DOE F 1325.8 e Electronic Form Approved by CGIR - 01/20/95
(8-89)

United States Government **Department of Energy**

Bonneville Power Administration

memorandum

DATE: April 21, 2003

REPLY TO ATTN OF: KEP-4

SUBJECT: Supplement Analysis for the Transmission System Vegetation Management Program FEIS (DOE/EIS-0285/SA-147 (Big Eddy-Chenoweth NO. 1 &2, Big Eddy – Midway & Chenoweth-Goldendale)

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

Proposed Action: Vegetation Management for the Big Eddy-Chenoweth NO. 1 &2 Substation to Substation, Big Eddy – Midway Substation to 2/3) & Chenoweth-Goldendale (Substation to 2/3).

Location: Project location is within Wasco County, Oregon & Klickitat County, Washington and is within the Redmond Region.

Proposed by: Bonneville Power Administration (BPA).

Description of the Proposal: BPA proposes to clear targeted vegetation within the right-of-way. BPA proposes to clear along access roads and remove danger trees outside the right-of-way where appropriate. Project is to remove vegetation that may impede the operation and maintenance of the subject transmission line. See Section 1.1 through 1.4 of the attached checklists for a complete description of the proposed action.

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 Big Eddy-Chenoweth NO. 1 &2 Substation to Substation, Big Eddy – Midway Substation to 2/3) & Chenoweth-Goldendale (Substation to 2/3) transmission lines. The easement width ranges from 305 feet to 500 feet.

Tall growing vegetation of the types listed in Section 1.2 of the attached checklist are present in the ROW and will soon pose a hazard to the lines. Project involves clearing tall growing vegetation and treatment of the associated stumps and re-spouts with approved herbicides 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.

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

A follow-up chemical foliar treatment is scheduled within the next growing season. Control methods and requirements, as outlined in Sections 3 of the attached Vegetation Management checklist, will be employed to mitigate any environmental effects to natural resources or to Threatened or Endangered species habitat. This vegetation management program is designed to provide a 5-8 maintenance free interval after the follow-up treatment.

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

The subject corridor traverses a mixture of private, Federal, tribal and public owned lands. Mostly rural residential, grazing and private forest lands. Line traverses the Columbia River Watershed.

A letter will be sent by mail to notify landowners in proximity to the project transmission lines prior to vegetation control activities. Personal contact along with door hangers may also be employed to notify landowners. The prescription / cut sheets will be modified as needed based on input received during the project. A listing of current Landowner Agreements along the ROW can be found in Section 2.4 of 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 describes mitigation measures to be used for the appropriate resource.

Riparian Habitat: Includes all wetlands, streams, creeks and ponds meeting the definition of riparian habitat. Riparian areas were identified which may include essential fish habitat. See Section 3.1 of the attached checklist for a complete listing of identified water resources.

T & E Terrestrial Species: A review of the software application TVIEW (GIS) determined that there are no known endangered species found within the project area.

Non T&E Fish Streams

- With 100-foot buffer aquatic formulations of Gyphosate will be used to waters edge. There will be no ground-disturbing mechanical methods employed within 35 ft. of the stream or wetland. On slopes greater than 20% there will be no ground-disturbing mechanical methods employed within the buffer.

T&E Fish Streams

- No herbicides will be used within 400 feet of the Columbia River or other T&E streams and rivers. Vegetation will be hand cut within the buffer.

Cultural Resources:

- A Native Burial Site is located along the Big Eddy-Chenoweth NO. 1 &2 transmission line. No tall growing vegetation exists at the location therefore the area will be avoided

Cultural Resources Mitigation:

- If a site is discovered during the course of vegetation control, work will be stopped in the vicinity and the local tribe will be contacted as well as the BPA Environmental Specialist.

4. Determine vegetation control and debris disposal methods.

Vegetation will be removed using manual, mechanical, and chemical methods. Glyphosate, dicamba (Trooper/Vanquish), Telar, Escort, clopyralid, picloram, and 2-4-d may be prescribed for wick, and spot-foliar treatments (localized).

As much as practical, be careful not to disturb low-growing plants. When possible, use only selective vegetation control methods (such as spot herbicide applications) that have little potential to harm non-target vegetation.

5. Determine revegetation methods, if necessary.

Re-vegetation is not planned for this project. However, if soil disturbance occurs during the project, the area will be reseeded.

6. Determine monitoring needs.

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.

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 have a no effect on threatened or endangered species. Therefore, no further NEPA or ESA documentation is required.

/s/ John Howington
John Howington
Physical Scientist – KEPR-4

CONCUR*/s/ Thomas C. McKinney* DATE:04/22/2003
Thomas C. McKinney
NEPA Compliance Officer

Attachment

cc:
L. Croff – KEC-4
T. McKinney – KEC-4
C. Leiter – KEP-4
J. Meyer – KEP-4
F. Walasavage – KEP/Celilo
P. Key – LC-7
D. Hollen – TF/DOB-1
G. Parks – TFR/Redmond
R. Fouse – TFR/Redmond
W. Banker – TFRK/The Dalles
Environmental File – KEC-4
Official File – KEP (EQ-14)

Jhowington:jh:4722:4/23/2003 (KEP-KEPR-4-W:\EP\2002 & 2003 FILES\EQ\EQ-14\FEIS-0285-SA-147-BigEddy-Chenoweth.doc)

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
Big Eddy-Chenoweth Nos. 1 & 2 Big Eddy-Midway Chenoweth-Goldendale	7 Miles 230 kV – Sub to Sub 35 Miles 230 KV – Sub to 2/3 24 Miles 115 kV – Sub to 2/3	Variable – Ranges from 305-500' wide	7 2 1

- ☑ Right-of-Way – clearing in right-of-way
- ☑ Transmission Structures – clearing around
- ☑ Access Road clearing - approximate miles – 3
- ☑ Wood Poles - fire protection clearing

1.2 Describe the vegetation needing management.

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

Vegetation Types: Low (50 stems or less/ per acre)
Willows, Wild Cherry, Sumac, poplars, birch, alder
Noxious Weeds - Knapweeds, yellow star thistle, puncture vine, thistle, and other county listed species.

As the row traverses over both Wasco County, OR & Klickitat County, WA, both county weed control boards have contracts with BPA to control weeds on & off row and wood pole fire prevention. No herbicide is given to landowners for control of noxious weeds within this segment of row.

When possible, wash vehicles that have been in weed-infested areas (removing as much weed seed as possible) before entering areas of no known infestations.
Consider, if appropriate, reseeding after noxious weed treatments.
When reseeding is needed, use approved weed-free seed.

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.

- ☑ Tall-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.
- ☑ Areas will be replanted or reseeded with low-growing species. [This should be done if there are no existing low-growing species or if there is a low potential for natural revegetation by low-growing species and a high potential for natural revegetation by tall-growing species.]

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. Hardwoods will be cut and then stump treated w/herbicide to prevent resprouting.

Subsequent entry's – Every 5-8 yrs., the row will need to be manually/mechanically cut .

Future cycles - Same as subsequent entry.

Overall mgmt for noxious weeds - Listed noxious weeds present in the ROW will be managed as a cooperative effort between BPA, Wasco/Klickitat County weed boards and landowners. The listed noxious weeds are non-native species that need to be controlled to prevent any additional spread of these weeds and encroachment of habitat for native species on the right-of-way. These noxious weed species will be controlled using an Integrated Vegetation Management Approach (IVM) using a combination of manual, mechanical herbicides, and biological methods. The selection of methods and herbicides for noxious weed management will be based on their location and proximity to water resources. Treatment will be Spot, localized and broadcast treatments. Non-selective treatments using broadcast treatment may be required in areas of high infestation of weeds on the ROW, and access roads and tower sites. Localized and Broadcast Granular treatments will also be considered.

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 - Notification letter will be sent 4 weeks prior to commencement of operations.
- ☑ Rural - Notification letter will be sent 4 weeks prior to commencement of operations.
- ☑ Agricultural - Notification letter will be sent 4 weeks prior to commencement of operations.
- ☑ Grazing lands - Notification letter will be sent 4 weeks prior to commencement of operations.
- ☑ Urban - Notification letter will be sent 4 weeks prior to commencement of operations.
- ☑ Other Federal lands – Corps of engineers, including Suefert Park – Met w/Ranger on 2/4/03.
- ☑ Tribal Reservation - Yakama Tribe - Notice to be sent to Dept. of Natural Resources & tribal use plant protection group.
- ☑ State/City/County Lands – Wasco County Park, Port of Klickitat, Port of The Dalles. Industrial permittes located on port property. - Notification letter will be sent 4 weeks prior to commencement of operations.

Industrial – several rock extraction developments occur on row - Notification letter will be sent 4 weeks prior to commencement of operations.

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

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

Notification letter will be sent at least 4 weeks prior to commencement of operations. Will discuss any issues raised with the various landowners. Once work begins, will continue to meet landowners on the ground via door hanger, letter, phone call, e-mail, and/or meeting) 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.

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.**.

Residential/Commercial Requirements:

Where appropriate, assign responsibility for tall-growing species on the rights-of-way to underlying property owner (e.g., to owners of orchards or Christmas tree farms).
If appropriate, offer to replace trees (with a low-growing species), or use tree growth regulators instead of removing a tree.

If using herbicides, ensure that treated areas are posted and reentry intervals are specified and enforced in accordance with label instructions.

Agricultural:

Below is a list of requirements for being on or adjacent to agricultural lands.
Prevent the spread of noxious weeds by cleaning seeds from equipment before entering cropland.
If using herbicides on grazing lands, comply with grazing restrictions as required per herbicide label.

If using herbicides near crops for consumption, comply with pesticide-free buffer zones, if any, as per label instructions.

For rights-of-way adjacent to agricultural fields, observe appropriate buffer zones necessary to ensure that no drift will affect crops.

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.

North Boundary of I-84 to The Dalles Dam – Corps of engineers – Suefert & Dam parks. BPA is required to maintain all veg. according to Corp demands. Met w/Park personnel to discuss & identify method of trimming trees & cleanup expectations/6/6+100 to 7/7 – Wasco County Park – Taylor lake areas. BPA will work closely with park administration to maintain integrity & objectives of park.

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.

None identified.

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.

A notification letter will be sent to the tribes four weeks prior to commencement of operations.

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		Waterbody	T&E	Method	Herbicide	Application Technique	Buffer	Other
From	To							
1/5 + 1150	2/1	Columbia River	Yes	Hand cut	None	NA	400' both sides	Tree trimming only - Parks
2/1	2/1 + 800	Spillway/ locks	Yes	Hand cut	None	NA	400' both sides	
5/6	5/6 + 100	Intermittent Cr.	No	Hand cut	None	NA	35' Both sides – No machinery to operate w/in zone.	
6/4	6/8	Columbia River	Yes	Hand cut	None	NA	400' both sides	
7/2 - 300	7/6 + 200	Col. River, Lakes & wetlands	Yes	Hand cut	None	NA	400' both sides	County Park

OTHER STREAMS: 100 ft buffer from stream or water body, will only use only aquatic formulation of Glyphosate. Spot treatments will be used within the Buffers.

Manual: Hand tools and chainsaws.

Mechanical: None, within 50 feet of streams or wetlands. Only on Access Roads and Tower sites

Herbicide: Only Non-toxic formulations and slightly toxic (to aquatic species) formulations of glyphosate (such as Rodeo®), dicamba (Trooper/Vanquish), Telar, Escort, clopyralid, picloram, and 2-4-d may be prescribed for wick, and spot-foliar treatments (localized).

Ground Broadcast treatments can be completed with the appropriate buffers on noxious weeds, access roads and tower sites.

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.

T&E fish species found in the Columbia River. See section 3.1 for buffers. No herbicide will be applied w/in 400' of the Columbia River.

3.4 List any other measures to be taken for enhancing wildlife habitat or protecting species.
See Handbook — **Protecting Other Species** for requirements.

Control and Management of Noxious weeds will improve habitats

3.5 List any visually sensitive areas and the measures to be taken at these areas.
See Handbook — **Visual Sensitive Areas** for requirements.

Tall growing vegetation w/in Suefert & Taylor Lake Parks will be maintained according to the directions provided by the park managers. Methods to alleviate visual concerns will include tree trimming where possible. Very little vegetation management expected to occur in these areas. Other methods may include the following:

- § Limit use of broadcast foliar application of herbicide to reduce the creation of large areas of browned vegetation.
- § At road crossings, highways or visual overlooks leave sufficient vegetation, where possible, to screen view of right-of-way.
- § If the area is a very sensitive visual resource, consider (1) planting low-growing tree seedlings adjacent to the right-of-way (or providing low-growing seedlings to landowner for planting); (2) softening the straight line of corridor edge by cutting some additional trees outside the right-of-way; or (3) if possible, leaving some low-growing trees within the right-of-way.

3.6 List areas with cultural resources and the measures to be taken in those areas.
See Handbook – **Cultural Resources** for requirements.

No ground disturbing activities planned on row.

Describe sensitivity	**Method/mitigation measures**
Native Burial Site	No tall growing veg. exists in this location. This area will be avoided.

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.

Span		Describe sensitivity	Method/mitigation measures
From	To		
1/5	1/5+400	Steep slope.	§ Do not use ground (soil)-disturbing mechanical equipment to clear on slopes over 20%. § Avoid using granular or total vegetation management (non-selective) herbicides on slopes over 10%. § Do not use herbicides that have surface water advisory. Perform mechanical clearing when the ground is dry enough to sustain heavy equipment.

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

See Handbook – **Spanned Canyons** for requirements.

Span		Describe sensitivity	Method/mitigation measures
From	To		
1/5	2/3	Columbia River/The Dalles Dam	Suefert Park is location in this segment of line and will be managed according to directions from Park personnel. No other work anticipated in this segment.
6/4	6/7	Columbia River	Handwork only. No herbicides w/in 400' of river.

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.

Manual: Hand tools and chainsaws

Mechanical: None, within 50 feet of streams or wetlands. Only on Access Roads and Tower sites

Herbicide: glyphosate, dicamba (Trooper/Vanquish), Telar, Escort, clopyralid, picloram, and 2-4-d may be prescribed for wick, and spot-foliar treatments (localized). Follow herbicide product label directions for appropriate uses, restrictions etc.

Vegetation Mitigation

As much as practical, be careful not to disturb low-growing plants. When possible, use only selective vegetation control methods (such as spot herbicide applications) that have little potential to harm non-target vegetation.

- § Use only those biological control agents (insects) that have been tested to ensure they are host-specific.
- § When possible, wash vehicles that have been in weed-infested areas (removing as much weed seed as possible) before entering areas of no known infestations.
- § Consider if appropriate, reseeding after noxious weed treatments.
- § Where cost-effective and to the extent practicable, use regionally native plants for landscaping.

Spot Herbicide Application

A spot application treats individual plant(s) with the least amount of chemicals possible. The methods include, but are not limited, to the following:

Wick and carpet roller applications. The herbicide is wiped on the plant(s) (noxious weeds) using hand held or equipment mounted rope wicks, sponges, fiber covered wipers, or carpet wiper designs. This application devise uses saturated ropes, wick or sponges that are used to apply the herbicide selectively on the plant. This method is effective where drift or sensitive water sources are a concern.

Localized Herbicide Application

"Localized" herbicide application is the treatment of individual or small groupings of plants. This application method is normally used only in areas of low-to-medium target-plant density.

The application methods for this application group include, but are not limited to, the following:

Low-volume foliar treatment. Herbicides are applied with the use of a backpack sprayer, all terrain vehicle (ATV), or tractor with a spray gun. Herbicide is applied to the foliage of individual or clumps of plants during the growing season, just enough to wet them lightly. A relatively high percentage of herbicide is used mixed with water. Thickening agents are added where necessary to control drift. Dyes may also be added to see easily what areas have been treated.

Localized granular application. Granular or pellet forms of herbicide are hand-applied to the soil surface beneath the drip lines of an individual plant, or as close to a tree trunk or stem base as possible. Herbicide is applied when there is enough moisture to dissolve and carry the herbicide to the root zone—but not so much water that it washes the granules off-site.

Broadcast Ground Herbicide Application

Broadcast herbicide applications treat an area, rather than individual plants. Broadcast applications are used to treat rights-of-way that are thickly vegetated (heavy stem density), access roads, and noxious weeds, The application methods for this group include, but are not limited to, the following:

High-volume foliar treatments. Herbicides are applied by truck, ATV, or tractor with a spray gun, broadcast nozzle, or boom. A hydraulic sprayer mounted on a rubber-tired tractor or truck or tracked-type tractor is used to spray foliage and stems of target vegetation with a mixture of water and a low percentage of herbicide. The herbicide mixture is pumped through hoses to a hand-held nozzle. A worker activates the nozzle and directs the spray to the target vegetation. Boom application methods involve a fixed nozzle or set of nozzles that spray a set width as the tractor passes over an area.

Broadcast granular treatment. Hand, belly grinder, truck or tractor spreads granular forms of herbicide. The herbicide is spread over a relatively large area, such as in an electric yard, or around tower legs.

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 (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.)

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 expected.

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

NA

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

NA

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 late summer after 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.

Site will be inspected during treatment. Routine patrols will be conducted by BPA ground and aerial patrols as well as Weed board members.

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