

United States Government

Department of Energy

Bonneville Power Administration

# memorandum

DATE: July 18, 2002

REPLY TO  
ATTN OF: KEP-4

SUBJECT: Supplement Analysis for the Transmission System Vegetation Management Program FEIS  
(DOE/EIS-0285/SA-92) Olympia District Substations

TO: Orion Albro  
Olympia Regional Manager

**Proposed Action:** Vegetation Management for the following electric yards located in the  
**Olympia District:**

Aberdeen	Grays Harbor, WA	Olympia	Thurston, WA
Centralia	Lewis, WA	Paul, C.W.	Lewis, WA
Chehalis	Lewis, WA	Port Angeles	Clallam, WA
Cosmopolis	Grays Harbor, WA	Potlatch	Mason, WA
Duckabush	Mason, WA	Sappho	Clallam, WA
Elma	Grays Harbor, WA	Satsop	Grays Harbor, WA
Fairmount	Jefferson, WA	Shelton	Mason, WA
Happy Valley	Clallam, WA	Silver Creek	Lewis, WA
Kitsap	Kitsap, WA		

**Proposed by:** Bonneville Power Administration (BPA).

**Description of the Proposal:** BPA proposes total vegetation management (bareground) in the electrical substations, and, noxious weed management and maintenance of landscaping within the property boundaries of the listed facilities. These facilities are all located within the Longview District of the Olympia Region.

**Description of the Proposal:** BPA proposes to manage vegetation inside and around electrical substations and associated facilities. Vegetation management within the substations will include bareground management by herbicides of all areas within the fenced perimeter of the facility including a bareground zone of up to 3 meters (10 feet) outside of the fenced area. The management of vegetation outside the substation and associated facilities will include: 1) bare ground management of perimeter roads and parking areas; 2) control of noxious weeds throughout property boundaries; 3) mowing, fertilizing, and weed control of landscaped lawn and mulched areas; 4) weed control in ornamental shrub areas; and 5) areas requiring only mechanical control to manage unwanted/danger trees, grasses, and shrubs.

**Analysis:** The attached checklist shows the resources that were found during this analysis and what mitigation measures are required to protect those resources. In addition, each facility is supported by a file containing drawings, aerial photographs, topographic maps, and the mitigation measures to be applied. Applicable findings are discussed below.

**Planning Steps:*****1. Identify facility and the vegetation management need.***

See proposed action.

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

All of the facilities are fee-owned by BPA. Two substations, Olympia and Silver Creek, may be managed for agricultural leases on lands adjacent to facilities under this proposal but within fee-owned property boundaries. Mitigation: The lessee will be contacted prior to treatment to identify agricultural use and appropriate treatment methods.

***3. Identify natural resources.***

T&E species (fish), wetlands, drinking water resources and water resources have been identified near some of the facilities as shown in Table 3.1 of the attached checklist. Mitigation measures, consistent with the FEIS, are listed for these sites in Section 3 and Attachment 1 of the attached checklist.

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

For switchyards and up to ten feet outside of fenced areas, the goal is total vegetation management. Facilities requiring landscaping are designed to be low maintenance and are consistent with Integrated Pest Management procedures, such as native, low-growing, types, mulches, rock covers, etc. All of the vegetation management techniques are designed to be permanent.

***5. Determine revegetation methods, if necessary.***

Not applicable, except as mentioned above when landscaping requires replacement.

***6. Determine monitoring needs.***

Monitoring is two-fold. Monitoring for evaluation of BPA/contractor treatment practices to ensure vegetation management practices will be handled through contract specifications. Environmental monitoring to ensure environmentally sound application practices will be determined in the future as outlined in the BPA/NMFS/USFWS Biological Assessment.

**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 no effect on anadromous T&E species. Therefore, no further NEPA or ESA documentation is required.

/s/ Mark Hermeston

Mark W. Hermeston  
Physical Scientist (Environmental) - KEP-4  
Licensed Hydrogeologist (WA 663)

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

DATE: 07/22/2002

Attachment

cc:

L. Croff – KEC-4  
T. McKinney – KEC-4  
P. Key – LC-7  
M. Hermeston – KEP-4  
J. Meyer – KEP-4  
J. Sharpe – KEPR-4  
M. Martin – KEPR-Covington  
M. Johnson – TF/DOB-1  
J. Jellison – TFO/Olympia  
D. Krauss – TFO/Olympia  
S. Martin – TFO/Olympia  
Environmental File – KEC  
Official File – KEP-4 (EQ-14)

Mhermeston:mh:4722:7/22/02 (KEP-KEP-4-W:\EP\2002 FILES\EQ\EQ-14\FEIS-0285-SA-92-Oly-sa.doc)

# OLYMPIA DISTRICT ELECTRIC YARD AND NON-ELECTRIC FACILITY CHECKLIST

## 1. IDENTIFY FACILITY AND THE VEGETATION MANAGEMENT NEED

### 1.1 Describe facility: (More than one facility may be listed and analyzed.)

Substation/Facility Name	Maximum Size of Area to be Treated	Nearest 1/4 Section Township/Range or GPS Coordinates	County	State
Aberdeen	12.4	46.58.46.7661N 123.51.2.4967W	Grays Harbor	WA
Centralia	0.85	46.43.47.0591N 122.56.50.8649W	Lewis	WA
Chehalis	42	46.35.57.4523N 122.56.44.7447W	Lewis	WA
Cosmopolis	19.83	46.56.56.6132N 123.45.44.3503	Grays Harbor	WA
Duckabush	2.59	47.39.38.2181N 122.57.2.8163W	Mason	WA
Elma	1.07	47.0.41.4786N 123.24.7.3582W	Grays Harbor	WA
Fairmount	12	47.58.32.2944N 122.53.1.5926W	Jefferson	WA
Happy Valley	12.79	48.2.34.0177N 123.6.14.9444W	Clallam	WA
Kitsap	27.18	47.31.54.6086N 122.42.10.8314W	Kitsap	WA
Olympia	77.84	47.0.5.6918N 122.57.12.5913W	Thurston	WA
Paul, C.W.	32.02	46.45.16.0967N 122.52.27.3551W	Lewis	WA
Port Angeles	20.48	48.6.4.4432N 123.25.0.7077W	Clallam	WA
Potlatch	1.3	47.23.5.0599N 123.10.53.5559W	Mason	WA
Sappho	6.684	48.4.18.9751N 124.16.6.0664W	Clallam	WA
Satsop	20.07	46.58.4.0055N 123.27.44.4229W	Grays Harbor	WA
Shelton	14.4	47.13.37.7771N 123.7.19.9525W	Mason	WA
Silver Creek	10.71	46.31.23.0300N 122.35.28.0118W	Lewis	WA

### 1.2 Describe vegetation needing management:

Substation (Total vegetation management (TVM) needs no further description.)

**Required at all of the facilities listed above.**

**Non-Electrical Facility (Describe all landscaping vegetation management.)**

Landscaping is required at Chehalis, Fairmount, Kitsap, Olympia, Paul, Port Angeles, Shelton and Silver Creek substations in addition to total vegetation management.

## 2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

### 2.1 List the types of landowners and land uses around your facility.

These sites are all fee-owned by BPA and are surrounded by a combination of private, state and federal lands. The surrounding land is used for residential, agricultural, and forested uses.

**2.2 Determine if there is a need to notify surrounding landowners of vegetation management activities. If so, why and how?**

Two substations in the Olympia District, Olympia and Silver Creek substations, may have agricultural leases adjacent to areas needing herbicide treatment. Drift can be controlled by implementing all label requirements for the reduction of drift. If the agricultural areas need herbicide treatment to control noxious weeds or tall-growing species, the lessee will be contacted through the Regional Realty Specialist, to determine the type of agricultural use, i.e., grazing or crops. Mitigation will be derived from existing label requirements and the needs of BPA and the lessee.

**2.3 List any specific measures to be taken based on surrounding landowners/use.**

See above.

**3. IDENTIFY NATURAL RESOURCES**

**3.1 Water Resources**

List or describe any water resources (streams, rivers, lakes, wetlands, undeveloped springs, etc.) near the facility.

Substation/ Facility Name	Water Resources (Within 400 feet)	Aquatic T&E Species	Direct Pathway	Mitigation <sup>1,2,3</sup>
Aberdeen	Fry Creek/Shallow Groundwater	No	Yes	GW/SW
Centralia	None	No	No	None
Chehalis	BPA Well	No	No	None
Cosmopolis	None	No	No	None
Duckabush	None	No	No	None
Elma	None	No	No	None
Fairmount	Snow Creek/Shallow Groundwater	Yes	Yes	GW/SW/TOX
Happy Valley	None	No	No	None
Kitsap	Shallow Groundwater	No	Yes	GW
Olympia	Shallow Groundwater	No	Yes	GW
Paul, C.W.	Hanford Creek/Wetland	No	Yes	GW/SW
Port Angeles	Shallow Groundwater	No	Yes	GW
Potlatch	None	No	No	None
Sappho	Shallow Groundwater	No	Yes	GW
Satsop	None	No	No	None
Shelton	None	No	No	None
Silver Creek	None	No	No	None

<sup>1</sup> If indicated, do not use chemicals with a groundwater (GW) or surfacewater (SW) label advisory.

<sup>2</sup> If indicated, only use chemicals Practically Non-Toxic to Slightly Toxic (TOX) to aquatic species.

<sup>3</sup> All chemicals are selected from BPA's List of Approved Herbicides, ESP E-VGM-004

**Does the substation/facility drainage have a direct pathway to the water body?**

See Table above.

**What measures will you take to limit potential impacts to water resources? As appropriate, list any buffers that will be applied.**

In addition to the Table above, the following mitigation measures apply at the following facilities:

- Aberdeen:** Do no apply any chemicals when water is present in northern substation drainage ditch.
- Duckabush:** Do no apply any chemicals when water is present in substation drainage ditches.
- Farimount:** Do no apply any chemicals when water is present in substation drainage ditches.
- Kitsap:** Do no apply any chemicals when water is present in substation drainage ditches.
- Olympia:** Do no apply any chemicals when water is present in substation drainage ditches and ponds.
- Port Angeles:** No chemical treatment inside secondary containment lagoon. Glyphosate okay between liner and fence.
- Shelton:** Do no apply any chemicals when water is present in marsh along northeast portion of property.
- Silver Creek:** Do no apply any chemicals when water is present in substation drainage ditches.

**3.2 Herbicide Use Near Irrigation Sources and Domestic and Public Drinking Water Supplies**

**List or describe any irrigation or domestic/public water source.**

See Table above.

**Does the substation/facility drainage have a pathway to the water supply?**

Chehalis Substation contains a BPA well. The well is 613 feet deep with a static water level of 298 feet. The well is used for potable and non-potable uses. The well is cased and grouted in accordance with state regulations. Well logs indicate varying layers of clay.

**What measures will you take to limit potential impacts to irrigation and drinking water supplies? As appropriate, list any buffers that will be applied.**

The well at Chehalis Substation needs no protection due to well construction and favorable geology that would restrict/prevent downward movement of chemicals.

### 3.3 Threatened and Endangered Plant or Animal Species

**Are there any T&E species in the area that could be affected? List if necessary.**

West coast salmonids have been identified in Snow Creek which is within 150 feet of facility.

**What measures will you take to limit potential impacts to each T&E species? As appropriate, list any buffers that will be applied.**

Limit use of chemicals with groundwater/surfacewater label advisories. Do not use chemicals greater than slightly toxic to aquatic species. Do not apply chemicals when surface water is present in ditches draining from substation. Use buffers as shown on Attachment 1 to protect T&E species and habitat.

### 3.4 Steep Slopes/ Unstable Slopes (Soils)

**Will herbicide treatment be occurring on any steep slopes?**

No.

**As appropriate, list any buffers, reseeding and/or ground disturbing restrictions that will be applied.**

None.

### 3.5 Attach drawing showing location of all required buffers.

Drawings showing the locations of all facilities with buffers are attached.

## 4. DETERMINE VEGETATION CONTROL METHODS

**Describe overall vegetation management scheme and schedule:**

**Initial:** For switchyards, and up to ten feet outside of fenced areas, the goal is TVM. Facilities requiring landscaping are designed to be low maintenance and are consistent with Integrated Pest Management procedures, such as, native, low-growing types, mulches, etc.

**Subsequent:** These facilities and their vegetation management schemes are designed to be permanent.

**Future:** See above.

## 5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

**Describe debris disposal and revegetation , if any.**

Debris disposal will take place on site. Revegetation will be consistent with the permanent nature of the facilities but will incorporate native species where practical.

## **6. DETERMINE MONITORING NEEDS**

### **6.1 Describe evaluation of BPA/contractor treatment practices to ensure vegetation management measures are working.**

Monitoring will be undertaken through contract specifications.

### **6.2 Is there a need to monitor adjacent areas for potential herbicide movement/contamination? If so, describe monitoring plan. (Unless monitoring for other reasons, this section should be consistent with BPA-systemwide herbicide monitoring plan not yet finalized.)**

Monitoring will be established at a later date consistent with the Maintenance BA.

## **7. PREPARE APPROPRIATE ENVIRONMENTAL DOCUMENTATION**

### **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.

# ATTACHMENT 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 <sup>1</sup>	Aerial <sup>2</sup>	Mixing, Loading, Cleaning
Practically Non-Toxic to Slightly Toxic	Up to Edge <sup>3,4</sup>	Up to Edge <sup>3,4</sup>	10.7m <sup>3,4</sup> (35 ft.)	30.5m <sup>4</sup> (100 ft.)	30.5m <sup>5</sup> (100 ft.)
Moderately Toxic, or if Label Advisory for Ground/ Surface Water	7.6m <sup>3,4</sup> (25 ft.)	10.7m <sup>3,4</sup> (35 ft.)	30.5m <sup>3,4</sup> (100 ft.)	76.2m <sup>4</sup> (250 ft.)	76.2m <sup>5</sup> (250 ft.)
Highly Toxic to Very Highly Toxic	10.7 m <sup>3,4</sup> (35 ft.)	30.5m <sup>3,4</sup> (100 ft.)	Noxious weed control only. Buffer as per local ordinance	Noxious weed control only. Buffer as per local ordinance	76.2m <sup>5</sup> (250 ft.)

<sup>1</sup> 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.<sup>3</sup>

<sup>2</sup> 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.<sup>3</sup>

<sup>3</sup> 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

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

<sup>5</sup> BPA Best Management Practice