

United States Government

Department of Energy
Bonneville Power Administration

memorandum

DATE: July 10, 2003

REPLY TO
ATTN OF: KEP

SUBJECT: Supplement Analysis for the Transmission System Vegetation Management Program FEIS
(DOE/EIS-0285/SA-167 McNary-Ross)

TO: Elizabeth Johnson
Natural Resource Specialist– TFR/The Dalles

Proposed Action: Vegetation Management for the McNary-Ross, 345kV transmission line.

Location: The project is located in the BPA Redmond Region, in Klickitat County, Washington.

Proposed by: Bonneville Power Administration (BPA).

Description of the Proposal: BPA proposes to remove unwanted vegetation along the right-of-way, along access roads and around tower structures along the subject transmission line corridor that may impede the operation and maintenance of the identified 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 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: 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.

Work will take place along the McNary-Ross 345 kV transmission line between towers 111/2 & 116/1 and 117 & 118/1. The easement width along the line varies from 250 feet to 300 feet.

Tall growing vegetation of the types and densities listed in section 1.2 of the attached checklist are present in the ROW and will soon pose a hazard to the lines. The work involves clearing this tall growing vegetation and treatment of the associated stumps and re-sprouts with herbicides to ensure that the roots are killed. Cut-stump or follow-up herbicide treatments on resprouting-type species will be carried out to ensure that the roots are killed.

Vegetation on access roads and around tower sites that impede the operation and maintenance of the transmission line will also be cleared and/or treated. Tall-growing vegetation will be cut and treated every 6 years.

Vegetation species that will be removed include: Doug Fir, choke cherry, oak, willow, big leaf maple, alder, pine, and poison oak.

Vegetation will be removed using manual or mechanical methods. Debris will be disposed of using either chip, lop and scatter, or mulch techniques. Brush and scotch broom will be chipped or mulched, while larger branches and tree trunks will be lopped. All debris will be scattered along the ROW.

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

The project crosses rural, industrial forest, State lands, Forest Service, and residential lands. Landowners will be contacted by letter about 3 weeks prior to cutting the brush. Door to door contact will be made where it is warranted. Door hangers have been used at properties where special treatments are anticipated. Conversations with property owners on site, emails, and phone calls are all used.

Copies of the checklist will be sent to State Department of Natural Resources (DNR) & Forest Service. The cover letter will ask for any other information that needs to be considered. Any concerns raised will be discussed, mitigated or avoided.

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.

Water resources identified include intermittent creeks and perennial streams. Mitigation measures include selective cutting and herbicide use in addition to the use of buffer zones as described in Sections 3.1 and 3.2 of the attached checklist. These mitigation measures are consistent with the EIS.

Terrestrial Species (Bald Eagle): Two Bald Eagle nesting areas were found through the BPA GIS and the Washington DNR Natural Heritage data bases. The nesting areas are approximately 2,200 feet to the east of tower 112/1.

Terrestrial Species Mitigation (Bald Eagle):

No vegetation management activity within .25 mile of the nesting site between January 1st to August 15th unless a State or Federal wildlife biologist has determined that the nest site to be unoccupied. No restrictions after August 15th.

No other T&E species or other natural resource or cultural resource issues were identified.

4. Determine vegetation control and debris disposal methods.

Treatment of project area will consist of mowing access roads & structures and selected areas with dense tall growing vegetation. Handcutting will be performed in all other areas of the right-of-way. Garlon 4 or 3A will be mixed with forest crop oil and spot sprayed on all stumps within 15 minutes of cutting except in riparian areas.

Only aquatic formulations of glyphosate will be spot sprayed in riparian areas on tall growing tree stumps once cut. A foliar application of garlon 3A or 4 will be used on noxious weeds. All herbicides will be mixed and applied according to label. Herbicide applications include spot, localized and foliar techniques. Debris will be disposed of using either chip, lop and scatter or mulch techniques as described in Section 5.1 of the attached checklist.

5. *Determine revegetation methods, if necessary.*

Revegetation activities are not planned for this project.

6. *Determine monitoring needs.*

Right-of-way will be visited during operations and routinely thereafter contractor has completed work to determine if target vegetation was cut and treated effectively, whether desired results were achieved for riparian as well as non-riparian areas and if mitigation measures were appropriately utilized and effective.

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. Therefore, no further NEPA documentation is required.

/s/ Frederick J. Walasavage
Frederick J. Walasavage
Environmental Protection Specialist

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

DATE: 07/11/2003

Attachment

cc:

L. Croff – KEC-4
T. McKinney – KEC-4
C. Leiter – KEP-4
J. Meyer – KEP-4
P. Key – LC-7
D. Hollen – TF/DOB-1
J. Hilliard Creecy – T-DITT2
R. Fouse – TFR/Redmond
R. Melzer – TFR/Redmond
W. Banker – TFRK/The Dalles
Environmental File – KEC-4
Official File – KEP-4 (EQ-14)

Vegetation Management Checklist

1. IDENTIFY FACILITY AND THE VEGETATION MANAGEMENT NEED

1.1 Describe Right-of-way.

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](#).

Corridor Name	Corridor Length & kV	Easement width	Miles of Treatment
McNary-Ross	144 miles/345kV	250-300'	Approx. 6.5

Right-of-Way – clearing in right-of-way – approx. 118 acres

Transmission Structures – clearing around each one.

Access Road clearing - approximate miles – 6 miles

1.2 Describe the vegetation needing management.

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

Doug Fir, choke cherry, oak, willow, big leaf maple, alder, pine, poison oak.

Medium (50 – 250 stems/acre)

Noxious weeds – knapweed, scotch broom. Noxious weeds – Scotch Broom, knapweed and poison oak, blackberry, etc. Contractor is required to control noxious weeds on row, around structures and along access roads. Where applicable, noxious weeds will be treated with a foliar application of an approved herbicide and applied according to label requirements. Herbicide and surfactant/adjuvant will be approved by COTR prior to application. All buffers will be maintained according to buffer table in EIS. Klickitat County Weed Dept. is very aggressive in managing noxious weeds and currently has a contract with BPA to help manage weeds w/in Klickitat County. However, vegetation mgmt & noxious weed control will be done simultaneously w/brush contractors to effectively control spread of weeds.

Work shall commence August 2003 and completed by September 2003.

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.

Bonneville's overall goal is to have low-growing plant communities along the rights-of-way to control the development of potentially threatening vegetation. In some areas where the line is w/in 40' or less distance to ground, this is not possible.

- Tall-growing vegetation that is currently or will soon be a hazard to the line will be removed.
- Cut-stump or follow-up herbicide treatments on resprouting-type species will be carried out to ensure that the roots are killed.
- 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 – This project is a maintenance entry. Vegetation will be cut with chain saws/mowers w/ some herbicide treatment.

Subsequent entries – Every 6 yrs., the row will need to be manually/mechanically/chemically treated.

Future cycles - Same as subsequent entry.

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.

Residential, Rural, Industrial Forest lands –SDS/Longview Fibre

State Lands – Wa. State Department of Natural Resources

Forest Service – Columbia Gorge National Scenic Area

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.

§ Landowner letters will be sent out 3 weeks prior to commencement of operations. Other methods will include door hangers, phone call, e-mail, and/or individual meetings to 1) notify landowners where Bonneville has a right-of-way easement to inform them of upcoming activities, 2) request any information that needs to be considered.

- Copies of the checklist will be sent to State DNR & Forest Service. Cover Letter will ask for any other info that needs to be considered. Any concerns brought to my attention will be discussed, mitigated or avoided.

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](#).

FS-managed Lands

Reviewed existing site-specific vegetation management plans – DOE/EA-1162 Columbia River Gorge Vegetation Management Project, dated 9/96, for consistency with this EIS. All requirements/mitigations/recommendations are consistent with the EIS and will be implemented during this project. If USFS request any changes to plan, will incorporate recommendations to accommodate their issues.

State Lands – Have discussed the project with Al Austin, DNR’s area timber manager, he verbally approved project plans on their land and requested a letter on dates of activity.

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.

Case No. 20010116 – Xmas trees on row. Called & spoke to landowner on 6/27/03 to see if they still planned on planting any trees on row. Indicated they are still considering doing so but sometime in the future. Informed them of the work I planned to do on row and they were agreeable.

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.

Hunters/dirt bikers may occasionally use the row. The planned entry is not expected to affect their 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 identified.

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.

- § In riparian areas, use selective control methods and take care not to affect non-target vegetation.
- § Leave vegetation intact, where possible.
- § Reseed all soil disturbed sites within 400 feet of a stream.
- § Any discharge of material (displaced soils, and in certain circumstances, vegetation debris) within a water of the U.S. may be subject to U.S. Army Corps of Engineers regulations under the Clean Water Act.
- § Do not permit debris from tree falling, cutting, or disposal to fall into or be placed in any watercourse, spring, pond, lake, or reservoir, unless there is approval from the appropriate authorities for stream habitat projects.
- § Do not burn piled vegetative debris in or next to watercourses.
- § For all methods using machinery or vehicles (i.e. chainsaws, trucks, graders) keep the equipment in good operating condition to eliminate oil or fuel spills.
- § Do not wash equipment or vehicles at a stream.
- § Notify inspector and the State of any amount of herbicide spill in or near water.

- § Consider climate, geology, and soil types in selecting the herbicide/adjuvant with lowest relative risk of migrating to water resources.
- § Use herbicide-thickening agents (as appropriate), label instructions, and weather restrictions to reduce the drift hazard to water resources.
- § When using granular formulations, consider overall climate and daily weather in ensuring herbicides are not washed offsite.
- § Always use appropriate anti-siphon devices/methods when filling herbicide tanks from any water sources.
- § Before herbicide application, thoroughly review the right-of-way to identify and mark, if necessary, the buffer requirements of competing resources.
- § The buffers in tables III-1 and III-2 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.
- § For noxious weed treatment, try to apply buffer zones, recognizing that treatment may be necessary within zones for control in compliance with local weed boards and Federal noxious weed laws.

Table III-1: Buffer Widths to Minimize Impacts on Non-target Resources

Herbicide & Adjuvant Ecological Toxicities and Characteristics	Buffer Width from Habitat Source per Application Method (i.e., stream, wetland, or sensitive habitat)				
	Spot	Localized	Broadcast ¹	Aerial ²	Mixing, Loading, Cleaning
Practically Non-Toxic to Slightly Toxic	Up to Edge ^{3,4}	Up to Edge ^{3,4}	10.7m ^{3,4} (35 ft.)	30.5m ⁴ (100 ft.)	30.5m ⁵ (100 ft.)
Moderately Toxic, or if Label Advisory for Ground/Surface Water	7.6m ^{3,4} (25 ft.)	10.7m ^{3,4} (35 ft.)	30.5m ^{3,4} (100 ft.)	76.2m ⁴ (250 ft.)	76.2m ⁵ (250 ft.)
Highly Toxic to Very Highly Toxic	10.7 m ^{3,4} (35 ft.)	30.5m ^{3,4} (100 ft.)	Noxious weed control only. Buffer as per local ordinance	Noxious weed control only. Buffer as per local ordinance	76.2m ⁵ (250 ft.)

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.

1 Using ultra low volume (ULV) nozzles with orifice size and spray pressure set to produce droplets at a minimum of 150 microns, boom or nozzle heights at the lowest possible height, and cross-wind speed of less than 10 mph.³

2 Using ULV nozzles with orifice size and spray pressure set to produce droplets at a minimum of 150 microns, minimizing air shear relative to nozzle angle and aircraft speed, boom length at 70% or less of wingspan/rotor, swath adjustment not to exceed 60 feet based on maximum cross-wind speed of less than 10 mph, minimum safety clearance application height, and herbicide tank mixture dynamic surface tension is less than 50 dynes/cm.³

3 Goodrich-Mahoney, J.W., Determination of the Effectiveness of Herbicide Buffer Zones in Protecting Water Quality, Electric Power Research Institute, Report No. TR-113160, September 1999

4 Calculated from: A Summary of Ground Application Studies, Spray Drift Task Force, 1997

5 BPA Best Management Practice

Table III- 4: Mechanical Buffer Zones

Ground-disturbing Mechanical Methods	Buffer Width From Habitat Source, i.e., Stream or Wetland
Slopes under 20%	10.7 m (35 ft.)*
Slopes over 20%	No disturbance

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.

*Natural Resources Conservation Service (NRCS), Conservation Practice Standard, Riparian Forest Buffer, Code 391A, 1997

Span		Waterbody	T&E?	Method	Herbicide	Application Technique	Buffer
From	To						
111/5 +550	111/5 +750	Intermittent creek	No	Hand cut individual trees if w/in 50' of lines.	Approved aquatic glyphosate formulation	Cut stump/Spot spray	100' slope distance - both sides. No machinery w/in 35' of stream or on slopes \geq 20%.
112/2 +200	112/2 +400	Perennial Stream	No	Hand cut individual trees if w/in 50' of lines.	Approved aquatic glyphosate formulation	Cut stump/Spot spray	100' slope distance - both sides. No machinery w/in 35' of stream or on slopes \geq 20%.
113/2 +700	113/2 +900	Perennial Stream	No	Hand cut individual trees if w/in 50' of lines	Approved aquatic glyphosate formulation	Cut stump/Spot spray	100' slope distance - both sides. No machinery w/in 35' of stream or on slopes \geq 20%.

113/3-250	113/3-450	Intermittent creek	No	Hand cut individual trees if w/in 50' of lines	Approved aquatic glyphosate formulation	Cut stump/Spot spray	100' slope distance - both sides. No machinery w/in 35' of stream or on slopes $\geq 20\%$.
113/3+1300	113/3+1500	Perennial Stream	No	Hand cut individual trees if w/in 50' of lines	Approved aquatic glyphosate formulation	Cut stump/Spot spray	100' slope distance - both sides. No machinery w/in 35' of stream or on slopes $\geq 20\%$.
114/4	115/1	Intermittent creek. Spanned Canyon	No	Hand cut individual trees if w/in 50' of lines	Approved aquatic glyphosate formulation	Cut stump/Spot spray	100' slope distance - both sides. No machinery w/in 35' of stream or on slopes $\geq 20\%$.
115/1+900	115/1+1100	Intermittent creek. Spanned Canyon	No	Hand cut individual trees if w/in 50' of lines	Approved aquatic glyphosate formulation	Cut stump/Spot spray	100' slope distance - both sides. No machinery w/in 35' of stream or on slopes $\geq 20\%$.
115/1+1100	115/2	Intermittent creek. Spanned Canyon	No	Hand cut individual trees if w/in 50' of lines	Approved aquatic glyphosate formulation	Cut stump/Spot spray	100' slope distance - both sides. No machinery w/in 35' of stream or on slopes $\geq 20\%$.
115/2+200	115/2+400	Intermittent creek.	No	Hand cut individual trees if w/in 50' of lines	Approved aquatic glyphosate formulation	Cut stump/Spot spray	100' slope distance - both sides. No machinery w/in 35' of stream or on slopes $\geq 20\%$.
115/3	115/4	Intermittent creek. Spanned Canyon	No	Hand cut individual trees if w/in 50' of lines	Approved aquatic glyphosate formulation	Cut stump/Spot spray	100' slope distance - both sides. No machinery w/in 35' of stream or on slopes $\geq 20\%$.
115/4+1050	115/4+1250	Perennial stream.	No	Hand cut individual trees if w/in 50' of lines	Approved aquatic glyphosate formulation	Cut stump/Spot spray	100' slope distance - both sides. No machinery w/in 35' of stream or on slopes $\geq 20\%$.

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.

None identified.

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.

Span		T&E Species	Method/mitigation or avoidance measures
To	From		
111/5	112/2	2 Bald Eagles Nests	Avoid operations in area until after 8/1.

2 Bald Eagle Nests were sited in 1998 by WDFW approx. 2200' east of 112/1 according to Washington Heritage Survey (Tview). To date, it is unknown whether the nests are still used. Therefore, to avoid possible disturbance to nests, operations will be restricted in this area until August 15.

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

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

None identified.

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

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

Within the Scenic Area, selective clearing techniques as well as promoting low growing plant communities will maintain the integrity of visually sensitive areas. No large-scale clearing or clear cuts will occur with this maintenance entry.

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

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

None identified. No soil disturbing activities planned for this project.

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.

- § Mechanical equipment will not operate on slopes over 20%.
- § Spot spraying with vegetation specific herbicides will be used on slopes over 10%.
- § Mowing will be done when the ground is dry enough to sustain heavy equipment.
- § Reseed or replant seedlings on slopes with potential erosion problems and/or take other erosion control measures as necessary.

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

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

See Water Resources Section 3.1

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](#), and [Herbicides](#) for requirements for each of the methods.

Treatment of project area will consist of mowing access roads & structures and selected areas with dense tall growing vegetation. Hand cutting will be performed in all other areas of row veg control. Garlon 4 or 3A will be mixed with forest crop oil and spot sprayed on all stumps within 15 minutes of cutting except in riparian areas. Only aquatic formulations of glyphosate will be spot sprayed in riparian areas on tall growing tree stumps once cut. A foliar application of garlon 3A or 4 will be used on noxious weeds. All herbicides will be mixed and applied according to label.

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.

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 – Limbs, small boles of trees will be mulched with mowers to reduce slash loading.

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.

No soil disturbance anticipated for project. Reseeding/replanting not required.

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.

See above.

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.

Right-of-way will be visited during operations and routinely thereafter contractor has completed work to determine if target vegetation was cut and treated effectively, whether desired results were achieved for riparian as well as non-riparian areas and if mitigation measures were appropriately utilized and effective.

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

Annually field verify results of previous veg. mgmt schemes and look for new alternatives for treatment, etc.

7. PREPARE APPROPRIATE ENVIRONMENTAL DOCUMENTATION

See handbook — [Prepare Appropriate Environmental Documentation](#) for requirements. . Also prepare Supplement Analysis — [Supplement Analysis](#) — for signature.

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”.

NA

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

NA