



## Department of Energy

Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208-3621

January 30, 2002

### **To: People Interested in the Santiam-Bethel Transmission Line Project**

In September 2001, Bonneville Power Administration (BPA) prepared a Preliminary Environmental Assessment (EA) for the Santiam-Bethel Transmission Line Project. You were on our mailing list to receive a copy. Since only two comments were received and only minor changes were needed on the Preliminary EA, it will serve as the Final EA and a separate document will not be issued. An errata sheet listing seven changes, a Finding of No Significant Impact, and a Mitigation Action Plan have been prepared and are enclosed.

**Additional Copies:** If you would like a copy of the EA, or additional copies of the enclosed errata sheet, Finding of No Significant Impact, and/or Mitigation Action Plan, please call our toll-free document request line: 1-800-622-4520. Leave a message naming this project and the documents you wish and giving your complete mailing address. They are also available at our website: [www.efw.bpa.gov](http://www.efw.bpa.gov).

**Proposal:** BPA proposes to rebuild the first 17 miles of the Santiam-Chemawa transmission line from Santiam Substation to the line's connection to Portland General Electric's Bethel Substation to improve transmission system reliability in the Salem area of northwestern Oregon. BPA would replace the existing single-circuit 230-kilovolt line with towers that could support two circuits (double-circuit) in the existing right-of-way. The existing line supplies both Bethel Substation and BPA's Chemawa Substation. The new lines would eliminate overloading of the existing line from Santiam Substation to the tap to Bethel Substation by having one new line supply Bethel Substation and the other new line supply Chemawa Substation.

**For More Information:** If you need more information or have any questions, please call me at my direct number, 503-230-3469, or toll-free at 1-800-282-3713; or e-mail me at [tklevesque@bpa.gov](mailto:tklevesque@bpa.gov). Thank you for your interest in our work.

*/s/ Tish Levesque*

Tish Levesque  
Environmental Project Manager

- 3 Enclosures:
1. Errata Sheet
  2. Finding of No Significant Impact
  3. Mitigation Action Plan

**ERRATA SHEET FOR  
SANTIAM-BETHEL TRANSMISSION LINE PROJECT  
FINAL ENVIRONMENTAL ASSESSMENT  
DOE/EA-1366**

January 28, 2002

This errata sheet documents the changes to be incorporated into the Preliminary EA named above. With these changes, the Preliminary EA will serve as the Final EA.

1. Add the following sections to the Table of Contents – “4.5.1 Coastal Zone Management Act Consistency,” “4.5.2 Oregon State Law,” “4.5.3 Linn County Comprehensive Plans and Development Code,” and “4.5.4 Marion County Comprehensive Plans and Ordinances.”
2. Section 3.7.6, page 26 – Add the following sentence after the first sentence of the second paragraph. “No construction activities would occur within 75 feet of surface waters if practicable.”
3. Section 3.7.6, page 26 – Under the paragraph that begins “To avoid the delivery...,” change the third sentence of the second bullet to read: “In areas where towers are adjacent to waterways (miles 3, 5, 7, 8, 9, 10, 11, 12, and 14), special erosion...”
4. Section 3.10.5, page 31 – Add the following bullet after the first bullet: “Refueling of vehicles would occur at least 400 feet from surface waters.”
5. Section 4.5, Page 43 – Add a new section entitled “4.5.1 Coastal Zone Management Act Consistency” under Section 4.5 State, Areawide, and Local Plan and Program Consistency. Move the first sentence that begins “This project does not fall...” to follow the new 4.5.1. Coastal Zone Management Act Consistency section.
6. Section 4.5, Page 43 – Leave the remainder of the paragraph under Section 4.5 as the first paragraph under Section 4.5 State, Areawide, and Local Plan and Program Consistency.
7. Section 4.5, Page 43 – Add the following new sections after Section 4.5.1 Coastal Zone Management Act Consistency.

4.5.2 Oregon State Law

Statewide Planning Goal 11: Public Facilities and Services

The proposed project complies with Goal 11 of Oregon's Statewide Planning Goals. Section A(6) of Goal 11's Planning Guidelines states: "All utility lines and facilities should be located on or adjacent to existing public or private rights-of-way to avoid dividing existing farm units." The proposed project would be constructed entirely in an existing ROW. The footprint of the transmission towers would not change, except in one location where 3 new poles would be installed to facilitate crossing under other existing utilities.

Section B(4) of the Goals' Implementation Guidelines states: "Plans should designate sites of power generation and the location of electric transmission lines in areas intended to support desired levels of urban and rural development." The proposed project is essential to maintaining reliable electrical services in the Salem area.

#### Oregon Administrative Rules

The following provisions of the Oregon Administrative Rules (OAR) are applicable to the proposed project.

OAR 345-024-0090 Siting Standards for Transmission Lines, states that the design, construction, and operation of transmission lines do not exceed 9-kV per meter at one meter above the ground in areas accessible to the public and that induced currents from the transmission line be as low as reasonably possible.

The proposed project would add a line to an existing 230-kV transmission line that runs between Santiam Substation and PGE's Bethel Substation. The existing line and towers would be removed and new towers would be built to accommodate two 230-kV lines. The same standards for the existing transmission line would be met with the new line; therefore, as proposed the project is consistent with OAR 345-024-0090.

OAR 345-022-0000 General Standards for Siting Non-Nuclear Facilities, states that the facility complies with the requirements of the Oregon Energy Facility Siting statutes and that the overall public benefits of the facility outweigh the damage to the resources protected by the standards. As proposed, the project is consistent with OAR 345-022-0000.

#### 4.5.3 Linn County Comprehensive Plans and Development Code

Linn County's Comprehensive Plan contains the following policies that are applicable to the proposed project:

Utility services should be coordinated with other key facilities and services in order to reduce total development costs. This should

include full utilization of easements and rights-of-way in order to reduce total costs and visual impacts.

According to Linn County's Land Development Code, non-dwelling, non-soil dependent uses are permitted in the EFU zoning district through a Type IIA conditional use review, including the utility facilities necessary for public service, except commercial facilities for the purpose of generating power for public use by sale (928.320 (B) (5)).

Given that the proposed project is not a change to a pre-existing use, no land use reviews would be required by Linn County Planning and Building Department, and the proposed project is consistent with the Linn County Land Development Code (Wheeldon, June 6, 2001).

#### 4.5.4 Marion County Comprehensive Plans and Ordinances

The Marion County Comprehensive Plan does not have any policies that directly address utilities; however, it does contain the following energy policies that are applicable to the proposed project:

- Future development should progress in the most energy efficient manner possible.
- It is the intent of the County to encourage conservation of present energy sources and the use and development of alternative sources.
- Plans for the development of new transportation facilities and the improvement of present facilities should be designed to achieve the most energy efficient system possible.
- Public facility planning provides the framework for future urban growth. It is essential that energy consumption and recycling be considered in determining the type, location, and delivery of public facilities and services.
- Industry is a primary consumer of energy, and land use planning should serve to direct the type, design and location of industrial development in the most energy efficient manner possible.

Within Marion County, the proposed project would be located entirely in the Exclusive Farm Use (EFU) zone. Within the EFU zone, the Marion County Zoning Code 136.040, *Uses Permitted Subject to Standards – Other Uses*, applies:

Utility facilities necessary for public service, except commercial facilities for the purpose of generating power for public use by sale

and transmission towers over 200 feet in height. A facility is “necessary” if it must be situated in the EFU zone in order for the service to be provided.

Since the project is an existing use and the transmission towers would not exceed 200 feet, no land use reviews would be required by Marion County and the proposed project is consistent with the Marion County Zoning Code (Fennimore, June 8, 2001).

Department of Energy  
Bonneville Power Administration

SANTIAM-BETHEL TRANSMISSION LINE PROJECT

Finding of No Significant Impact (FONSI)  
and Floodplain Statement of Findings

**Summary:** Bonneville Power Administration (BPA) proposes to rebuild the first 17 miles of the Santiam-Chemawa transmission line from Santiam Substation to the line's connection (tap) to Portland General Electric's (PGE) Bethel Substation to improve transmission system reliability in the Salem area of northwestern Oregon. BPA would replace the existing single-circuit 230-kilovolt (kV) line with towers that could support two circuits (double-circuit) in the existing right-of-way. The existing line supplies both Bethel Substation and BPA's Chemawa Substation. The new lines would eliminate overloading of the existing line from Santiam Substation to the tap to Bethel Substation by having one new line supply Bethel Substation and the other new line supply Chemawa Substation.

BPA has prepared an Environmental Assessment (DOE/EA-1366) evaluating the proposed project. Based on the analysis in the EA, BPA has determined that the Proposed Action is not a major Federal action significantly affecting the quality of the human environment, within the meaning of the National Environmental Policy Act (NEPA) of 1969. Therefore, the preparation of an Environmental Impact Statement (EIS) is not required and BPA is issuing this FONSI. A Floodplain Statement of Findings is also included.

**Copies:** For copies of this FONSI and/or the EA, call BPA's toll-free document request line at 1-800-622-4520, and record your name, address, project name, and the document(s) you wish. The documents are also on the Internet at [www.efw.bpa.gov/cgi-bin/PSA/NEPA/SUMMARIES/SantiamBethel](http://www.efw.bpa.gov/cgi-bin/PSA/NEPA/SUMMARIES/SantiamBethel).

**For Further Information Contact:** Tish Levesque – KEC-4, Bonneville Power Administration, P.O. Box 3621, Portland, Oregon, 97208-3621; phone number 503-230-3469; fax number 503-230-5699; e-mail [tklevesque@bpa.gov](mailto:tklevesque@bpa.gov).

**Supplementary Information:** BPA's existing Santiam-Chemawa No.1 230-kV transmission line is about 25 miles long and is located in Linn and Marion counties in Oregon. BPA is proposing to rebuild the first 17 miles of the Santiam-Chemawa transmission line from Santiam Substation to the tap to PGE's Bethel Substation. BPA's Santiam-Chemawa No.1 transmission line serves BPA customers that in turn serve communities in the Willamette Valley. This line provides voltage support and also backs up BPA's 500-kV transmission system in case one of BPA's 500-kV lines or substations goes out of service.

The existing BPA Santiam-Chemawa 230-kV transmission line is at risk of overloading during peak winter electrical power usage (maximum demand). During normal and extreme winter peak load conditions, outages on BPA's 500-kV or 230-kV transmission grid in the area could

cause the Santiam Substation to Bethel Substation section of the Santiam-Chemawa line to overload. For example, an outage of BPA's Pearl-Marion No.1 500-kV line during extreme cold winter peak load conditions could cause the line to overload. During normal winter peak load conditions, an outage of BPA's Santiam-Albany No.1 230-kV line or an outage of BPA's Albany 230/115-kV transformer would also overload the line.

An overload could damage electrical equipment sensitive to power fluctuations. An overload could cause the line to sag too close to the ground, which could harm people or property under the line. In addition, an overload could cause switches on the Santiam-Chemawa line to automatically take the line out of service, which could create blackouts in the Salem area. Overloading the line could also cause permanent damage to the conductor and BPA would be required to remove the line from service. Removing the line from service could curtail electrical power in the area. BPA needs to improve system reliability by rebuilding the Santiam-Chemawa line to a double-circuit line.

Low, minor, short-term, or temporary impacts from construction of the Proposed Action would occur to the following resources: fish and wildlife, soils, water quality, land use, socioeconomics, visual resources, and vegetation resources. Though noise would disturb wildlife close to the construction area, wildlife would most likely return after the disturbance is removed. Although unlikely, construction may create indirect or temporary increases in soil erosion to streams near the right-of-way, which could affect water quality and fish habitat. Mitigation measures would be used to prevent erosion. Potential impacts would diminish after disturbed areas are restored and erosion and runoff control measures take effect. Construction related noise, dust, traffic disruption, and crop harvest disruption would also temporarily disturb human populations. Spending in the local community and an increase in employment would be short-term but beneficial. Minor visual impacts may occur from construction activities in certain locations along the right-of-way. The new towers would be taller than the existing towers. Noxious weeds could grow in the right-of-way as the ground surface and vegetation are disturbed during construction. Radio and television interference from the new line could occur temporarily, but BPA would promptly correct all interference.

A biological assessment (BA) was prepared to evaluate the potential effect of the project on the bald eagle, northern spotted owl, Fender's blue butterfly, the Upper Willamette River chinook salmon ESU, the Upper Willamette River steelhead ESU, Oregon chub, Nelson's checker-mallow, Bradshaw's lomatium, Willamette daisy, golden Indian paintbrush, water Howellia, and Kincaid's lupine. Based on a review of the latest federal threatened and endangered species lists, review of habitat requirements, and use of project mitigation measures proposed in the BA and the EA, it is BPA's opinion that the proposed project "may affect but is not likely to adversely affect" all the listed species that may be present in the project area except the northern spotted owl. It is BPA's opinion that the proposed project would have "no effect" on the northern spotted owl. The National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) concurred with these findings.

Background research indicated that no prehistoric or historic-period archaeological sites have been recorded within a one-mile radius of any tower locations or right-of-way along the 17-mile portion of line to be rebuilt. As part of the field study 90 discrete areas were surveyed and 33 areas were

investigated using shovel test probes. No archaeological materials were observed on the ground surface at any of the tower locations or within the right-of-way between the towers. One prehistoric artifact was recovered from a total of 34 shovel test probes excavated along the 17-mile portion of right-of-way. Artifact isolates are not recognized as sites by the Oregon State Historic Preservation Officer (SHPO) and the single prehistoric artifact does not represent a cultural resource potentially eligible for listing in the National Register of Historic Places. It is BPA's opinion that the proposed project would have no effect on cultural resources. The Oregon SHPO concurred with these findings. During review of the Preliminary EA, the Confederated Tribes of Grand Ronde discussed with BPA the presence of areas of cultural sensitivity in the project vicinity. To ensure protection of the culturally-sensitive areas, a member of the Tribe would be present during construction activities at those sites.

No impacts are expected to wetland and floodplains, and public health and safety.

BPA also studied the No Action Alternative. For the No Action Alternative, BPA would not rebuild the Santiam-Chemawa transmission line. As a result, normal and extreme cold winter load conditions could cause thermal overloading of existing facilities.

The Proposed Action would not violate Federal, State, or local law or requirements imposed for protection of the environment. All applicable permits would be obtained.

***Floodplain Statement of Findings:*** This is a Floodplain Statement of Findings prepared in accordance with 10 C.F.R. Part 1022. A Notice of Floodplain and Wetlands Involvement was published in the Federal Register on May 11, 2001, and a floodplain and wetlands assessment was incorporated in the EA. BPA is proposing to rebuild its existing Santiam-Chemawa No.1 230-kV line in the existing right-of-way that crosses the 100-year floodplains of the North Santiam River and a tributary to the Pudding River. No impacts to the floodplains would occur because no construction activities would occur within the floodplains, and their floodplain characteristics would not be altered. The Proposed Action conforms to applicable State or local floodplain protection standards.

BPA will allow 15 days of public review after publication of this statement of findings before implementing the Proposed Action.

***Determination:*** Based on the information in the EA, as summarized here, BPA determines that the Proposed Action is not a major Federal action significantly affecting the quality of the human environment within the meaning of NEPA, 42 U.S.C. 4321 *et seq.* Therefore, an EIS will not be prepared and BPA is issuing this FONSI.

Issued in Portland, Oregon, on January 29, 2002.

/s/ Alexandra B. Smith  
Alexandra B. Smith  
Vice President  
Environment, Fish and Wildlife

## Santiam-Bethel Transmission Line Project Mitigation Action Plan

This Mitigation Action Plan identifies mitigation measures that Bonneville Power Administration (BPA) has committed to for the Santiam-Bethel Transmission Line Project. All measures were identified in the Environmental Assessment. They have been developed in coordination with environmental specialists, design and construction engineers, and maintenance personnel.

Because this project will be built by contract, the mitigation measures discussed in the mitigation action plan will be included in the Construction Contract specifications. The contractor is obligated to implement several of the mitigation measures as identified in the construction contract. The contractor has flexibility in the use of specific mitigation measures or best management practices, as long as impacts are mitigated.

Construction of the project could begin in April of 2002 and would continue through November 2002. If you have any questions about the Mitigation Action Plan, please contact Tish Levesque at (503) 230-3469. If you have any general questions about the project, including the construction schedule, please contact Mark Korsness at (360) 619-6326.

<b>General Resource Category</b>	<b>Mitigation (Responsibility)</b>
Land Use	<ul style="list-style-type: none"> <li>• Affected farmers will receive compensation for lost crop production caused by the construction of the project. (BPA Real Property Services)</li> <li>• Equipment operators and the construction crew will be instructed to leave gates as they are found, open or closed, to avoid disturbances to livestock, and to stay within the right-of-way (ROW) to minimize impacts to crops. (Contractor)</li> <li>• Marker balls will be installed on the conductor where it crosses the North Santiam River to make it more visible to pilots. (Contractor)</li> <li>• Landowners will be compensated to disc or till soil to reduce soil compaction from equipment once construction is completed. (BPA Real Property Services)</li> <li>• Construction activities will be coordinated with agricultural activities as best as practicable. (Contractor)</li> </ul>

Soils	<p>Minimizing disturbance and erosion is a concern at all transmission tower erection sites, construction staging areas, and where access roads would be modified or improved. By following best management practices, impacts will be reduced or eliminated at all sites and would be short term. Best management practices include these mitigation measures:</p> <ul style="list-style-type: none"> <li>• Roadway drainage systems will be designed to control and disperse runoff (e.g., using outsloping roads, water bars, and ditches) to prevent erosion or slope stability problems. (BPA Access Road Engineers)</li> <li>• Access roads will be rocked where necessary. (Contractor)</li> <li>• To minimize erosion, disturbed areas will be returned to their original contour and promptly seeded with a seed mixture suited to the site. (Contractor)</li> <li>• Erosion control measures such as silt fencing, straw mulch, straw bale check dams, and reseeded disturbed areas will be used to contain sediment within work areas. Special erosion control fabrics, such as matting, will be applied where soils and slopes have high erosion potential. In areas where towers are adjacent to waterways (miles 3, 5, 7, 8, 9, 10, 11, 12, and 14), special erosion control measures will be applied to minimize erosion potential and sediment input to the streams. (Contractor)</li> <li>• To reduce disturbance to soils and vegetation, vehicle use will be restricted to access roads and to only those areas around and between towers necessary to get the work done, and topsoil will be left in roughened condition in agricultural areas. (Contractor)</li> <li>• When practical, construction activities will be avoided when soil is wet to reduce soil compaction, rutting, and the resultant loss in soil productivity. (Contractor)</li> <li>• Dust abatement best management practices will be used to minimize the potential for erosion. (Contractor)</li> </ul>
Vegetation	<ul style="list-style-type: none"> <li>• To avoid disturbance to areas of native vegetation, BPA will limit construction from potential habitat for these species and limit construction equipment to previously disturbed areas wherever possible. (BPA Environmental Specialists)</li> <li>• To avoid spreading noxious weeds, vehicles will be washed before they enter the project area. Disturbed nonagricultural areas will be reseeded with a plant mix, fertilized, and mulched preferably in October or November. (Contractor)</li> </ul>

Fish and Wildlife	<ul style="list-style-type: none"> <li>• No construction activities will occur within 75 feet of surface waters (stream or wetland) if practicable. (Contractor)</li> <li>• With the exception of the installation of approximately 4 culverts along unnamed tributaries to Valentine and Mill creeks and an unnamed tributary to the Pudding River, no construction activities will occur in water. (Contractor)</li> <li>• Culvert installations on the two unnamed tributaries to Valentine Creek will be completed during the Oregon Department of Fish and Wildlife’s in-water work period from June 1 to September 30, 2002. The culvert installations in an unnamed tributary to Mill Creek and an unnamed tributary to the Pudding River will occur in the same in-water work period or in dry conditions as the streams are seasonal and are usually dry during the proposed construction work period. (Contractor)</li> <li>• All culvert installations will occur on waterways that are not identified stream reaches with threatened and endangered fish species. (BPA Environmental Specialists)</li> </ul>
Wetlands	<ul style="list-style-type: none"> <li>• There will be no filling in wetlands without a permit from the U.S. Army Corps of Engineers. (BPA Environmental Specialists)</li> <li>• Topsoil will be immediately replaced following construction. (Contractor)</li> <li>• Silt fencing will be placed between construction areas and sensitive resources to prevent sedimentation of those resources. (Contractor)</li> <li>• Weed-free hay bales will be used for erosion control. (Contractor)</li> </ul>
Floodplains	<ul style="list-style-type: none"> <li>• All construction and clearing debris will be removed from within the floodplain boundary. (Contractor)</li> </ul>
Water Quality	<p>To avoid accidental release of petrochemical contaminants to surface waters, the following measures will be used:</p> <ul style="list-style-type: none"> <li>• Mechanized equipment will be stored and maintained at least 150 feet from any surface water (stream or wetland). (Contractor)</li> <li>• Refueling of mechanized equipment will occur at least 400 feet from any surface water (stream or wetland). (Contractor)</li> <li>• Mechanized equipment will be inspected daily for leaks and promptly repaired or replaced if leaking. (Contractor)</li> </ul>

	<ul style="list-style-type: none"> <li>• A stormwater pollution prevention plan will be prepared and implemented. (Contractor)</li> </ul>
Cultural Resources	<ul style="list-style-type: none"> <li>• In the unlikely event that cultural resources are uncovered during construction, work in the immediate vicinity of the discovery will be halted, and BPA will consult with the Oregon State Historic Preservation Officer, the Confederated Tribes of Grand Ronde, and a qualified archaeologist. (Contractor and BPA Environmental Specialists)</li> <li>• To ensure protection of any potentially culturally sensitive areas, a member of the Confederated Tribes of Grand Ronde will be present during construction activities at certain areas along the ROW. (BPA Environmental Specialists)</li> </ul>
Public Health and Safety	<ul style="list-style-type: none"> <li>• Design the Proposed Action to meet Oregon Energy Facility Siting Council (EFSC) and BPA electric field standards. (BPA Design Engineers)</li> <li>• Maintain safe clearances between trees and transmission lines to prevent fires and other hazards. (Contractor)</li> <li>• Require the construction contractor to develop an emergency response plan that includes responding to a potential accidental fire during construction. (Contractor)</li> <li>• Design the line to meet Oregon EFSC requirements for noise. (BPA Design Engineers)</li> <li>• Rectify any TV/radio interference caused by the proposed project. (BPA Real Property Services)</li> </ul>