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United States Government **Department of Energy**

Bonneville Power Administration

memorandum

DATE: January 17, 2002

REPLY TO ATTN OF: KEPR/Covington

SUBJECT: Supplement Analysis for the Transmission System Vegetation Management Program FEIS (DOE/EIS-0285/SA-37)

TO: Don Atkinson - TFN/Snohomish
Bob Sweet – TFNF/Snohomish

Proposed Action: Vegetation Management along the Monroe – Custer No.1 Transmission Line ROW from 29/1+915 to 45/4+975. The transmission line is 500 kV single circuit transmission line. Project includes adjacent Monroe - Custer No.2 and Arlington - Bellingham single circuit transmission lines having a combined ROW width of 421.5 feet. The proposed work will be accomplished in the indicated sections of the transmission line corridor.

Location: The ROW is located in Snohomish and Skagit Counties, WA.

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

Description of the Proposed Action: BPA proposes to clear unwanted vegetation in the rights-of-ways and around tower structures that may impede the operation and maintenance of the subject transmission line, including both Reclaim and Danger Trees. Also, access road clearing will be conducted. 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 tall growing vegetation that is currently or will soon be a hazard to the transmission line. BPA's overall goal is to have low-growing plant communities along the rights-of-way to control the development of potentially threatening vegetation.

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 (reclaim and danger trees) that currently pose a hazard to the lines; selectively cut, lop and scatter and stump treat brush and other tall growing vegetation that currently or will in the near future pose a threat to the lines, treat the associated stumps and re-sprouts with herbicides to ensure that the roots are killed preventing new sprouts. All work will take place in existing rights-of-ways.

All work will be accomplished by selective vegetation control methods to assure that there is little potential harm to non-target vegetation and to low-growing plants. Desirable low-growing plants will not be disturbed. The work will provide system reliability.

Access roads will be treated using mowing and herbicide applications.

The vegetation control is designed to provide a 3-5 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 follow-up to treatment 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 rural residential, farms, grazing lands, and small and private forestlands. Landowners will be notified of the upcoming work by letters, personal contact and door hangers.

3. Identify natural resources.

Riparian areas and T&E streams (see attached checklist at 3.1) have been identified in the areas of the proposed work. In addition, the project will cross steep slope and spanned canyon areas (see checklist at 3.7 and 3.8).

No other T&E/wildlife issues, visually sensitive areas, cultural resources or other natural resource issues have been identified along the other work corridor.

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.

A licensed contractor would undertake the proposed work. The unwanted vegetation would be removed by employing cut stump, basal and foliar treatment methods. Chemical means would be employed to prevent resprouts from the cut stumps. 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.

The contractor will receive a list of required mitigation measures (management prescriptions) to follow as well as a set of maps delineating the transmission line and potential sensitive resource areas. The contractor will follow manufacturers' label instructions when applying herbicides.

Vegetation Management Checklist

Monroe-Custer No. 1
29/1-45/4
Prepared by Don Atkinson
1/14/02

1. IDENTIFY FACILITY AND THE VEGETATION MANAGEMENT NEED

1.1 Describe Right-of-way.

Corridor Name	Corridor Length & kV	Easement width	Miles of Treatment
Monroe-Custer No. 1	29/1 to 45/4 500kV	412.5'	Approx. 12 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 in right-of-way

Transmission Structures – clearing around structures as needed by a combination of machine and hand cutting

Access Road clearing - approximate miles – **20 of machine and hand cutting**

Reclaim ("C") Trees – will be cut as part of this project

Danger Tree clearing – will be done as part of this project

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

Hemlock

Alder

Willows – mid span or where ground to conductor is low

Cottonwoods

Scotchbroom – along access roads and around structures

Blackberry

Density:

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

T**all-growing vegetation that is currently or will soon be a hazard to the line will be removed.** (In places where tall growing vegetation must be left in place, it may not be possible to promote low-growing plants.)

Cut-stump or follow-up herbicide treatments on resprouting-type species will be carried out to ensure that the roots are killed on non Forest Service lands. –Note there is no Forest Service land in this project.

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.

1.4 Describe overall management scheme/schedule.

See Handbook - **Overall Management Scheme/Schedule**.

Initial entry – Cut lope and scatter, treat stumps where possible to prevent re-sprouting (on State and Private lands), Mow and treat access roads and structure sites.

Subsequent entries – Follow-up with re-treatment, with herbicide in areas that were not treated due to weather conditions or where there was not a good kill, within the next growing season.

Future cycles – This area is being managed on a 3 to 5 year cycle for brush and danger trees.

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.

Pacific Denkmann Timber Company, Boy Scouts of America, State of Washington, and private landowners (rural residential, farms, grazing land, small 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 and doorhangers.

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.**.

No known specific landowner measures needed at this time.

*Note-not all areas within the project area will be treated with chemicals, riparian areas, and areas where private landowners who do not want chemicals used will not be treated.

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.

Monroe-Custer No. 1 (See attached maps for locations)

Span		Landowner/use	Specific measures to be applied
To	From		
29/1 + 1050	**29/3 + 490**	Tree & Brush agreement	Land owner will maintain
29/3 + 1010	**31/3 +100**	Tree & Brush agreement	Land owner will maintain
39/2 + 820	**39/3 + 400**	Tree & Brush agreement	Land owner will maintain
41/3 + 50	**42/4 + 1000**	Sensitive Area	Contact Camp Manager before cutting

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.

Bicycle trail located at 29/4, also used for horseback riding.

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

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.

Monroe-Custer No. 1 (See attached maps for locations)

Span		Waterbody	T&E?	Treatment Zone	Herbicide	Application Technique	Buffer	Other
To	From							
29/1 + 1050	**29/2 + 1130**	Stillaguam-ish River	yes	Riparian T& E	See Below	See below	See below	Anadromous fish
29/3 + 590	**29/3 + 800**	Marsh	no	Riparian	See Below	See below	See below	
30/5 + 620	**30/5 + 1100**	Marsh	no	Riparian	See Below	See below	See below	
31/1 + 380	**31/1 + 750**	Marsh	no	Riparian	See below	See below	See below	
31/2 + 250	**31/2 + 690**	Marsh	no	Riparian	See below	See below	See below	
31/3 + 200	**31/3 + 1050**	Creek & Marsh	no	Riparian	See below	See below	See below	
31/3 + 1360	**31/4 + 500**	Pond	no	Riparian	See below	See below	See below	
32/1 +230	**32/1 +560**	Marsh	no	Riparian	See below	See below	See below	
32/2 + 400	**32/2 + 960**	Creek	yes	Riparian T&E	See below	See below	See below	Bull Trout
32/2 + 1140	**32/3 + 200**	Marsh	no	Riparian	See below	See below	See below	
32/4 + 180	**32/4 + 460**	Creek	no	Riparian	See below	See below	See below	
32/5 + 300	**32/6 + 00**	Creek	no	Riparian	See below	See below	See below	
33/1 + 200	**33/4 + 550**	Creek & Marsh	yes	Riparian T&E	See below	See below	See below	Bull Trout
33/6 + 850	**34/2 + 350**	Creek & Marsh	no	Riparian	See below	See below	See below	
34/3 + 360	**35/1 +00**	Marsh	no	Riparian	See below	See below	See below	
35/3 + 70	**35/3 + 1450**	Creek	no	Riparian	See below	See below	See below	
35/4 + 580	**35/4 + 1400**	Creek	no	Riparian	See below	See below	See below	
36/2 + 620	**36/2 + 1520**	Pilchuck Creek	no	Riparian	See below	See below	See below	
37/1 + 190	**37/1 + 1310**	Marsh	no	Riparian	See below	See below	See below	
37/4 + 80	**37/4 + 440**	Marsh	no	Riparian	See below	See below	See below	
37/6 + 110	**37/6 + 330**	Creek	no	Riparian	See below	See below	See below	
38/1 + 570	**38/1 + 1280**	Marsh	no	Riparian	See below	See below	See below	
38/2 + 300	**38/3 + 640**	Creek & Marsh	No	Riparian	See below	See below	See below	
39/1 + 00	**39/1 + 1130**	Creek & Marsh	no	Riparian	See below	See below	See below	
39/2 + 270	**39/2 + 820**	Creek	no	Riparian	See below	See below	See below	
39/4 + 500	**39/5 + 100**	Marsh	no	Riparian	See below	See below	See below	
39/5 + 570	**39/5 + 1050**	Marsh	no	Riparian	See below	See below	See below	

Span		Waterbody	T&E?	Treatment Zone	Herbicide	Application Technique	Buffer	Other
To	From							
40/2 + 120	**40/2 + 630**	Creek & Marsh	no	Riparian	See below	See below	See below	
40/3 + 100	**41/2 + 400**	Creek & Marsh	no	Riparian	See below	See below	See below	
41/3 + 490	**41/6 + 1070**	Creek & Marsh	no	Riparian	See below	See below	See below	
42/1 + 410	**42/2 + 690**	Creek & Marsh	no	Riparian	See below	See below	See below	
42/3 + 250	**42/3 + 780**	Creek & Marsh	no	Riparian	See below	See below	See below	
42/4 + 100	**42/4 + 670**	Marsh	no	Riparian	See below	See below	See below	
42/5 + 40	**42/5 + 520**	Nookach-amps Creek	no	Riparian T&E	See below	See below	See below	Bull Trout
43/1 + 250	**43/1 + 700**	Creek	no	Riparian	See below	See below	See below	
43/2 +00	**43/2 + 380**	Creek	no	Riparian	See below	See below	See below	
43/3 + 180	**43/4 + 00**	Creek	no	Riparian	See below	See below	See below	
43/4 + 600	**43/5 + 750**	Creek	no	Riparian	See below	See below	See below	
44/2 + 400	**44/3 + 380**	Creek	no	Riparian	See below	See below	See below	
44/3 + 790	**44/3 + 1210**	Creek	no	Riparian	See below	See below	See below	
44/5 + 770	**45/2 + 70**	Creek	no	Riparian	See below	See below	See below	
45/2 + 420	**45/2 + 850**	Creek	no	Riparian	See below	See below	See below	

Riparian	**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. No mechanical treatments. **Herbicides**: Within 100 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 200 ft. from streams or water.
Riparian T&E	**RIPARIAN SALMON**: BPA, county, or private lands, within 122 m (400 ft.) of a listed salmon stream. Available: all manual, spot and localized herbicide, and biological treatments, except grazing. No mechanical treatments. **Herbicides**: No herbicides within 200 feet from the waters edge.. From 100 to 400 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. Highly Toxic and very Highly toxic (to fish) herbicides will not be used in this zone.

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

None Known

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 showing on sensitive species maps. (Red flag maps)

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. See resources for mitigation for salmon fisheries.

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

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.

Monroe-Custer No. 1

Span		Describe sensitivity	Method/mitigation measures
To	**From**		
36/1 +00	**36/2 + 620**	Steep slope	See below
36/2 + 1520	**36/2 + 1706**	Steep slope	See below
42/5 + 00	**42/5 + 1095**	Steep slope	See below

Zones	Treatment Alternatives
SS	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. **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.

3.8 List areas of spanned canyons and the type of cutting needed.
See Handbook – **Spanned Canyons** for requirements.

Monroe-Custer No. 1

Span		Describe sensitivity	Method/mitigation measures
To	**From**		
29/2 + 210	**29/2 + 940**	Select Tree Cut	See below
36/2 + 970	**36/2 + 1170**	Select Tree Cut	See below
44/2 + 425	**44/2 + 700**	Select Tree Cut	See below

Zones	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.

LT	LEVEL TERRAIN: BPA, county, or private lands where the ROW is Fairly flat and level. There are minimal environmental and treatment restrictions. 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. **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.
MS	MODERATE SLOPE: BPA, county, or private lands where the ROW is varies from flat to steep terrain with stable soils. . Available: all manual, mechanical treatments using rubber tired mowers on slopes up to 20%, track mowers on slopes up to 60%, and specializes mowing equipment such as the Spyder (trade name) can be used on slopes up to 90% - 100% (when conditions make it feasible). All access roads and structure sites may also be mowed. Also available are biological treatments and all herbicide treatments spot, localized, and broadcast treatment including cut-stubble treatment following a mechanical treatment where suitable. **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.
UR-RU	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. **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 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

Lope and Scatter

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 we will reseed.

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

N/A

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.

Will review during line patrol 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".

None

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

No

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.) Mowing and mulching along access roads.

5. Determine revegetation methods, if necessary.

Re-seeding will occur only along those places were 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 preformed 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 A. Martin
Mark A. Martin
Environmental Protection Specialist

CONCUR:*/s/ Thomas C. McKinney* DATE: *1/18/2002*
Thomas C. McKinney
NEPA Compliance Officer

Attachments