

United States Government

Department of Energy
Bonneville Power Administration

memorandum

DATE: April 15, 2002

REPLY TO
ATTN OF: KEPR/Covington

SUBJECT: Supplement Analysis for the Transmission System Vegetation Management Program FEIS
(DOE/EIS-0285/SA-60)

TO: Don Atkinson - TFN/Snohomish

Proposed Action: Vegetation Management along the Rocky Reach – Maple Valley No. 1 Transmission Line ROW from structure 110/1 to the Maple Valley Substation. The transmission line is a 500 kV line.

Location: The ROW is located King County, WA.

Proposed by: Snohomish Regional Headquarters, Bonneville Power Administration (BPA).

Description of the Proposed Action: BPA proposes to clear targeted vegetation along access roads and around tower structures that may impede the operation and maintenance of the subject transmission line. BPA plans to conduct vegetation management along existing access road and around structure landings for the purpose of maintaining access to structures site. All work will be in accordance with the National Electrical Safety Code and BPA standards.

Analysis: This project meets the standards and guidelines for the Transmission System Vegetation Management Program Final Environmental Impact Statement (FEIS) and Record of Decision (ROD).

Planning Steps

1. Identify facility and the vegetation management need.

The work involved will be to clear tall growing vegetation that currently limits access to the transmission line ROW and structures.

- Control all tree and brush species except grasses within 30 feet of the transmission structures.
- Control all vegetation except grasses, to enable safe access to the transmission ROW and structure sites. The access road is to be 14 to 25 feet wide with a 15-foot high clearance.

All work will be accomplished by using hand cutting or mechanical means, treating the stumps and stubble with herbicide by using spot, localized or broadcast methods. Desirable low-growing plants will not be disturbed. The work will provide system reliability.

The vegetation control is designed to provide a 3-8 year maintenance free interval. The overall vegetation management scheme will initially include selective removal and treatment of tall growing species utilizing cut and stump treat methods using practically non toxic to slightly toxic herbicides as outlined in the attached checklist.

Subsequent work will be needed the following growing season as a follow-up to treat misses and any other re-growth.

Future cycles - As tall growing species are controlled, 5-8 year entry treatments will be needed.

2. Identify surrounding land use and landowners/managers.

The subject corridor traverses industrial forested, rural, urban and other federal lands. Landowners will be notified of the upcoming work by letters, personal contact and door hangers.

3. Identify natural resources.

Riparian areas, T&E streams, existing landowner agreements, and casual informal use areas have been identified. See section 3 of the attached checklist.

The herbicides used for vegetation management will be consistent with what is specified in the Vegetation Management FEIS.

4. Determine vegetation control and debris disposal methods.

Herbicides used would be applied by licensed applicators following manufacturers' label instructions and BPA's management prescriptions. Herbicide used would be consistent with the guidance outlined in the Vegetation Management FEIS.

Debris will be disposed by:

Lop and Scatter - (Branches of a fallen tree are cut off (lopped) by ax or chainsaw, so the tree trunk lies flat on the ground. The trunks are occasionally cut in 1-to-2-m (4-to-8-ft.) lengths. The cut branches and trunks are then scattered on the ground, laid flat, and left to decompose.

5. Determine revegetation methods, if necessary.

Re-seeding will occur only along those places where soil disturbance has occurred.

6. Determine monitoring needs.

An inspector will monitor the work being performed at the time of the initial work. Follow-up inspections will be performed during routine regular patrols. Additional required work would be identified at that time.

7. Prepare appropriate environmental documentation.

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. Therefore, no further NEPA documentation is required.

/s/ Mark Martin _____
Mark A. Martin
Environmental Protection Specialist

CONCUR _____
Thomas C. McKinney
NEPA Compliance Officer

DATE: _____

Attachments

1. IDENTIFY FACILITY AND THE VEGETATION MANAGEMENT NEED

1.1 Describe Right-of-way. Rocky Reach-Maple Valley 110/1 to Maple Valley Substation Access Road Vegetation Management

Corridor Name	Corridor Length & kV	Easement width	Miles of Treatment
Rocky Reach-Maple Valley	18 miles	Var	70 acres potential Access Roads

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](#).

Access roads and Tower sites will be treated using selective and non-selective methods that include, hand cutting, mowing, and herbicide spot, localized and broadcast applications including cut stubble and localized granular treatments

The approximate acres of off Right-of-way roads is 70 acres. The landowners are currently managing a large percentage of the roads so the actual need for road treatment should be less than the total acres. The Inspector will make the actual determination for road treatment by flagging or staking of those roads during the time of contract implementation. The Contractor will provide vegetation management on roads where the vegetation is encroaching on the access road. Payment will be based the total acres treated determined by the length of treatment area, times 25 feet wide, divided by 43,560.

Right Of Way:

Transmission Structures – clearing around

Access Road clearing - approximate miles – up to 70 miles

Tower Clearing

- Control all tree and brush species within about 30 ft. of transmission structures. Cut stumps are not to be taller than 2 – 4 in.
- Pull all debris and slash out of the 30-ft. area around transmission structures.

Access roads Requirements

- 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 in. 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.

1.2 Describe the vegetation needing management.

See handbook — [List of Vegetation Types, Density, Noxious Weeds](#) for checkboxes and requirements.

Vegetation Types:

Douglas Fir

Alder

Popular

True Fir

Maple

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.

Not Promoting Low Growing Plant Communities

Describe Why? Project only entail the clearing of roads and Tower site to facilitate maintenance

1.4 Describe overall management scheme/schedule.

See Handbook - [Overall Management Scheme/Schedule](#).

Description of the Proposed Action: BPA proposes to clear unwanted vegetation in the access roads and around tower structures 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. BPA plans to conduct vegetation control with the goal of removing growing vegetation that is currently encumbering access to the transmission line.

The work will provide system reliability.

Initial entry –

Using hand cutting or mechanical means, BPA will complete brush management on the access roads and towers. Vegetation is currently encumbering the access roads and towers of the power lines; treat the associated stumps and stubble 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. Areas may be replanted or reseeded with low-growing grasses if there is limited vegetation to re-establish the site.

Keeping trucks and equipment on designated access roads will not disturb desirable low-growing plants on the ROW. All work will take place in existing access roads or ROW.

Slash and debris will be pulled at least 10 feet from the road surface and loped and scattered, or it will be mulched mechanically

Subsequent entry

The vegetation management program will be designed to provide a 3-8 year maintenance free interval. The overall vegetation management scheme will be to initially clear and remove all encumbering vegetation using a combination of manual, mechanical, and herbicide treatments as outlined in the initial treatment

Future cycles -

Future cycles of work will involve cut stump, basal treatments, or tree cutting. During routine patrols, the ROW will be examined for edge, tall growing trees, and danger trees with appropriate actions taken

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.

- | | |
|---|---|
| <input checked="" type="checkbox"/> Residential | <input checked="" type="checkbox"/> Urban |
| <input checked="" type="checkbox"/> Rural | <input checked="" type="checkbox"/> Other Federal lands BPA Fee |
| <input checked="" type="checkbox"/> Industrial Forest lands | <input checked="" type="checkbox"/> State/City/County Lands State Department Of Natural Resources, King County, City of North Bend, City of Seattle |

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.

The Contractor or BPA inspector will contact landowners before work begins.

In addition, homes within 200 feet of the ROW will be contacted 2 days prior to treatments.

2.3 List the specific land owner/landuse 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](#).

- **When facilities that cross state or local agency lands, notify, and cooperate with those entities) prior to vegetation control activities, as appropriate.**

Span		Landowner/use	Specific measures to be applied
To	From		
112/2+767	112/3+127	DNR WA	Sec 12 T23N R7E
113/4	116/1+335	DNR WA	10, 15, 16, 21 T23N R7E
117/3+716	118/3+1105	DNR	Sec 30 T23N R7E
121/4	122/4+	King County	Contact local mgr if work is needed
124/1	126/1	BPA Fee	
126/4-	127/3	BPA fee	

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.

The following landowners have responsibility for vegetation maintenance.

Span		Landowner	Agreement ID number (?)
To	From		
119/3	119/4	Randy Monroe	Verbal Sensitive area
120/1	120/2	Raymond Como 425-9320124 392-0174 396-0174	Verbal Sensitive area
120/5	121/1	William Schaefer	Well no spray area 88046
121/1	121/2	Tree Agreement Wright	81052
121/1	121/2	Various Sensitive owner	Contact First Before any vegetation work
121/1	121/2	R Hancheroff tree agree	90152
123/2	123/4	James O'reilly	Grazing Sale #465
124/1	124/2	Park area Little League	09744

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.

City Parks and Little League Fields,

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.

No Tribal land involved

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.

Span		Water body	T&E?	Method	Herbicide	Application Technique	Buffer	Other
To	From							
110/1	110/4	Var Creeks	no	Manual Herbicide mechanical	2,4-d dicamba cloprialid chlorsulfuron metsulfuron picloram Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	Note sites on off ROW roads
111/2	111/5	Var Creeks Wetlands	no	Manual Herbicide mechanical	2,4-d dicamba cloprialid chlorsulfuron metsulfuron Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	Note sites on off ROW roads
112/3	113/1	Var Creeks	no	Manual Herbicide mechanical	2,4-d dicamba cloprialid chlorsulfuron metsulfuron picloram Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	Note sites on off ROW roads
113/2	113/3	Creek Wetlands	no	Manual Herbicide mechanical	2,4-d dicamba cloprialid chlorsulfuron metsulfuron Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	
113/4	114/5	Raging River	yes	Manual Herbicide mechanical	2,4-d dicamba cloprialid chlorsulfuron metsulfuron Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	
114/1	114/2	Deep Creek	yes	Manual Herbicide mechanical	2,4-d dicamba cloprialid chlorsulfuron metsulfuron Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,		Note sites on off ROW roads
114/2	114/3	Creek	no	Manual Herbicide mechanical	2,4-d dicamba cloprialid chlorsulfuron metsulfuron picloram Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,		
115/1	115/4	Var Creeks	no	Manual Herbicide mechanical	2,4-d dicamba cloprialid chlorsulfuron metsulfuron picloram Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	Note sites on off ROW roads

Span		Water body	T&E?	Method	Herbicide	Application Technique	Buffer	Other
To	From							
116/1	116/2	wetlands	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	Note sites on off ROW roads
116/2	116/3	Wetland or pond	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	Note sites on off ROW roads
116/3	116/3	Issaquah Creek	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron picloram Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	Note sites on off ROW roads
116/4	117/1	Creek	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron picloram Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	Note sites on off ROW roads
117/1	117/4	Var Creeks Holder Creek	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron picloram Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	
118/2	118/3	Creek	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron picloram Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	Note sites on off ROW roads
118/3	118/4	Creeks Note Water Supply	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron picloram Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	Note sites on off ROW roads
118/4	118/5	Creek	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron picloram Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	
118/5	119/1	Creek	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron picloram Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	
119/3	119/4	Creek Wetland Sensitive area Randy Monroe	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	No access road across area
119/4	119/5	Issaquah Creek	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron picloram Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	

Span		Water body	T&E?	Method	Herbicide	Application Technique	Buffer	Other
To	From							
120/1	120/2	Creek Sensitive area Raymond Como	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	Note sites on off ROW roads
120/2	120/3	Creek Sensitive area Raymond Como	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	
121/3	121/4	Creek	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron picloram Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	Note sites on off ROW roads
122/4	122/5	Creek wetland and swamp	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	Note pond off ROW
123/1	123/2	Creek and Pond	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron picloram Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	No access roads near site
123/1	123/2	Cedar River	yes	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	No treatment in area planned Spanned Canyon
124/2	124/4	Wetlands and Bogs	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	
124/5	125/1	Wetlands and Bogs	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	
125/1	125/2	Intermittent creeks	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron picloram Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	
125/3	125/4	Creeks and Ponds	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron picloram Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	
125/4	125/5	Wetlands	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	

Span		Water body	T&E?	Method	Herbicide	Application Technique	Buffer	Other
To	From							
126/1	126/2	Wetlands	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	
126/3	126/4	Creek	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron picloram Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	No treatment near creek expected
127/1	128/1	Various creeks wetlands spring	no	Manual Herbicide mechanical	2,4-d dicamba clopyralid chlorsulfuron metsulfuron Garlon 3A Garlon 4	Spot, localized, Ground Broadcast,	See specs	No treatment near these area expected

SALMON T&E STREAMS

State and/or Private lands within 122 m (400 ft.) of a listed stream. Available: manual, mechanical, spot and localized herbicide, and ground broadcast treatments. No mechanical (machines) within 100 feet of streams except for tower sites and access roads.

Manual: Hand tools and chainsaws

Mechanical: None within 100 feet of stream. Except for Access Roads and Tower sites. No ground disturbing activities that will cause bare soil or erosion within 400 feet from the stream.

Herbicide: Use appropriate buffers as described in the buffer table.

Suggested herbicides: Glyphosate (such as Rodeo®), Garlon 3A, dicamba (Trooper/Vanquish), Escort, clopyralid, picloram, and 2-4-d using wick and spot-foliar treatments (localized) and ground broadcast treatments with handgun only. Garlon 4 can be use when using appropriate buffers. At no time will there be applications to standing or open water.

Streams and Wetlands

State Forest or private lands, within 30.5 m (100 ft.) of a stream and wetland areas. Available: all manual and biological treatments

Manual: Hand tools and chainsaws

Mechanical: None, within 50 feet of streams or wetlands. Only on Access Roads and Tower sites. No ground disturbing activities that will cause bare soil or erosion within 100 feet from the stream.

Herbicide: Use appropriate buffers as described in the buffer table.

Suggested herbicides: Glyphosate (such as Rodeo®), Garlon 3A, dicamba (Trooper/Vanquish), Escort, clopyralid, picloram, and 2-4-d using wick and spot-foliar treatments (localized) and ground broadcast treatments with handgun only. Garlon 4 can be use when using appropriate buffers. Use only Herbicides labeled for wetland areas when treating wetlands. At no time will there be applications to standing or open water.

BPA BUFFER Herbicide

HERBICIDE	Ground water Advisory	Surface Water Advisory	Highest Aquatic Toxicity Invertebrates/Vertebrates	Spot treat	Localized	Ground Broadcast
Transline Clopyralid	x		Practically Non Toxic	25 ft	35 ft	100 ft
2,4-d Dimethyl amine Salt	x		Practically Non Toxic	25 ft	35 ft	100 ft
Glypro/Accord Glyphosate			Practically Non Toxic	Up to edge	Up to edge	35 ft

2,4-d Dodecyl/amine salt	x		Slightly toxic	25 ft	35 ft	100 ft
Tordon 22K picloram	x	x	Moderately Toxic	25 ft	35 ft	100 ft
Vanquish dicamba	x	x	Slightly Toxic	25 ft	35 ft	100 ft
Escort			Practically Non Toxic	Up to edge	Up to edge	35 ft
Garlon 3A			Practically Non Toxic	Up to edge	Up to edge	35 ft
Garlon 4*			Highly Toxic	35 ft	100 ft	400 ft

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 restrictions.

Table III-2: Herbicide-free Zones for Rights-of-way, Electric Yards, and Non-electric Facilities

Zone	Buffer Width
Agricultural Irrigation Source of Any Kind (Wet or Dry)	15m (50 ft.) from each bank (linear) or well (radius) for any herbicide.
Domestic/Public Drinking Water Well	50m (164 ft.) radius for any herbicide having a ground/surface water advisory* 15m (50 ft.) radius for any other herbicide
Domestic/Public Drinking Water Intakes/Spring Developments	For slopes <10% 50-m (164-ft.) radius for any herbicide having a ground/surface water advisory* 15-m (50-ft.) radius for any other herbicide For Slopes >10% <30% 150-m (492-ft.) radius for any herbicide having a ground/surface water advisory* 50-m (164-ft.) radius for any other herbicide For slopes >30% 300-m (984-ft.) radius for any herbicide having a ground/surface water advisory* 100-m (328-ft.) radius for any other herbicide
Sole Source Aquifers	As per local aquifer management plan.

*as stated on the label

The buffers in this table are to be used unless other agencies, local authorities, or T&E consultations require more strict buffers. In cases of more strict local buffers, those would apply.

See table 7a for general aquatic toxicities of and label advisories of the active ingredients.

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 restrictions.

Span		Well/irrigation/or spring	Herbicide	Buffer	Other notes/measures
To	From				
118/3	118/4	Creek for water supply	none	500 ft	Steep slope
120/5	120/1	Well William Schaeffer	none	100 ft	88048

NON-HERBICIDE AREAS

Water sources and wells, parks, and other sensitive lands within 100 feet of Very sensitive Riparian areas or water sources. Hand Cutting Methods only, no Herbicides allowed.

WELLS: No herbicides allowed within 100 feet of wellhead. Use only herbicides that do not have ground or surface water advisories between 100 and 165 feet of wellhead. Approved herbicides include: glyphosate, Imazapyr, triclopyr, 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.

None Identified by BPA DATA BASE

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

See Handbook — [Protecting Other Species](#) for requirements.

N/A

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

See Handbook — [Visual Sensitive Areas](#) for requirements.

N/A

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

See Handbook – [Cultural Resources](#) for requirements.

Soil disturbance will be minimal (less than 6 inches) and confined to access roads and tower Sites

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.

N/A

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

See Handbook – [Spanned Canyons](#) for requirements.

N/A

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.

Rocky Reach Maple Valley #1 Road Project					On ROW Access			Off ROW Access		
TWR	to	TWR	Owner	Constraint	length	width	Ac	length	width	Ac
110/4		111/3	PVT	none	3400	60	4.7	7037.0	25.0	4.0
111/5		112/2+	PVT	none	1625	25	0.9			0.0
113/1		113/2	PVT	none	780	25	0.4			0.0
113/3		113/4	PVT	none	1300	25	0.7	463	25	0.3
114/1		114/1+800	PVT	none	850	25	0.5	280	25	0.2
114/2+400		115/1	PVT	none	800	25	0.5	1169	25	0.7
115/4		116/1	PVT	none	2400	25	1.4			0.0
117/3+600		118/2	PVT	none	3600	25	2.1			0.0
121/1		121/3	PVT	Creeks	3600	25	2.1		25	0.0
121/3		122/3	city			25	0.0		25	0.0

123/2	124/2	FEE	Parks	6000	25	3.4		25	0.0
124/4	125/1	FEE		2000	25	1.1		25	0.0
125/2	125/3+	FEE		1500	25	0.9	600	25	0.3
125/5	126/1	FEE		1100	25	0.6		25	0.0
126/2	126/3	FEE		950	25	0.5		25	0.0
126/4	127/1	FEE		1450	25	0.8		25	0.0
128/1	128/5	city		5000	25	2.9	600	25	0.3
								23.6	5.8

URBAN-RURAL: BPA, county, or private lands where the ROW is adjacent to rural and residential development. Land-use ranges from backyards, pasture, and open areas. Available: all manual, mechanical (when conditions make it feasible), and biological treatments: all herbicide treatments spot, localized, and broadcast treatment including cut-stubble treatment following a mechanical treatment where suitable.

Manual: Hand tools and chainsaws

Mechanical: Can be used on roads and towers, all areas suitable for mechanical treatment. No Ground disturbing activities on slopes over 20%

Herbicide: Glyphosate, Imazapyr, 2,4-d, Triclopyr (Garlon 3A and Garlon 4), Dicamba may be prescribed for cut-stump, stem-injection, and basal-stem treatments, as well as for spot-foliar, cut stubble, and broadcast-foliar treatments. In addition, Escort and clopyralid can be used for spot foliar and broadcast treatments.

NO ENVIRONMENTAL CONSTRAINTS

State Forest or private lands with no environmental constraints. Available: all manual, mechanical, biological, and herbicidal treatments

Manual: Hand tools and chainsaws

Mechanical: Can be used on roads and towers, all areas suitable for mechanical treatment. No Ground disturbing activities on slopes over 20%

Herbicide: Glyphosate, Picloram, Imazapyr, picloram, 2,4-d, Triclopyr (Garlon 3A and Garlon 4), Dicamba may be prescribed for cut-stump, stem-injection, and basal-stem treatments, as well as for spot-foliar, cut stubble, and broadcast-foliar treatments. In addition, Escort and clopyralid can be used for spot foliar and broadcast treatments.

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.

Chip (Mechanical brush disposal unit cuts brush into chips 4 in. or less in diameter, and spread over ROW, piled on ROW, or trucked off site. Trunks too large for the chipper are limbed and the limbs chipped. Trunks are placed in rows along the edge of the right-of-way or scattered, as the situation requires.)

- Lop and Scatter (Branches of a fallen tree are cut off (lopped) by ax or chainsaw, so the tree trunk lies flat on the ground. The trunks are occasionally cut in 1-to-2-m (4-to-8-ft.) lengths. The cut branches and trunks are then scattered on the ground, laid flat, and left to decompose.)
- Mulch (Mulching is a debris treatment that falls between chipping and lop-and-scatter. The debris is cut into 1-to-2-ft. lengths, scattered on the right-of-way and left to decompose. This method is used when terrain and conditions do not allow the use of mechanical chipping equipment.)
- Other – Pull debris back 10 feet from road surface

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.

If Re-Seeding is needed Mixtures of the following grasses would be beneficial

	Native
California Brome (Bromus carinatus)	y
Sheep fescue (Festuca ovina)	y
Blue wildrye (Elymus glaucus)	y
Canada bluegrass (Poa compressa)	y
Smooth Brome	n
Perennial Ryegrass	n
Big Bluegrass	y
Clovers	n
Alfalfa	n
Sickle-keeled lupine 5 oz./100# seed	y
And/or Lupinus bicolor 5 oz./100# seed	y
America vetch (Vicia Americana)	y

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

Native will be considered in all mixes. Introduced species are more competitive against invading tall tree species

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

Seeding should be completed when there is enough moisture to allow for 2 months of growth. Seeding can be completed any time of the year except for the hot summer months.

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.

Site will be inspected during treatment. In addition routine patrols by BPA ground and aerial patrols

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

Routine patrols by BPA ground and aerial patrols

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”.

No

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

No