

United States Government

Department of Energy
Bonneville Power Administration

memorandum

DATE: April 09, 2002

REPLY TO
ATTN OF: KEP-4

SUBJECT: Supplement Analysis for the Transmission System Vegetation Management Program FEIS
(DOE/EIS-0285/SA-56)

to: Orion Albro
Olympia Regional Manager

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

Cape Horn	North Bonneville	Stevenson
Carson	Underwood	Troutdale
Cascade Locks	Acton	Ross 345kV and J.D.
Alcoa	Sifton	St. Johns
Ostrander	McLoughlin	

Proposed by: Bonneville Power Administration (BPA).

Description of the Proposal: BPA proposes to maintain a weed-free environment in the electrical substations located within the Olympia Region's Ross District.

Description of the Proposal: BPA proposes to manage vegetation inside and around electrical substations and associated facilities. Vegetation management within the substation shall include the bare ground management of all graveled areas. These areas shall primarily be maintained with the use of herbicides. The management of vegetation outside the substation and associated facilities shall include: 1) bare ground management of perimeter roads and parking areas; 2) mechanical and/or spot herbicide control of some broadleaves and noxious weeds; 3) mowing, fertilizing, and broadleaf control of landscaped lawn areas; 4) weed control in ornamental shrub areas; and 4) areas requiring only mechanical control to manage unwanted/danger trees, grasses, and shrubs.

Analysis: Please see the attached files. Each file contains detailed checklists, drawings, aerial photographs, and topographic maps for the resources present and the mitigation measures to be applied.

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/ Elaine Stratton

Elaine Stratton

Environmental Protection Specialist - KEP-Z/992

CONCUR: /s/Thomas C. McKinney

Thomas C. McKinney

NEPA Compliance Officer

DATE: 04/26/02

Attachment

cc:

L. Croff – KEC-4

T. McKinney – KEC-4

M. Hermeston – KEP-4

J. Meyer – KEP-4

E. Stratton – KEP/Z992

J. Sharpe – KEPR-4

M. Martin – KEPR-Covington

P. Key – LC-7

M. Johnson – TF/DOB-1

D. Krauss – TFO/Olympia

S. Martin – TFO/Olympia

D. Swanson – TFOP/Ross

Environmental File – KEC

Official File – KEP-4 (EQ-14)

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	Size of Area to be Treated (Acres)	Nearest 1/4 Section Township/Range or GPS Coordinates	County	State
<p>Cape Horn Substation</p> <p>652 Canyon Creek Road Cape Horn, WA</p> <p>Olympia Region</p>	<p>Bare ground acres = 0.80</p>	<p>Latitude: 45 35 37.1209 N</p> <p>Longitude: 122 10 42.5947 W</p>	Skamania	WA

1.2 Describe vegetation needing management:

- * Bare ground management within the substation and up to 10 feet outside the substation fence.
- * Mechanical control of brush and danger trees outside the yard with some herbicide spot spraying required.

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

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

Site is bounded to the North by trees, brush and Canyon Creek Road, to the east and west by ROW with trees and brush, and to the south by a horse pasture.

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

No notifications required

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

N/A

3. IDENTIFY NATURAL RESOURCES

3.1 Water Resources

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

Columbia River is 4,599' to the South.

Three small ponds are 500 feet to the southwest.

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

No

Drainage from outfall 1 flows southwest overland approximately 580 feet to a drainage ditch along the east side of Canyon Creek road. Drainage flows through a 12" culvert to the west side of the road and flows approximately 30 feet into the first of three small ponds. Drainage from outfall 2 flows south overland approximately 875 feet to a drainage ditch along the north side of Canyon Creek Road, then passes under the road to the west side and pools.

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

Buffers are not necessary at this site.

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

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

There is a neighboring well to the south of the facility.

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

No

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

N/A - well is greater than 164' from the site.

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.

No

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

N/A.

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.

N/A

3.5 Attach drawing showing location of all required buffers.

See attached substation drawing showing locations of bare ground management.

4. DETERMINE VEGETATION CONTROL METHODS

Describe overall vegetation management scheme and schedule:

Initial:

A licensed contractor will spray bare ground areas within and around the substation as detailed in the Ross District herbicide SOW and Contract. The contract contains specific language to ensure that herbicide application is consistent with BPA's Transmission System Vegetation Management Program EIS.

BPA facility maintenance workers on occasion use mechanical control techniques and spot herbicide treatment to control broadleaf and noxious weeds outside the substation yards.

Subsequent:

Re-application will be on an as-needed basis during any particular calendar year.

Future:

Herbicides will be applied on an annual basis.

5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

Describe debris disposal and revegetation, if any.

N/A

6. DETERMINE MONITORING NEEDS

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

COTR will inspect work and evaluate for reapplications as necessary.

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.)*

No

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".

N/A

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

No

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	Size of Area to be Treated (Acres)	Nearest 1/4 Section Township/Range or GPS Coordinates	County	State
<p>Carson Substation</p> <p>391 Monaghan Road Carson, WA</p> <p>Olympia Region</p>	<p>Bare ground acres = 0.80</p>	<p>Latitude: 45 43 13.5321 N</p> <p>Longitude: 122 48 10.5504 W</p>	Skamania	WA

1.2 Describe vegetation needing management:

- ✿ Bare ground management within the substation and up to 10 feet outside the substation fence.
- ✿ Mechanical control with some spot herbicide treatment for broadleaf or noxious weed control around perimeter of the property.

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

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

Site is bounded to the North by pasture, to the west by pasture, to the south by brush, trees and pasture, and to the east by a hay field.

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

No notifications required

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

N/A

3. IDENTIFY NATURAL RESOURCES

3.1 Water Resources

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

Wind River is located 3,300' to the east.

Columbia River is located 1,980' to the southeast.

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

No.

The substation has no yard drainage. Surface runoff flows overland into drainage ditches, which surround the yard, and is directed to the southeast into a field where it pools.

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

Buffers are not necessary at this site.

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

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

None - there are no on-site or neighboring wells.

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

N/A

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

N/A

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.

Listed anadromous fish are present in the Columbia River.

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

N/A. There is no direct pathway to the Columbia River from the site.

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.

N/A

3.5 Attach drawing showing location of all required buffers.

See attached substation drawing showing locations of bare ground management.

4. DETERMINE VEGETATION CONTROL METHODS

Describe overall vegetation management scheme and schedule:

Initial:

A licensed contractor will spray bare ground areas within and around the substation as detailed in the Ross District herbicide SOW and Contract. The contract contains specific language to ensure that herbicide application is consistent with BPA's Transmission System Vegetation Management Program EIS.

BPA facility maintenance workers on occasion use mechanical control techniques and spot herbicide treatment to control broadleaf and noxious weeds outside the substation yards.

Subsequent:

Re-application will be on an as-needed basis during any particular calendar year.

Future:

Herbicides will be applied on an annual basis.

5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

Describe debris disposal and revegetation, if any.

N/A

6. DETERMINE MONITORING NEEDS

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

COTR will inspect work and evaluate for reapplications as necessary.

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.)*

No

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".

N/A

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

No

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	Size of Area to be Treated (Acres)	Nearest 1/4 Section Township/Range or GPS Coordinates	County	State
<p><i>Cascade Locks Substation</i></p> <p><i>1800 Frontage Road</i> <i>Cascade Locks, OR</i></p> <p><i>Olympia Region</i></p>	<p><i>Bare ground acres = 0.80</i></p>	<p><i>Latitude: 45 40 40.7381 N</i></p> <p><i>Longitude: 122 51 6.8231 W</i></p>	<p><i>Hood River</i></p>	<p><i>OR</i></p>

1.2 Describe vegetation needing management:

- ✿ *Bare ground management within the substation and up to 10 feet outside the substation fence.*
- ✿ *Some mechanical control and spot herbicide treatment for broadleaf and noxious weeds.*
- ✿ *Danger tree removal on the ROW will be evaluated in separate - project specific evaluations.*

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

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

Site is bounded to the north by timber and the frontage road, to the west by ROW with brush and trees and a portion of the frontage road, to the south by timer crossing to the ROW with brush and to the east by timber.

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

No notifications required

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

N/A

3. IDENTIFY NATURAL RESOURCES

3.1 Water Resources

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

Cascade Locks is located 700 feet away from the Oxbow Salmon Hatchery, 750 feet from Herman Creek, and $\frac{1}{2}$ mile south of the Columbia River.

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

No. The substation has no yard drainage.

Sheet flow off the substation yard would flow to the north along the dirt access road, then over a steeply sloped bank to an open surface drainage ditch. From this ditch, drainage flows either to the north under the frontage road into the grass median where it would pool, or to the west along the frontage road where it would pool prior to reaching the road entrance to the Salmon Hatchery.

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

Buffers are not necessary at this site.

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

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

None - there are no on-site or neighboring wells.

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

N/A

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

N/A

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.

The substation is within the Northern Spotted Owl Unit # 138. Listed anadromous fish are present in Herman Creek.

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

None. There is no direct pathway for substation drainage to reach Herman Creek. In addition, it is highly unlikely that Spotted Owls will be present within the substation boundaries where the herbicides will be applied. Only hand held or low-volume truck mounted application techniques will be used that would have very little potential for drift outside these boundaries.

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.

N/A

3.5 Attach drawing showing location of all required buffers.

See attached substation drawing showing locations of bare ground management.

4. DETERMINE VEGETATION CONTROL METHODS

Describe overall vegetation management scheme and schedule:

Initial:

A licensed contractor will spray bare ground areas within and around the substation as detailed in the Ross District herbicide SOW and Contract. The contract contains specific language to ensure that herbicide application is consistent with BPA's Transmission System Vegetation Management Program EIS.

BPA facility maintenance workers on occasion use mechanical control techniques and spot herbicide treatment to control broadleaf and noxious weeds outside the substation yards.

Subsequent:

Re-application will be on an as-needed basis during any particular calendar year.

Future:

Herbicides will be applied on an annual basis.

5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

Describe debris disposal and revegetation, if any.

N/A

6. DETERMINE MONITORING NEEDS

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

COTR will inspect work and evaluate for reapplications as necessary.

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.)*

No

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".

N/A

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

No

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	Size of Area to be Treated (Acres)	Nearest 1/4 Section Township/Range or GPS Coordinates	County	State
<p>Alcoa Substation</p> <p>5500 NW Lower River Road Vancouver, WA 98660</p> <p>Olympia Region</p>	<p>Bare ground acres = 5</p>	<p>Latitude: 45 39 5.7416 N</p> <p>Longitude: 122 43 34.7875 W</p>	<p>Clark</p>	<p>WA</p>

1.2 Describe vegetation needing management:

- ✿ Bare ground management within the substation and up to 10 feet outside the substation fence.
- ✿ Mechanical with spot herbicide application to control brush along the perimeter of the substation
- ✿ Some weed control in small landscaped area outside control house
- ✿ Some mechanical control along remainder of the property.

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

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

Site is bounded to the north by New Lower River Road and to the south and west by NW Lower River Road. These roads are raised 3' above station grade and meet to completely encircle the substation.

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

No notifications required

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

N/A

3. IDENTIFY NATURAL RESOURCES

3.1 Water Resources

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

Alcoa substation is located less than one mile from Vancouver Lake on the Columbia River Floodplain and approximately 350' from a seasonal wetland area.

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

Yes.

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

Apply 6' buffers around all catch basins or use liquid herbicides (not granular) and spray around all catch basins using hand application techniques.

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

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

None - onsite well has been properly abandoned.

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

N/A

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

N/A

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.

Listed anadromous fish are present in the Columbia River located 3,111 feet south of the site. Alcoa is within the floodplain for the River however there is no direct pathway for drainage from the site to reach the river.

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

See buffers listed in 3.1 above.

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.

N/A

3.5 Attach drawing showing location of all required buffers.

See attached substation drawing.

4. DETERMINE VEGETATION CONTROL METHODS

Describe overall vegetation management scheme and schedule:

Initial:

A licensed contractor will spray bare ground areas within and around the substation as detailed in the Ross District herbicide SOW and Contract. The contract contains specific language to ensure that herbicide application is consistent with BPA's Transmission System Vegetation Management Program EIS.

BPA facility maintenance workers on occasion use mechanical control techniques and spot herbicide treatment to control broadleaf and noxious weeds outside the substation yards.

Subsequent:

Re-application will be on an as-needed basis during any particular calendar year.

Future:

Herbicides will be applied on an annual basis.

5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

Describe debris disposal and revegetation, if any.

N/A

6. DETERMINE MONITORING NEEDS

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

COTR will inspect work and evaluate for reapplications as necessary.

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.)*

NO

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".

N/A

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

NO

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	Size of Area to be Treated (Acres)	Nearest 1/4 Section Township/Range or GPS Coordinates	County	State
<p>Ostrander Substation 16885 S. Eadon Road Oregon City, Oregon</p> <p>Olympia Region</p>	<p>Bare ground acres = 1.8</p>	<p>Latitude: 45 21 37.3040 N</p> <p>Longitude: 122 24 20.8770 W</p>	Clackamas	OR

1.2 Describe vegetation needing management:

- ✿ Bare ground management within the substation and up to 10 feet outside the substation fence.
- ✿ Mechanical and spot herbicide treatment to control broadleaf and noxious weeds outside the electric yard.
- ✿ Mechanical control of brush along the ROW entering the property.

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

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

Bordered on the North by timber, on the south by brush and trees, on the east by pasture and a small wetlands area and on the west by ROW with brush and trees.

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

No notifications required

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

N/A

3. IDENTIFY NATURAL RESOURCES

3.1 Water Resources

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

Foster Creek is 1,600' to the west.

Clackamas River is 3,000' to the east

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

All drainage from this facility flows into a ditch along the southeastern border of the yard that then drains to the east through a pipe which flows east 950', under Eadon Road, angles north for 900' then empties into a ditch which drains into the Clackamas River.

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

None needed

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

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

On-site well is 300 feet from the yard to the east.

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

No

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

None needed.

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.

Listed anadromous fish are located in Foster Creek.

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

None. There is no drainage pathway from the site to Foster Creek.

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.

N/A

3.5 Attach drawing showing location of all required buffers.

See attached substation drawing showing locations of bare ground management.

4. DETERMINE VEGETATION CONTROL METHODS

Describe overall vegetation management scheme and schedule:

Initial:

A licensed contractor will spray bare ground areas within and around the substation as detailed in the Ross District herbicide SOW and Contract. The contract contains specific language to ensure that herbicide application is consistent with BPA's Transmission System Vegetation Management Program EIS.

BPA facility maintenance workers on occasion use mechanical control techniques and spot herbicide treatment to control broadleaf and noxious weeds outside the substation yards.

Subsequent:

Re-application will be on an as-needed basis during any particular calendar year.

Future:

Herbicides will be applied on an annual basis.

5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

Describe debris disposal and revegetation, if any.

N/A

6. DETERMINE MONITORING NEEDS

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

COTR will inspect work and evaluate for reapplications as necessary.

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.)*

No

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".

N/A

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

No

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	Size of Area to be Treated (Acres)	Nearest 1/4 Section Township/Range or GPS Coordinates	County	State
<p>North Bonneville Substation</p> <p>651 E. Cascade Drive N. Bonneville, WA</p> <p>Olympia Region</p>	<p>Bare ground acres = 7.0</p>	<p>Latitude: 45 38 53.8153 N</p> <p>Longitude: 121 57 33.7913 W</p>	Skamania	WA

1.2 Describe vegetation needing management:

- ✿ Bare ground management within the substation and up to 10 feet outside the substation fence.
- ✿ Mechanical control and spot herbicide treatment outside the yard perimeter will be used to control broad leaf and noxious weed control.

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

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

Site is bounded from the northwest by ROW and the northeast by brush, to the east by brush and the slough, to the south by lawn, field and the road, and to the west by the Annex, ROW and timber.

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

No notifications required.

One individual living in North Bonneville is registered on the Department of Agriculture's list of pesticide sensitive individuals (case # 23). However, the individual resides greater than ½ mile from the North Bonneville substation and across highway 14.

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

N/A

3. IDENTIFY NATURAL RESOURCES

3.1 Water Resources

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

Greenleaf Slough is 150' to the east.

The Columbia River is 1,189' to the south.

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

Main yard drainage ties into a singular run of 15" concrete pipe located along the northeastern border of the yard. The run is equipped with a sensor vault with an oil stop valve. Drainage from the oil stop valve flows to outfall 1 which daylights approx 12 feet from Greenleaf Slough.

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

Cover all catch basins prior to spraying and use only herbicides labeled as practically non-toxic or slightly toxic to aquatic species.

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

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

On-site well has been properly abandoned.

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

N/A

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

N/A

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.

Listed anadromous fish are present in Greenleaf Slough

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

See buffers listed in 3.1 above

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.

N/A

3.5 Attach drawing showing location of all required buffers.

See attached substation drawing showing locations of bare ground management.

4. DETERMINE VEGETATION CONTROL METHODS

Describe overall vegetation management scheme and schedule:

Initial:

A licensed contractor will spray bare ground areas within and around the substation as detailed in the Ross District herbicide SOW and Contract. The contract contains specific language to ensure that herbicide application is consistent with BPA's Transmission System Vegetation Management Program EIS.

BPA facility maintenance workers on occasion use mechanical control techniques and spot herbicide treatment to control broadleaf and noxious weeds outside the substation yards.

Subsequent:

Re-application will be on an as-needed basis during any particular calendar year.

Future:

Herbicides will be applied on an annual basis.

5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

Describe debris disposal and revegetation, if any.

N/A

6. DETERMINE MONITORING NEEDS

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

COTR will inspect work and evaluate for reapplications as necessary.

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.)*

No

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".

N/A

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

No

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	Size of Area To be Treated (Acres)	Nearest 1/4 Section Township/Range or GPS Coordinates	County	State
<p>Underwood Substation 331 Newell Road Underwood, WA Olympia Region</p>	<p>Bare ground acres = 0.38</p>	<p>Latitude: 45 44 35.7496 N Longitude: 121 32 32.2485 W</p>	<p>Skamania</p>	<p>WA</p>

1.2 Describe vegetation needing management:

- ✿ Bare ground management within the substation and up to 10 feet outside the substation fence.
- ✿ Mechanical control and spot herbicide treatment for broadleaf and noxious weeds outside the electric yard.
- ✿ Some mechanical control of brush and danger trees on the ROW entering the property.

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

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

North is ROW with trees and brush.
South is a residence.
East is a vineyard bordered by a pasture.
West is Newell Road, timber and brush

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

Adjacent landowner with vineyard should be notified prior to spraying.

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

N/A

3. IDENTIFY NATURAL RESOURCES

3.1 Water Resources

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

White Salmon Creek - 3,830 feet

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

No

There is no subsurface drainage piping at this site. Perimeter drainage ditches flow into grassy pooling areas.

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

No buffers needed.

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

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

No neighboring wells within 164 feet.

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

No.

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

N/A.

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.

No

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

N/A.

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.

N/A

3.5 Attach drawing showing location of all required buffers.

See attached substation drawing showing locations of bare ground management.

4. DETERMINE VEGETATION CONTROL METHODS

Describe overall vegetation management scheme and schedule:

Initial:

A licensed contractor will spray bare ground areas within and around the substation as detailed in the Ross District herbicide SOW and Contract. The contract contains specific language to ensure that herbicide application is consistent with BPA's Transmission System Vegetation Management Program EIS.

BPA facility maintenance workers on occasion use mechanical control techniques and spot herbicide treatment to control broadleaf and noxious weeds outside the substation yards.

Subsequent:

Re-application will be on an as-needed basis during any particular calendar year.

Future:

Herbicides will be applied on an annual basis.

5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

Describe debris disposal and revegetation, if any.

N/A

6. DETERMINE MONITORING NEEDS

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

COTR will inspect work and evaluate for reapplications as necessary.

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.)*

No

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".

N/A

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

No

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	Size of Area to be Treated (Acres)	Nearest 1/4 Section Township/Range or GPS Coordinates	County	State
<p>Acton Substation 100 Old Columbia River Hwy Cascade Locks, Or Olympia Region</p>	<p>Bare ground - 0.25</p>	<p>Lat: 45 38 8.8325 N Long: 121 56 34.9924 W</p>	<p>Multnomah</p>	<p>OR</p>

1.2 Describe vegetation needing management:

- ✿ Bare ground management within the substation and up to 10 feet outside the substation fence.
- ✿ Mechanical control and spot herbicide application for danger tree and brush control in adjacent ROW. ROW herbicide application will be covered in separate checklists as appropriate to specific projects.

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

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

Facility is bounded on the North by I-84; to the South is ROW with timber and brush, the east and west are bounded by timber.

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

No notifications are required.

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

None

3. IDENTIFY NATURAL RESOURCES

3.1 Water Resources

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

Tanner creek is located 3,500 feet southwest of the facility
The Columbia River is 1,000 feet north of the facility.

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

No direct pathway to water:

Acton substation has a containment system, which utilizes a geomembrane liner, oil storage vault, and 6-inch float type oil stop valve. Yard drainage flows from containment to a pooling area west of the substation. If the pooling area were to overflow then drainage would flow 500 feet downhill along the west entrance road to another pooling area. If this pooling area also overflowed then drainage would flow another 500 feet across the dirt entrance road and a depression to the northwest, over an embankment and along side the on ramp to I-84. Drainage would then flow west along the on-ramp another 1,800 feet to a culvert passing under the entrance road then another 700 feet to Tanner Creek.

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

Buffers are not necessary at this site.

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

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

None

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

N/A

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

N/A

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.

None

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

N/A

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.

N/A

3.5 Attach drawing showing location of all required buffers.

See Attachment showing area requiring bare ground management.

4. DETERMINE VEGETATION CONTROL METHODS

Describe overall vegetation management scheme and schedule:

Initial:

A licensed contractor will spray bare ground areas within and around the substation as detailed in the Ross District herbicide SOW and Contract. The contract contains specific language to ensure that herbicide application is consistent with BPA's Transmission System Vegetation Management Program EIS.

BPA facility maintenance workers on occasion use mechanical control techniques and spot herbicide treatment to control broadleaf and noxious weeds outside the substation yards.

Subsequent:

Re-application will be on an as-needed basis during any particular calendar year.

Future:

Herbicides will be applied on an annual basis.

5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

Describe debris disposal and revegetation, if any.

N/A

6. DETERMINE MONITORING NEEDS

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

COTR will inspect work and evaluate for re-applications as necessary.

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.)*

No

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".

N/A

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

NO

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	Size of Area To be Treated (Acres)	Nearest 1/4 Section Township/Range or GPS Coordinates	County	State
Sifton Substation NE 39 th Street Vancouver, WA Olympia Region	Bare ground acres = 5.8	Latitude: 45 39 13.3044 N Longitude: 122 29 56.1461 W	Clark	WA

1.2 Describe vegetation needing management:

- ✿ Bare ground management within the substation and up to 10 feet outside the substation fence.
- ✿ Mechanical control and spot herbicide treatment of broadleaf and noxious weeds outside the electric yard.
- ✿ Some mechanical control of danger trees and brush along ROW entering the property.

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

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

Site is bounded to the North by ROW covered mainly with brush, to the south with ROW covered with brush, to the east by a residential area and to the west by agricultural lands.

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

No notifications required

Two individuals in the Vancouver area are registered on the Department of Agriculture's list of pesticide sensitive individuals (case # 148 and case # 156). However, each resides greater than $\frac{1}{2}$ mile from the substation.

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

N/A

3. IDENTIFY NATURAL RESOURCES

3.1 Water Resources

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

Spring Branch Creek is 2,200' to the Northeast.

Lacamas Creek is 5,000' to the Southeast.

A reservoir is 750' to the Northeast.

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

No

The substation is located approximately 3,000 feet to the southeast of a drainage basin, which feeds into Spring Branch Creek flowing into LaCamas Creek then on to LaCamas Lake, which is approximately 3 miles away.

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

None needed

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

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

On-site well has been properly abandoned.

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

No

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

None needed.

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.

No

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

N/A

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.

N/A

3.5 Attach drawing showing location of all required buffers.

See attached substation drawing showing locations of bare ground management.

4. DETERMINE VEGETATION CONTROL METHODS

Describe overall vegetation management scheme and schedule:

Initial:

A licensed contractor will spray bare ground areas within and around the substation as detailed in the Ross District herbicide SOW and Contract. The contract contains specific language to ensure that herbicide application is consistent with BPA's Transmission System Vegetation Management Program EIS.

BPA facility maintenance workers on occasion use mechanical control techniques and spot herbicide treatment to control broadleaf and noxious weeds outside the substation yards.

Subsequent:

Re-application will be on an as-needed basis during any particular calendar year.

Future:

Herbicides will be applied on an annual basis.

5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

Describe debris disposal and revegetation, if any.

N/A

6. DETERMINE MONITORING NEEDS

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

COTR will inspect work and evaluate for reapplications as necessary.

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.)*

No

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".

N/A

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

No

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	Size of Area to be Treated (Acres)	Nearest 1/4 Section Township/Range or GPS Coordinates	County	State
<p>McLoughlin Substation</p> <p>14889 Maplelane Road Oregon City, OR</p> <p>Olympia Region</p>	<p>Bare ground acres = 0.30</p>	<p>Latitude: 45 20 16.2635 N</p> <p>Longitude: 122 33 25.9198 W</p>	Clackamas	OR

1.2 Describe vegetation needing management:

- ✿ Bare ground management within the substation and up to 10 feet outside the substation fence.
- ✿ Some mechanical control and spot herbicide treatment for broadleaf and noxious weed control along the perimeter of the property.

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

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

Site is bounded to the South by Maplelane Road and on all other sides by the Customer substation owned by Portland General Electric Co.

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

No notifications required

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

N/A

3. IDENTIFY NATURAL RESOURCES

3.1 Water Resources

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

Pond 900' to the NE

Pond 1,725' to the NE

Abernathy Creek 3,125' to the NE

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

No

Site contains a partial drainage system. Drainage leaving the BPA property travels east overland approximately 120' across PGE property to outfall 1. From this outfall drainage enters a ditch along S. Waldow Road and flows north 375' to a pipe under the road. Drainage continues northeast across the adjacent farmland 525' to a small pond. This pond drains northeast 825' to another small pond, which drains northeast 1500' to Abernathy Creek.

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

Buffers are not necessary at this site.

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

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

None

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

N/A

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

N/A

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.

No

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

N/A.

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.

N/A

3.5 Attach drawing showing location of all required buffers.

See attached substation drawing showing locations of bare ground management.

4. DETERMINE VEGETATION CONTROL METHODS

Describe overall vegetation management scheme and schedule:

Initial:

A licensed contractor will spray bare ground areas within and around the substation as detailed in the Ross District herbicide SOW and Contract. The contract contains specific language to ensure that herbicide application is consistent with BPA's Transmission System Vegetation Management Program EIS.

BPA facility maintenance workers on occasion use mechanical control techniques and spot herbicide treatment to control broadleaf and noxious weeds outside the substation yards.

Subsequent:

Re-application will be on an as-needed basis during any particular calendar year.

Future:

Herbicides will be applied on an annual basis.

5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

Describe debris disposal and revegetation, if any.

N/A

6. DETERMINE MONITORING NEEDS

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

COTR will inspect work and evaluate for reapplications as necessary.

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.)*

No

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".

N/A

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

No

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	Size of Area To be Treated (Acres)	Nearest 1/4 Section Township/Range or GPS Coordinates	County	State
Stevenson Substation 1 Maple Way Stevenson, WA Olympia Region	Bare ground acres = 0.5	Latitude: 45 42 29.0460 N Longitude: 121 53 35.5676 W	Skamania	WA

1.2 Describe vegetation needing management:

- ✿ Bare ground management within the substation and up to 10 feet outside the substation fence.
- ✿ Mechanical control and spot herbicide treatment of broadleaf and noxious weeds outside the electric yard.

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

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

Site is bounded to the North by timber, to the south by a residence with timber, to the east and west by ROW with brush.

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

No notifications required

There are two individuals living in the Stevenson area that have registered on the Department of Agriculture's list of pesticide sensitive individuals (case # 143 and case #254). However, each resides more than ½ mile from the Stevenson substation.

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

N/A

3. IDENTIFY NATURAL RESOURCES

3.1 Water Resources

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

Seasonal Spring - 800 feet to the south.
Rock Creek - 3,366 feet to the southwest.
Kanaka Creek - 1,500 feet to the east
Small Pond - 1,555 feet to the southeast.
Columbia River - 1.5 miles south.

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

Drainage from the site empties into a drainage ditch which flows to a pipe running under the entrance road then enters a gully and flows 800 feet to a culvert under a residents driveway along Maple way then flows to the south approximately 750 feet to a small pond. There is no direct route to the Columbia River, Rock Creek or Kanaka Creek.

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

None needed

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

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

None.

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

No

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

None needed.

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.

No

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

N/A

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.

N/A

3.5 Attach drawing showing location of all required buffers.

See attached substation drawing showing locations of bare ground management.

4. DETERMINE VEGETATION CONTROL METHODS

Describe overall vegetation management scheme and schedule:

Initial:

A licensed contractor will spray bare ground areas within and around the substation as detailed in the Ross District herbicide SOW and Contract. The contract contains specific language to ensure that herbicide application is consistent with BPA's Transmission System Vegetation Management Program EIS.

BPA facility maintenance workers on occasion use mechanical control techniques and spot herbicide treatment to control broadleaf and noxious weeds outside the substation yards.

Subsequent:

Re-application will be on an as-needed basis during any particular calendar year.

Future:

Herbicides will be applied on an annual basis.

5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

Describe debris disposal and revegetation, if any.

N/A

6. DETERMINE MONITORING NEEDS

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

COTR will inspect work and evaluate for reapplications as necessary.

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.)*

No

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".

N/A

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

No

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	Size of Area To be Treated (Acres)	Nearest 1/4 Section Township/Range or GPS Coordinates	County	State
Troutdale Substation 5200 Reynolds Road Troutdale, OR 97060 Olympia Region	Bare ground acres = 13.0	Latitude: 45 33 29.8086 N Longitude: 122 23 55.2943 W	Multnomah	OR

1.2 Describe vegetation needing management:

- ✿ Bare ground management within the substation and up to 10 feet outside the substation fence.
- ✿ Mechanical control and spot herbicide treatment of broadleaf and noxious weeds outside the electric yard.
- ✿ Landscaped lawn requiring fertilizer and broadleaf control
- ✿ Ornamental shrubs requiring weed control in bark mulch

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

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

East of the facility is the Reynolds parking area, condenser building and horizontal storage tanks, south of the facility is the Reynolds Metals Plant, to the north of the main yard up to Reynolds road is a grassy field sloping down to a drainage ditch and across Reynolds road is an open field and the dike for Company Lake. To the west of the facility the substation yard slopes down to meet a grassy field leading to drainage ditch along Sundial Road. Across Sundial Road are two Pacific Corp substations.

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

No notifications required

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

N/A

3. IDENTIFY NATURAL RESOURCES

3.1 Water Resources

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

Columbia river - 2,735 feet north

Company Lake - 600 feet north

Salmon Creek 1,000 feet southwest.

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

No

The facility has an extensive oil containment system including membrane liners incorporating oil stop vales and an oil containment pond. Drainage to the west of the facility flows into a ditch, which flows 1,000 feet before entering Salmon Creek. Salmon Creek flows west to Campbell Road and then into the Columbia River.

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

No buffers needed.

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

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

One on-site well abandoned in 1997. One on-site well is still active (depth 287 feet, static water level 36 feet).

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

Potential conduit.

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

Apply buffer around well of 164 feet if using SW Advisory herbicides or 50 feet for all other herbicides.

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.

No

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

NA.

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.

N/A

3.5 Attach drawing showing location of all required buffers.

See attached substation drawing showing locations of bare ground management.

4. DETERMINE VEGETATION CONTROL METHODS

Describe overall vegetation management scheme and schedule:

Initial:

A licensed contractor will spray bare ground areas within and around the substation as detailed in the Ross District herbicide SOW and Contract. The contract contains specific language to ensure that herbicide application is consistent with BPA's Transmission System Vegetation Management Program EIS.

BPA facility maintenance workers on occasion use mechanical control techniques and spot herbicide treatment to control broadleaf and noxious weeds outside the substation yards.

Subsequent:

Re-application will be on an as-needed basis during any particular calendar year.

Future:

Herbicides will be applied on an annual basis.

5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

Describe debris disposal and revegetation, if any.

NA

6. DETERMINE MONITORING NEEDS

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

COTR will inspect work and evaluate for reapplications as necessary.

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.)*

No

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".

N/A

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

No

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	Size of Area to be Treated (Acres)	Nearest 1/4 Section Township/Range or GPS Coordinates	County	State
Ross, JD and 345 kV Substations 5411 NE Hwy 99 Vancouver, WA 98666 Olympia Region	Bare ground acres = 16.50	Latitude: 45 39 41.8774 N Longitude: 122 39 29.2256 W	Clark	WA

1.2 Describe vegetation needing management:

Substation

- ✱ Bare ground management within the substation and up to 10 feet outside the substation fence.

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

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

JD Ross is bounded to the North by a grassy slope leading to North Road within the Complex, to the South by Ross Street, to the east by the Complex on 15th Ave and to the east by the Dittmer District on the Complex. The 345 kV yard is bounded to the North by Ross Street, to the South by a field owned by Bonneville, to the East by a residential neighborhood and to the west by 15th Ave.

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

No notifications required

Two individuals in the Vancouver area are registered on the Department of Agriculture's list of pesticide sensitive individuals (case # 148 and case # 156). However, each resides greater than ½ mile from the substation.

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

N/A

3. IDENTIFY NATURAL RESOURCES

3.1 Water Resources

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

Burnt Bridge Creek 1,500 to the SW.

Cold Creek - 300' to the North.

Vancouver Lake - 2 miles West.

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

Drainage from the 230/115 kV yard flows off-site to an oil/water separator located 330' southeast of the Dittmer building. Drainage from the separator ties into a pipe carrying Burnt Bridge Creek west under Hwy 99.

Drainage from the 345 kV yard enters a ditch that runs south along NE 15th Ave, to a pipe running under the road which empties into a ditch that empties into a grass field where it pools.

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

No buffers needed in the 345 kV yard.

In the 230/115 kV yard apply 6' buffers around the catch basins or use liquid herbicides (no granular) and spray around all catch basins using hand application techniques.

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

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

None

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

No

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

None needed.

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.

No

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

N/A

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.

N/A

3.5 Attach drawing showing location of all required buffers.

See attached substation drawing showing locations of bare ground management.

4. DETERMINE VEGETATION CONTROL METHODS

Describe overall vegetation management scheme and schedule:

Initial:

A licensed contractor will spray bare ground areas within and around the substation as detailed in the Ross District herbicide SOW and Contract. The contract contains specific language to ensure that herbicide application is consistent with BPA's Transmission System Vegetation Management Program EIS.

Subsequent:

Re-application will be on an as-needed basis during any particular calendar year.

Future:

Herbicides will be applied on an annual basis.

5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

Describe debris disposal and revegetation, if any.

N/A

6. DETERMINE MONITORING NEEDS

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

COTR will inspect work and evaluate for reapplications as necessary.

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.)*

No

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".

N/A

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

No

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	Size of Area to be Treated (Acres or Square Feet)	Nearest 1/4 Section Township/Range or GPS Coordinates	County	State
<p>St Johns Substation 12567 N Columbia Blvd Portland, OR 97203</p> <p>Olympia Region</p>	<p>Bare ground acres = 5.80</p>	<p>Latitude: 45 36 50.6566 N</p> <p>Longitude: 122 45 48.9438 W</p>	Multnomah	OR

1.2 Describe vegetation needing management:

- ✿ Bare ground management within the substation and up to 10 feet outside the substation fence.
- ✿ Mechanical control and spot herbicide treatment of broadleaf and noxious weeds.
- ✿ Mechanical control of brush and danger trees along the ROW entering the property.

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

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

Site is bounded on the north by Bonneville Pond and railroad tracks, to the south by N. Burgard Road and industrial sites, to the east by N. Columbia Blvd and industrial sites, and to the west by industrial sites and a small patch of trees.

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

No notifications required

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

N/A

3. IDENTIFY NATURAL RESOURCES

3.1 Water Resources

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

Bonneville Pond- 180 feet north.

Columbia Slough - 800 feet Northeast

Willamette River - 4,849 feet west.

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

Yes

Site drainage outfalls via outfall 1 to the pond and associated wetlands area 180 feet to the north.

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

Apply 6-foot buffers around catch basins or use liquid herbicides (no granular) and spray around all catch basins using hand application techniques.

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

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

On-site well was abandoned in 1997.

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

No

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

None needed.

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.

Listed anadromous fish are present in Columbia Slough

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

See buffers in 3.1 above.

Burgard Road curves north and passes the substation on the eastern boundary creating a boundary between the Columbia Slough and the pond/wetland area north

of the substation. This pond is fed by infiltration from the Columbia Slough but there are no inlets or outlets except by natural infiltration.

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.

N/A

3.5 Attach drawing showing location of all required buffers.

See attached substation drawing showing locations of bare ground management.

4. DETERMINE VEGETATION CONTROL METHODS

Describe overall vegetation management scheme and schedule:

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Future:

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5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

Describe debris disposal and revegetation, if any.

N/A

6. DETERMINE MONITORING NEEDS

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

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N/A

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

No