

United States Government

Department of Energy  
Bonneville Power Administration

# memorandum

DATE: March 6, 2003

REPLY TO  
ATTN OF: KEP-4

SUBJECT: Supplement Analysis for the Transmission System Vegetation Management Program FEIS  
(DOE/EIS-0285/SA- 128 - Olympia-Satsop #3 [Mile 1-6])

to: James Jellison  
Natural Resource Specialist - TFO/Olympia

**Proposed Action:** Vegetation Management for the Olympia-Satsop #3 230 kV transmission line corridor (reference line) from structure 1/1 through structure 6/1 and between structures 8/3 and 8/4. Other lines which are present in the proposed corridor are the Paul-Satsop #1 500 kV, Olympia-Satsop #2 500 kV, Olympia-South Elma #1 115 kV, Olympia-Kitsap #3 230 kV, Olympia-Shelton #3 230 kV, Olympia-Shelton #4 230 kV, and Olympia-Shelton #1 115 kV. Right of way width averages 615 feet.

**Location:** The project location is within Thurston County, Washington and is within the Olympia Region.

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

**Description of the Proposal:** BPA proposes to remove unwanted vegetation along the right-of-way, access roads and around tower structures along the subject transmission line corridors. Approximately 5 miles of right-of-way will be treated using selective and non-selective methods that include hand cutting, mowing and herbicide treatments. Approximately 0.5 mile of access road will be cleared using selective and non-selective methods that include hand cutting, mowing and herbicide treatments. Tower sites will be treated using selective and non-selective methods that include hand cutting, mowing and herbicide treatments. Vegetation management is required for unimpeded operation and maintenance of the subject transmission line. See Section 1 of the attached checklist for a complete description of the proposal.

**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.***

Unwanted vegetation and reclaim trees will be removed and/or controlled using selective and nonselective methods that will include hand cutting, mowing, and herbicidal treatment. All methods of herbicide treatment will be used (except aerial) dependent on site conditions/restrictions. This proposal covers approximately 421 acres of land between towers 1/1 through 6/1 on the Olympia-Satsop #3 230 kV transmission line corridor (corridor reference line). The entire width of the corridor needs to be managed.

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

The subject corridor traverses private, and state public lands in Thurston County, used for residential, rural residential, horticultural and grazing purposes. No other federal or tribal lands are involved.

Landowners requiring notification or under tree and brush agreements are shown in Section 2.3 and 2.4 of the attached checklist. Any remaining landowners will be contacted (letters, personal contact, door hangers, etc.) by BPA before and during the project. Any input received will be incorporated into the prescription/cut sheets.

**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 resources found along with applicable mitigation measures:

**Riparian Habitat:**

Includes all wetlands, streams, and creeks meeting the definition of riparian habitat. Several areas were identified. See Section 3.1 of the checklist for a complete listing.

**Riparian Habitat Mitigation:**

- 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. On slopes less than 20% there will be no disturbance within 35ft. of the stream or wetland. On slopes greater than 20% there will be no disturbance within the buffer.
- Within 50 ft. to edge of surface water only cut-stump and localized or spot chemical treatments using practically non-toxic to slightly toxic formulations of glyphosate, triclopyr (TEA) formulation, imazapyr, and metsulfuron-methyl (Escort). Moderately toxic to very highly toxic herbicides (to aquatic species) or those herbicides containing a groundwater or surface water label advisory will not be used in this zone. Triclopyr (Garlon 4) may be used only more than 100 ft. from streams or water.

**Irrigation Source, Wells, or Springs:**

Includes water sources, springs, wells and other sensitive lands within 100 ft. of sensitive riparian areas or water sources. See Section 3.2 of the attached checklist for a complete listing.

**Irrigation Source, Wells, or Springs Mitigation:**

Herbicides will not be applied within 100 ft. of any irrigation water source, well, spring, or other sensitive riparian area. Only hand cutting methods are permitted within this buffer. Herbicide use is limited to those that do not have ground or surface water advisories between 100 and 165 ft of wellhead. Approved herbicides include: glyphosate, imazapyr, tryclopyr, Escort.

**T&E Species and EFH:**

No known Threatened and Endangered (T&E) Species are present in the proposed project area; however, Essential Fish Habitat (EFH) is present within the project area. For a full listing of EFH, see Section 3.1 of the attached checklist.

**T&E Species and EFH Conservation/Protection Measures:**

For EFH, these measures include: no herbicide application within 100 ft. of known EFH; selective manual cutting of tall-growing vegetation within 100 ft. of known EFH which could encroach on conductor clearances before the next vegetation management cycle; and use of “practically non-toxic” to “slightly toxic” herbicide, i.e. Triclopyr BEE (Garlon 3A), between 100 and 200 ft. of known EFH. Other measures may be specified by the Natural Resource Specialist (NRS) up to 400 ft. from EFH dependent on factors such as near-by access or right of way roads, existing vegetation, conductor clearances, etc. For additional information, see Section 3.3 of the attached checklist.

**Cultural Resources:**

No known cultural resources are present in the proposed project area.

**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 as described in Section 4 of the attached checklist. Debris will be disposed onsite using either chip, lop and scatter, or mulch techniques as described in Section 5 of the attached checklist.

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

Native grasses and low growing species are present in the areas of the right-of-way that will be managed. These populations will seed into the areas that will have lightly disturbed soil predominately located on the right-of-way roads. BPA expects 2-3 brush contractor vehicles and 1 BPA Natural Resource Specialist vehicle will be present on the site. A brush machine will mulch the structure sites and right-of-way roads where Scotch Broom and blackberries are present.

Re-vegetation needs will be determined onsite. Any areas identified with limited ground cover will be replanted with native plant or other species as determined by the Natural Resource Specialist.

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

The entire project will be inspected during the work period, and, the line will be patrolled annually after treatment to monitor the effectiveness of the treatment measures. For a full description of monitoring needs, see Section 6 of the attached checklist.

**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/ Oden W. Jahn

Oden W. Jahn

Physical Scientist (Environmental)

CONCUR: /s/Thomas C. McKinney

Thomas C. McKinney

NEPA Compliance Officer

DATE: 03/14/2003

Attachment

cc:

L. Croff – KEC-4

T. McKinney – KEC-4

J. Meyer – KEP-4

C. Leiter – KEP-4

G. Tippetts – KEPR/Olympia

P. Key – LC-7

D. Hollen– TF/DOB-1

D. Krauss – TFO/Olympia

T. Grover – TFO/Olympia

G. Westling – TFOF/Olympia

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
Olympia-Satsop No. 3 ADNO 8322	5mi (1/1 to 6/1 3-115Kv, 4-230Kv, 2-500Kv	615	5 mi.

### Right Of Way:

#### Right-of-Way – clearing in right-of-way

A combination of mulching the easement because of the Scotch broom and the cut, lop and scatter of tall growing species will be utilized to treat hazardous vegetation and this will be followed up with herbicide treatment.

#### Transmission Structures – clearing around

All structures will be cut to 30 feet from the center of the pole and from each leg of the steel towers and the stumps will be treated with herbicide.

#### Access Road clearing - approximate miles – 0.5 miles

All access roads will mulched due to the encroachment of Scotch broom and stubble treat the stumps or foliar treatment of the sprouts in the spring.

#### Reclaim (“C”) Trees:

Refer to the prescription cut sheets that notes the location of the draws and the edge of the right-of-ways where reclamation activities will be occurring. An occasional span has been identified where “C” trees will need to be cut along both edges of the easement

**Danger Trees:** No danger trees will be cut at this entry. This danger trees were cut on this easement in 2000.

## 1.2 Describe the vegetation needing management.

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

### Vegetation Types:

Douglas Fir

True Fir

Hemlock

Alder

Maple

Willows

Cottonwood

Wild Cherry

Noxious Weeds - Scotch Broom

Blackberries

**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.

Cut stump or follow-up herbicide treatments on sprouting-types 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.

**1.4 Describe overall management scheme/schedule.**

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

**Initial entry** – All tall growing vegetation will be cut and chemically treat the stumps to prevent grow-in trees. Access, right-of-way roads and structure sites are to be cut and treated.

**Subsequent entries** – A follow-up chemical foliar treatment is scheduled to begin in the spring of 2003.

**Future cycles** – Every 3-4 years, a maintenance contract will be necessary to treat sprouts. The use of herbicides on the initial and subsequent cycles should reduce the quantity and cost of work.

**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.

Landowners/Managers/Uses:

Timber Managed Lands

DNR Managed Lands

Residential property owners

**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.

Olympia will send letters to the property owners about 2 weeks prior to cutting the brush. Door to door contact will be made where it is warranted.

**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](#).

Span		Landowner/use	Specific measures to be applied
From	To		
2/3 +700	1000	Tree Nursery	Under Oly-Sat#2 line, trees are in compliance < 10' ht.
4/1 + 100	1015	T&B Agreement	The property owner will be contacted due to several trees are out of compliance. Agreement under Oly-Sat#3 & Oly-She#4
4/2 +950	4/3 +100	T&B Agreement	2 tree are out of compliance, P/O will be contacted
4/6 +75	200	Informal T&B Agreement	3 trees topped under the Oly-Sat#2 line
5/4 + 125	450	T&B Agreement	The tree heights are out of compliance with agreement P/O will be contacted.

**2.4 Review any existing landowner agreements (e.g. tree/brush Permits or Agreements). List in table above any provisions that need to be followed and where they are located.**

See handbook — [Landowner Agreements](#) for requirements.

The tree and brush agreements that are out of compliance, I will contact them regarding the trees are out of compliance. They will be given a notice as stated in the agreement when compliance is expected.

**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.

N/A

**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.

There are no tribes listed as using this portion of the easement for their historic usual and cultural use.

### 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.

EFH is essential fish habitat along streams for anadromous fish.

Span		Water body	T&E	Method	Herbicide	Application Technique	Buffer	Other
From	To							
1/2+ 150 Oly-She#1	200	Wetlands	No	Cut Stump	Garlon 3A	Spot treat w/in buffer	35' to creek	Selective Cutting
1/5+ 300 Oly-Sat#3	1300	Wetlands	No	Cut Stump	Garlon 3A	Spot treat w/in buffer	35' to creek	Selective Cutting
1/5+ 1100 Oly-Sat#3	1300	Black Lake Cr.	No	Cut Stump	Garlon 3A	Spot treat w/in buffer	35' to creek	Selective Cutting
1/9+ 1200 Oly-She#4	1400	Black Lake Cr. EFH	EFH	Cut Stump	Garlon 3A	Spot treat w/in buffer	35' to creek	Selective Cutting
2/4+ 500 Oly-Sat#3	700	Wetlands	No	Cut Stump	Garlon 3A	Spot treat w/in buffer	35' to creek	Selective Cutting
3/3+ 570 Oly-Sat#3	770	No name ck-EFH	EFH	Cut Stump	Garlon 3A	Spot treat w/in buffer	35' to creek	Selective Cutting
3/4+ 200	400	McLane Ck. EFH	EFH	Cut Stump	Garlon 3A	Spot treat w/in buffer	35' to creek	Selective Cutting
3/5+ 200	600	Wtlds/Bea ver Pond	No	Cut Stump	Garlon 3A	Spot treat w/in buffer	35' to creek	Selective Cutting
4/3+ 700	900	Swift Creek	No	Cut Stump	Garlon 3A	Spot treat w/in buffer	35' to creek	Selective Cutting
4/3+ 700 Between O-S#2 & O-Ab#1	1220	No name creek	No	Cut Stump	Garlon 3A	Spot treat w/in buffer	35' to creek	Selective Cutting
4/4+ 0 Under Oly- Sat#2	435	Wtlds/No name creek	No	Cut Stump	Garlon 3A	Spot treat w/in buffer	35' to creek	Selective Cutting

5/2+ 315 Under O-Sat#2	385	No name creek.	No	Cut Stump	Garlon 3A	Spot treat w/in buffer	35' to creek	Selective Cutting
5/2+ 650 Under O-Sat#2	850	Wetlands	No	Cut Stump	Garlon 3A	Spot treat w/in buffer	35' to creek	Selective Cutting
5/3+ 465	535	No name creek-int	No	Cut Stump	Garlon 3A	Spot treat w/in buffer	35' to creek	Selective Cutting
5/4+ 0 Lt edge of Oly-Sat#2	615	No name creek-int	No	Cut Stump	Garlon 3A	Spot treat w/in buffer	35' to creek	Selective Cutting
5/5+ 765	835	No name creek-int	No	Cut Stump	Garlon 3A	Spot treat w/in buffer	35' to creek	Selective Cutting

**3.2 If planning to use herbicides, list locations of any known irrigation source, wells, or springs (landowners maybe able to provide this info if requested).**

See Handbook — [Herbicide Use Near Irrigation, Wells or Springs](#) for buffers and herbicide restrictions.

Span		Well/irrigation/or spring	Herbicide	Buffer	Other notes/measures
From	To				
1/7 + 490	590	Well-Left of Oly-kit#3	No herbicide	164'	C, L&S vegetation
1/9+ 1400	1700	Well-Under Oly-She#4	No herbicide	164'	C&C vegetation
5/2+ 550	650	Well- Between Oly-Aber & Oly-She#2	No herbicide	164'	C, L&S vegetation
5/3+ 300	500	Well-Under Oly-Sat#2	No herbicide	164'	C, L&S vegetation

**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.

No T&E species in project area.

Span		EFH	Method/mitigation or avoidance measures
From	To		
1/5 + 1100	1300	Anadromous	No herbicide application within 100 ft. of known EFH; selective manual cutting of tall-growing vegetation within 100 ft. of known EFH which could encroach on conductor clearances before the next vegetation management cycle; and use of “practically non-toxic” to “slightly toxic” herbicide, i.e. Triclopyr BEE (Garlon 3A), between 100 and 200 ft. of known EFH. Other measures may be specified by the Natural Resource Specialist (NRS) up to 400 ft. from EFH
1/9 + 1200	1400	Anadromous	
3/3 + 570	770	Anadromous	
3/4+ 200	400	Anadromous	

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

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

N/A

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

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

N/A

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

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

Span		Describe sensitivity	Method/mitigation measures
From	To		
1/1	6/1	Cultural Sites	Chehalis tribe, Richard Bellon, Archeologist Resource Manager is not aware of any cultural sites on this transmission corridor. 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.
8/3	8/4		

**3.7 List areas with steep slopes or potential erosion areas and the measure and methods to be applied in those areas.**

See Handbook – [Steep/Unstable Slopes](#) for requirements.

N/A

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

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

N/A

**4. DETERMINE VEGETATION CONTROL METHODS**

See Handbook — [Methods](#)

**4.1 List Methods that will be used in areas not previously addressed in steps above.**

See Handbook — [Manual](#), [Mechanical](#), [Biological](#), [and Herbicides](#) for requirements for each of the methods.

See attached prescription cut sheets.

Span		Methods, including herbicide active ingredient, trade name, application technique
From	To	
1/1	6/1	For non-sensitive areas (spans) cut stump/basal treatment with 25% Garlon 4 and 75% Forest Crop Oil (FCO). 50/50 Accord or Garlon 3A/Water for stump treatment in the riparian zones Stubble treat structure sites and the right-of-way roads with 90% Water, 6% FCO, 3% Garlon 4 and 1% Tordon 22 K. Follow-up treatment, foliar application of the above chemicals as noted under stubble treatment, except for FCO is omitted and Garlon 3A replaces Garlon 4. Foliar treat Scotch broom.
8/3	8/4	

**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.

**Debris Disposal:**

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

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

**Mulch** (Mulching is a debris treatment that falls between chipping and lop-and-scatter. The debris is cut into 1-to-2-ft. lengths, scattered on the right-of-way and left to decompose. This method is used when terrain and conditions do not allow the use of mechanical chipping equipment.)

**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.

N/A

Native grasses are present on the entire right-of-way that will seed into the areas that will have lightly disturbed soil predominately located on the right-of-way roads. BPA expects 2-3 vehicles of the brush contractor and 1 contract inspector's vehicle will be present on the site. A brush machine will mulch the structure sites and right-of-way roads where Scotch Broom and Black Berries are present.

**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.**

Monitoring of the success of the brush-cutting program will begin in the spring in which evaluation of soil erosion as a result of the brush-cutting program will be made. If grass seeding is necessary, native grass seed will be applied.

**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.**

Monitoring of the effectiveness of the herbicide treatment will begin in the spring and follow up treatment of cut stump/basal or foliar treatment of target vegetation. The mixture of the product is 25% Garlon 4 and 75% FCO or 90% water, 3-5% Garlon 3A with Depo-RTU drift retardant under windy conditions.

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

Annually patrol the transmission line by the line crew and the Natural Resource Specialist will periodically monitor the right-of-way for the effectiveness of the vegetation management activities on the right-of-way and assess other resources that may have been adversely affected. BPA's vegetation maintenance activities may increase the public use of the right-of-way due to better accessibility. This may cause damage to the natural resources.

## 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”.

All proposed brush cutting and chemical treatment activities on this corridor are noted in the EIS.

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

No