A) can be used. Highly Toxic and very Highly toxic (to fish) herbicides will not be used in this zone. Glyphosate, and triclopyr (Garlon 3A) can be used. See Table 111-1: Buffer width to Minimize Impacts on non-target Resources. (Transmission Vegetation Management EIS)</p>							

3.2 If planning to use herbicides, list locations of any known irrigation source, wells, or springs (landowners maybe able to provide this info if requested).

See Handbook — Herbicide Use Near Irrigation, Wells or Springs for buffers and herbicide restriction

Rocky Reach – Maple Valley No. 1 (See attached maps for locations)

Span		Wells, Irrigation or Springs	Treatment Zone	Buffer
From	To			
91/3 + 160	91/3 + 430	Spring	Non Herbicide Area	100 ft. radius around spring
NON-HERB	NON-HERBICIDE AREAS Water sources, springs, wells and other sensitive lands within 100 feet of sensitive Riparian areas or water sources. Hand Cutting Methods only, no Herbicides allowed. WELLS: No herbicides allowed within 100 feet of well head. Use only herbicides that do not have ground or surface water advisories between 100 and 165 feet of well head. Approved herbicides include: glyphosate, imazapyr, tryclopyr, Escort,			

3.3 List below the areas that have Threatened or Endangered Plant or Animal Species and the name of the species, and any special measures that need to be taken due to their presence. Attach any BAs, T&E maps, or letters from US Fish and Wildlife.

See Handbook — T&E Plant or Animal Species for requirements and determining presence.

Rocky Reach – Maple Valley No. 1 (See attached maps for locations)

Span		Threatened or Endangered Plant or Animal Species	Method/mitigation measures
To	From		
74/4 + 470	74/5 + 830	Anadromous Fish & Bull Trout – Kachess River	See Below
80/1 + 90	80/1 + 860	Anadromous Fish & Bull Trout – Yakima River	See Below
85/3 + 930	86/2 + 830	Northern Spotted Owl	See Below
86/3	86/4	Northern Spotted Owl	See Below
86/4 + 845	87/2 + 1250	Northern Spotted Owl	See Below
89/5 + 410	90/1 + 200	Marbled Murrelet	See Below
90/1 + 200	90/2 + 1200	Northern Spotted Owl & Marbled Murrelet	See Below
90/2 + 1200	90/5 + 520	Northern Spotted Owl	See Below
90/5 + 520	91/3	Northern Spotted Owl & Marbled Murrelet	See Below

Riparian T&E	RIPARIAN T&E: BPA, county, or private lands, within 91.5 m (300 ft.) of a listed salmon or bull trout stream. Available: all manual, spot and localized herbicide, and biological treatments, except grazing. No mechanical treatments except along access roads and around structures. On slopes less than 20% there will be no disturbance within 35ft. of the stream or wetland. On slopes greater than 20% there will be no disturbance within the buffer. Herbicides: No herbicide treatments allowed within the buffer zone.
Northern Spotted Owl	During the nesting season, from March 1 to July 1, no danger trees within ¼ mile of known northern spotted owl nest sites will be removed. If any owl nesting activity is found the NRS will conduct formal consultation with the USFWS.
Marbled Murrelet	During the core-breeding season of marbled murrelets, from April 1 – August 5, activities that produce noise above ambient levels will not occur within ¼ mile of potential suitable habitat of the marbled murrelet. During the late breeding season, from August 6 – September 15, activities utilizing motorized equipment within ¼ mile of marbled murrelet habitat will not occur within two hours after sunrise or within two hours before sunset.

3.4 List any other measures to be taken for enhancing wildlife habitat or protecting species.

See Handbook — Protecting Other Species for requirements.

None mapped. Also, any areas in the corridor with ground to conductor clearances greater than 38.1 m (125 ft.) vertical distance will be select tree cut. This will help provide shade for salmon and other fish.

3.5 List any visually sensitive areas and the measures to be taken at these areas.

See Handbook — Visual Sensitive Areas for requirements.

None known within the project area.

3.6 List areas with cultural resources and the measures to be taken in those areas.

See Handbook – Cultural Resources for requirements.

None known within the right-of-way.

3.7 List areas with steep slopes or potential erosion areas and the measure and methods to be applied in those areas.

See Handbook – Steep/Unstable Slopes for requirements. See attached maps for exact locations.

Rocky Reach – Maple Valley No. 1

Span		Describe sensitivity	Method/mitigation measures
From	To		
74/5 + 190	74/5 + 1200	Steep slope	See below
76/2 + 0	76/4 + 200	Steep slope	See below
76/6 + 100	76/6 + 410	Steep slope	See below
77/2 + 870	77/2 + 1210	Steep slope	See below
77/4 + 50	77/4 + 220	Steep slope	See below
77/4 + 720	77/4 + 990	Steep slope	See below

78/1 + 170	78/1 + 900	Steep slope	See below
80/2 +1250	80/2 + 1530	Steep slope	See below
80/3 + 330	80/3 + 1440	Steep slope	See below
81/1 + 140	81/1 + 430	Steep slope	See below
81/4 + 770	81/4 + 1770	Steep slope	See below
82/1 + 890	82/1 + 1030	Steep slope	See below
84/2 +1250	84/3 + 450	Steep slope	See below
84/5 + 70	85/5 + 1090	Steep slope	See below
85/5 +1450	85/5 + 1998	Steep slope	See below
86/1 + 50	88/2 + 1590	Steep slope	See below
89/2 +1400	89/3 + 170	Steep slope	See below
89/4 +1920	89/4 + 2322	Steep slope	See below
90/2 + 130	90/2 + 990	Steep slope	See below
90/3 + 0	90/4 + 130	Steep slope	See below
91/2 + 70	91/2 + 950	Steep slope	See below
91/2 +1040	91/2 + 1130	Steep slope	See below
Resource	Treatment Alternatives		
SS	<p>BPA Fee owned State DNR, or private lands where a steep slope or visual resources precludes mechanical treatments except on access roads and around structures. Available: all manual and biological treatments. All herbicide treatments including cut-stubble treatment following a mechanical treatment on access roads and structure sites.</p> <p>Herbicides: glyphosate, triclopyr (Garlon 3A and 4), imazapyr, dicamba may be prescribed for cut-stump, stem-injection, and basal-stem treatments. In addition to the above herbicides, Escort, and clopyralid can be used spot foliar and broadcast treatments. 2,4-d amine can be added to the list to control noxious weed species. See Table 111-1: Buffer width to Minimize Impacts on non-target Resources. (Transmission Vegetation Management EIS)</p>		

3.8 List areas of spanned canyons and the type of cutting needed.

See Handbook – Spanned Canyons for requirements.

Rocky Reach – Maple Valley No. 1

Span		Describe sensitivity	Method/mitigation measures
From	To		
77/4 +220	77/4 + 720	Select Tree Cut	See below
82/1 + 550	82/1 + 890	Select Tree Cut	See below
82/5 + 910	82/5 +1555	Select Tree Cut	See below
84/4 + 70	84/4 + 790	Select Tree Cut	See below
85/5 +1090	85/5 + 1450	Select Tree Cut	See below
89/2 + 740	89/2 + 1400	Select Tree Cut	See below
89/3 + 170	89/3 + 330	Select Tree Cut	See below
89/4 + 70	89/4 + 1920	Select Tree Cut	See below
90/2 + 990	90/2 + 1611	Select Tree Cut	See below
91/2 + 950	91/2 + 1040	Select Tree Cut	See below
Resource	Treatment Alternatives		
STC	Any areas in the corridor with greater than 38.1 m (125 ft.) vertical distance between the ground surface and transmission lines. Here, removal is periodically required only of individual trees (single tree cuts) that could encroach into the transmission corridor danger zone. Herbicides: None.		

4. DETERMINE VEGETATION CONTROL METHODS

See Handbook — Methods

4.1 List Methods that will be used in areas not previously addressed in steps above.

See Handbook — Manual, Mechanical, Biological, Herbicides for requirements for each of the methods.

MANUAL: Manual control methods include the following: cutting with shears, clippers, or chainsaws; and girdling by cutting a ring around the tree. When chainsaws are used cut conifers below the lowest live limb to eliminate continued growth of the lateral branches and cut all stumps flat where possible.

MECHANICAL: Mechanical methods include the use of brush mowers and feller bunchers. Ground-disturbing mechanical equipment will not be used on slopes over 20% or in riparian areas (Refer to 3.1). Work will be done when the ground is sufficiently dry enough to sustain heavy equipment and minimize excessive rutting.

HERBICIDES: The herbicide treatments prescribed for the project area are spot stump treatment, localized basal treatment, and localized foliar treatment. Where possible the deciduous stumps will be treated to prevent resprouting. If we are unable to treat the stumps during the project, we will wait until the next growing season and do a localized foliar treatment. In areas where the trees are less than 6ft. tall and the density is light we may do a localized basal treatment.

PROPOSED HERBICIDES: Glyphosate, triclopyr (Garlon 3A and 4), imazapyr, and dicamba may be prescribed for cut-stump, stem-injection, and basal-stem treatments. In addition to the above herbicides, Escort, and clopyralid can be used for spot foliar and Broadcast treatments. 2,4-d amine may be added to the list to control Noxious weed species. See Tables 111-1: Buffer width to Minimize Impacts on non-target Resources, and 5-7: Herbicide Ecological Toxicities and Characteristics. (Transmission Vegetation Management EIS).

SEE CUT SHEET FOR CONTROL METHODS

5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

5.1 Describe the debris disposal methods to be used and any special considerations.

See Handbook — **Debris disposal** for a checkbox list and requirements.

Mulching/Mowing – This will be done on access roads and around structure sites.

Lope and Scatter – These areas are identified in the **VEGETATION CONTROL PRESCRIPTION** as Cut, Lope, and Scatter.

Some areas may require that the brush be chipped. These areas are identified in the **VEGETATION CONTROL PRESCRIPTION** as cut and treat as needed, and will depend on the requirements of the landowners.

5.2 List areas of reseeding or replanting (those areas not already described in steps 1, 2, or 3).

See Handbook — **Reseeding/replanting** for requirements.

Not planned at this time. However, if soil disturbance occurs during the project the area will be reseeded.

5.3 If not using native seed/plants, describe why.

Native seed will be considered in all mixes. Introduced species may be more competitive against invading tree species and protecting against erosion.

5.4 Describe timing and any follow-up that will need to take place to ensure germination/success of seeding/planting.

Not planned at this time. However, if reseeding is necessary it will take place in the fall just before the fall rains.

6. DETERMINE MONITORING NEEDS

See handbook — Monitoring for requirements.

6.1 Describe the follow-up/monitoring cycle that will be used to evaluate the effectiveness of the vegetation control methods used.

The project area will be inspected during treatment. In addition, it will be reviewed during routine patrols by the line crew and within one year by the NRS.

6.2 Describe any follow-up or monitoring needed to determine if mitigation measures were effective.

Will review during line patrol by the line crew and within one year by the NRS.

7. PREPARE APPROPRIATE ENVIRONMENTAL DOCUMENTATION

See handbook — Prepare Appropriate Environmental Documentation for requirements.

7.1 Describe any potential project impacts or project work that are different than those disclosed in the Transmission System Vegetation Management Program EIS. Describe how those differences impact natural resources and if the differences are “substantial”.

Effects are expected to be the same or less than the description provided in the EIS.

7.2 Is there a need for additional NEPA documentation (i.e. Forest Service requirement, Record of Decision, supplemental EIS)? If so, attach.

No