

In cooperation with the Bureau of Land Management

# Lane-Wendson No. 1 Transmission Line Rebuild Project

## Finding of No Significant Impact and Floodplain and Wetland Statement of Findings

DEPARTMENT OF ENERGY  
Bonneville Power Administration  
DOE/EA-1952  
April 2016

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### Summary

Bonneville Power Administration (BPA) announces its environmental findings for the Lane-Wendson No. 1 Transmission Line Rebuild Project. The project involves rebuilding the existing 115-kilovolt (kV) transmission line that runs from Eugene to Florence, Oregon. The aging, 41.3-mile-long line requires replacement of its wood-pole structures and other line components and needs improvements to its access road system.

BPA has prepared an environmental assessment (EA) evaluating the Proposed Action and the No Action Alternative. 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 (42 United States Code [USC] 4321 *et seq.*). Therefore, the preparation of an environmental impact statement (EIS) is not required and BPA is issuing this Finding of No Significant Impact (FONSI) for the Proposed Action. The Proposed Action is not the type of action that normally requires preparation of an EIS and is not without precedent.

The comments received on the Draft EA and responses to the comments are included in the Final EA. The Final EA also identifies changes made to the Draft EA.

Attached is a Mitigation Action Plan that lists all the mitigation measures that BPA and its contractors are committed to implementing. The FONSI also includes a statement of findings on how the Proposed Action impacts wetlands and floodplains. Impacts to wetlands and floodplains would be avoided where possible and minimized by the mitigation measures included in the EA and Mitigation Action Plan where there is no practicable alternative.

## Public Availability

This FONSI will be mailed directly to individuals who previously requested it, a notification of availability will be mailed to other potentially affected parties, and the Final EA and FONSI will be posted on the project webpage at [www.bpa.gov/goto/LaneWendson](http://www.bpa.gov/goto/LaneWendson).

## Proposed Action

Under the Proposed Action, BPA would remove and replace all wood-pole transmission line structures, and replace the existing conductors, overhead ground wire, five 115-kV disconnect switches, and the insulators and hardware that holds conductors on the towers. The project would also improve the access road system (including improving or reconstructing existing roads, developing new roads, installing temporary roads, obtaining access rights, and replacing or installing gates); install, replace, or repair new or existing culverts and bridges; remove some trees and other vegetation along the transmission line right-of-way and access roads; establish temporary staging areas and tensioning sites; and revegetate areas disturbed by construction activities.

Construction is expected to take three construction seasons, starting in summer 2016 with wintertime shutdowns between December and April. Details of the Proposed Action are presented in Chapter 2 of the EA.

## No Action Alternative

Under the No Action Alternative, BPA would not rebuild the transmission line or upgrade access roads, bridges, or culverts as a single coordinated project. Construction activities associated with the Proposed Action would not occur. However, the reliability and safety concerns that prompted the need for the Proposed Action would remain. BPA would replace aged and rotting structures as they deteriorate and maintain or construct access roads to allow access to structures on an as-needed basis.

Given the current poor condition of the transmission line, the No Action Alternative would likely result in more frequent and more disruptive work to replace structures and maintain access roads. It might be possible to plan some of these activities, but some repairs would likely occur on an emergency basis as various parts of the transmission line continue to deteriorate.

## Significance of Potential Impacts of the Proposed Action

To determine whether the Proposed Action has the potential to cause significant environmental effects, the potential impacts on human and natural resources were evaluated and presented in

Chapter 3 of the EA. To evaluate potential impacts, four impact levels were used – high, moderate, low, and no impact. These impact levels are based on the considerations of context and intensity defined in Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] 1508.27). High impacts could be considered significant impacts, if not mitigated, while moderate and low impacts are not. The Proposed Action would have no significant impacts.

The following discussion provides a summary of the Proposed Action’s potential impacts and the reasons these impacts would not be significant.

## Land Use and Recreation

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Impacts to land use and recreation would be low.

- Because most transmission structures would be replaced in the same locations and most road work would be within existing road beds, long-term changes in land use would be limited to a conversion of about 0.22 acre of forest use to new access trails. New trail segments would be relatively short (700 feet or less) and would not prohibit the remainder of the property from continuing to be used for agriculture.
- About 215.2 acres of agricultural land would be disturbed for structure replacement or temporary access, but disturbance would be temporary, landowners would be compensated for crop damage, and BPA would assist in restoring compacted soils.
- Impacts on forestry uses would be minimized as the removal of about 1,218 trees would be dispersed across the access road system of the 41.3-mile long line; property owners would be able to keep felled trees cut on their land, and the removal of four BPA towers in line miles 21, 27, 29, and 31 would reduce potential disruptions to forestry activities in those areas.
- There would be no long-term changes to recreational use to the five parks and recreation areas located along or near the project area; impacts would be limited to temporary construction disturbance of noise and dust, and potential traffic delays.
- Only 0.789 mile of new easement would be required for access roads on U.S. Bureau of Land Management (BLM) land.

## Geology and Soils

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Impacts to geology and soils would be low.

- Improved roads would be more stable and better capable of handling stormwater and would reduce soil erosion and risks of mass wasting, particularly during storm events.
- Mitigation measures (e.g., sediment barriers, reseeding disturbed areas, and use of gabion walls) would minimize potential erosion and compaction impacts to soils and geology during and following construction.

## Vegetation

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Impacts to vegetation would be low.

- The removal of about 1,277 trees (1,218 trees for access road work and up to a potential additional 59 trees adjacent to the right-of-way following line construction) is a small number of trees relative to forested areas the line passes through, and low growing vegetation is expected to quickly regenerate.
- Mitigation measures (e.g., return temporarily disturbed areas to the original contours and conduct site restoration and reseedling as soon as practicable following construction) would help reestablish vegetation in disturbed areas.
- Mitigation measures would help limit spread of existing noxious weed infestations (e.g., power-washing construction vehicles to remove seeds, flag infested areas for avoidance, conduct pre-project weed treatments), and the Proposed Action would not be expected to introduce noxious weeds into new areas or affect the productivity of adjacent vegetation communities.

## Streams and Fish

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Impacts to streams would be low and impacts to fish would be low-to-moderate.

- Erosion control measures would minimize or eliminate the delivery of sediments from construction activities into nearby streams, mitigation measures would reduce the risk and extent of accidental oil or fuel spills, and the project would not be expected to contribute to impaired water quality or inhibit any water quality recovery efforts on streams crossed by the transmission line.
- Tree removal would have little to no effect on water temperature or availability of large wood in streams since few trees would be removed from riparian areas. Most of the tree removal is associated with cut slopes or road widening in upland areas.
- New or improved access roads would be constructed with compacted gravel surfaces, drainage dips, culverts, or water bars so the potential for long-term surface erosion to nearby streams would be minimized.
- Replacing undersized culverts with adequately sized crossing structures would accommodate a wider range of flows, prevent excess sediment accumulation, and improve fish passage.
- In-water work for culvert and stream crossing improvements would be implemented with mitigation measures (construction timing restrictions, fish salvage, diverting stream flow, isolating work areas, on-site biologist, etc.), to minimize short-term turbidity and direct construction-related impacts to Endangered Species Act (ESA)-listed fish species.
- BPA would follow any additional mitigation measures required by National Marine Fisheries Service (NMFS) and the Oregon Department of Fish and Wildlife (ODFW) for Oregon Coast

coho salmon and Pacific lamprey once coordination with these agencies for ESA compliance (NMFS) and fish passage design approval (ODFW) has been completed.

## Wetlands, Floodplains, and Groundwater

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Impacts to wetlands and floodplains would be low-to-moderate, and impacts to groundwater would be low.

- Compensatory mitigation would be obtained for the 2.285 acres of unavoidable wetlands that would be permanently impacted for the wood pole replacements and access road work.
- Temporary impacts to wetlands (about 4.722 acres due to structure replacement and road work) would be minimized with mitigation measures—working in the dry season if possible, flagging wetland boundaries, using wetland mats or low ground pressure equipment, and reseeding disturbed areas.
- Erosion control measures during construction would lessen potential sedimentation to wetlands adjacent to work areas.
- The underground portions of wood poles placed in wetlands (most would be placed in the same holes from which they were removed) would be contained in multi-layer barrier wraps to help prevent leaching of the preservative material into surrounding areas.
- The 2.975 acres of temporary floodplain disturbance would be short-term, and would have the potential to decrease the existing ecological characteristics of the floodplains.
- The 0.320 acre of unavoidable road development in floodplains may decrease flood-storage capacity slightly, but would not alter the course of floodwaters.
- Compaction of soils around structures or along access roads would not be expected to impact groundwater quality, no impermeable (paved) surfaces would be created to decrease potential water infiltration, and spill prevention measures would lessen risk and extent of accidental oil or fuel spills reaching groundwater.

## Wildlife

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Impacts to wildlife would be low for habitat alterations and moderate for noise and activity levels.

- Although common wildlife species would be impacted during construction through habitat and nesting disturbances and possible injury or death of smaller species that remain in the area, most impacts would be temporary and limited to specific structure locations for short durations.
- Potential impacts to ESA-listed marbled murrelets, northern spotted owl, and streaked horn larks would be minimized through construction timing restrictions, and tree removal would not affect nesting trees and would maintain spotted owl existing canopy cover habitat above the U.S. Fish and Wildlife Service 60 percent threshold.

- The project would not affect ESA-listed Fender’s blue butterfly larvae or eggs, and timing restrictions would eliminate potential impacts to adult butterflies that could feed within portions of the right-of-way.
- Potential habitat modifications due to noxious weed infestations would be minimized through mitigation measures to control the spread of noxious weeds.
- The installation of bird diverters where the transmission line crosses high bird use areas, where technically feasible, would minimize potential bird-line collisions.

## Cultural Resources

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Impacts to cultural resources would be no to low.

- The three cultural resource sites identified in the project area are located in areas where they would not be affected by construction activities.
- If ground-disturbing activities cause an inadvertent discovery, all activities near the find would be stopped per BPA’s Inadvertent Discovery Procedure. The BPA archaeologist, Oregon State Historic Preservation Office, and affected Tribes would be notified immediately.

## Visual Quality

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Impacts to visual quality would be low.

- The improvements would occur in areas where the landscape is largely already altered, replaced structures would appear nearly identical to the existing structures (with some potential increases in height of 5 to 10 feet), and most access road improvements or reconstruction would occur in road corridors that already exist.
- The impacts of construction activities on visual quality would be temporary and remote; a small number of sensitive viewers (e.g., residents) would see the construction activities. Furthermore, viewers would be few because the access roads would be gated.
- The dispersed removal of trees would not substantially change the existing visual environment.

## Socioeconomics and Public Services

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Impacts to socioeconomics and public services would be low. There would be no disproportionate adverse effects to environmental justice populations.

- Because there would be no change in underlying landownership, there would be no impact to property taxes.
- Property owners who would be affected by new access road easement acquisition would be compensated.

- Communities and public services would experience minimal impacts during construction because access to all properties would be maintained during construction, and local agencies, residences, and businesses near the transmission line would be notified of upcoming construction activities and potential disruptions.
- Some local procurement of equipment and spending by construction workers could benefit the economy in communities near the transmission line during construction.
- Any short-term traffic delays from approximately four construction vehicles would not disrupt the ability of emergency services personnel to respond to emergencies.

## Noise, Public Health, and Safety

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Impacts to noise, public health, and safety would be low.

- Noise impacts from construction would temporarily contribute to similar existing machinery noise from regular agricultural practices. Corona noise from the transmission line would not change from current levels.
- There are no known occurrences of hazardous materials or reported contamination within the transmission line right-of-way and implementation of spill prevention and response measures would avoid, minimize, or mitigate potential impacts to public health and safety.
- The line's operating voltage would remain the same as the existing line's operating voltage. No changes to the electromagnetic field levels in the vicinity of the transmission line would occur.
- New, properly installed connecting hardware would reduce potential safety risks associated with aging hardware.

## Transportation

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Impacts to transportation would be low.

- Structure replacement and access road work would only cause temporary and localized delays on county roads and state highways.
- Impacts to the transportation network would be minimized through notifications about construction activities, coordination with Oregon Department of Transportation and BLM timber sales, traffic management during construction, and keeping residential driveways clear to the extent possible.

## Air Quality and Greenhouse Gases

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Impacts to air quality and greenhouse gases would be low.

- Air quality impacts would be limited to the construction site, would be temporary in nature, and would not result in violations of air quality standards.

- Mitigation measures (e.g., use of water trucks to control dust during construction and turning off construction equipment when not in use) would minimize impacts to air quality.
- Construction vehicle emissions for the entire three-year construction period would be equivalent to the annual carbon dioxide emissions of 38 passenger vehicles.
- Greenhouse gas emissions would be far below the U.S. Environmental Protection Agency mandatory reporting threshold of 25,000 metric tons or more and would not represent a substantial change from current conditions.

## Floodplain and Wetland Statement of Findings

In accordance with the Department of Energy's NEPA implementing regulations and compliance with Floodplain and Wetland Environmental Review Requirements (10 CFR Part 1021 and 1022), BPA assessed the project's potential impacts to floodplains and wetlands (see Section 3.5 of the EA), considered alternatives to avoid impacts, and identified measures to mitigate adverse effects.

About 0.32 acre of floodplain that could not be avoided would be permanently impacted by road development; the road work may decrease flood-storage capacity and would not alter the course of floodwaters.

About 1.9 acres of wetlands that could not be avoided would be permanently impacted for the wood pole replacements and access road work. Impacts would be minimized by using existing road systems, where possible, narrowing road widths in wetlands, complying with conditions in the Oregon Department of State Lands Removal/Fill Authorization and a US Army Corps of Engineers Section 404 Authorization, and purchasing compensatory mitigation.

Additional measures that would be taken to minimize potential impacts to floodplains and wetlands include working in the dry season if possible, flagging wetland boundaries, using wetland mats or low ground pressure equipment, implementing erosion control measures, containing underground portions of wood poles in culverts to help prevent potential leaching of pentachlorophenol, and reseeding disturbed areas.



# 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 USC 4321 *et seq.*). Therefore, an EIS will not be prepared and BPA is issuing this FONSI for the Proposed Action.

Issued in Portland, Oregon

/s/ F. Lorraine Bodi  
F. Lorraine Bodi  
Vice President  
Environment, Fish and Wildlife

April 19, 2016  
Date

# Lane-Wendson No. 1 Transmission Line Rebuild Project

## Mitigation Action Plan

Bonneville Power Administration  
DOE/EA-1952  
March 2016

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## Mitigation Action Plan

This Mitigation Action Plan (MAP) is part of the Finding of No Significant Impact (FONSI) for the Lane-Wendson No. 1 Transmission Line Rebuild Project. The project would rebuild the aging 41.3-mile-long 115-kilovolt (kV) Lane-Wendson transmission line in Lane County, Oregon.

This MAP is for the Proposed Action and includes all of the integral elements and commitments made in the Environmental Assessment (EA) to mitigate potential adverse environmental impacts.

BPA and its contractor are responsible for implementing the mitigation measures during various phases of project construction. Relevant portions of this MAP will be included in the construction contract specifications. This will obligate the contractor to implement the mitigation measures identified in the MAP that relate to contractor responsibilities during and after construction.

If you have any general questions about the project, contact the Project Manager, Richard Heredia: toll-free telephone 800-282-3713, direct telephone 360-524-5262, or e-mail [rhheredia@bpa.gov](mailto:rhheredia@bpa.gov).

If you have questions about the MAP, contact the BPA lead for the environmental review, Doug Corkran: toll-free telephone 800-282-3713, direct telephone 503-230-7646, or e-mail [dfcorkran@bpa.gov](mailto:dfcorkran@bpa.gov).

If you have questions about the MAP during implementation, contact the BPA environmental lead for project implementation, Oden Jahn: toll-free telephone 800-282-3713, direct telephone 503-230-7501, or e-mail [owjahn@bpa.gov](mailto:owjahn@bpa.gov).

This MAP may be amended if revisions are needed due to new information or if there are project adjustments.

# Mitigation Measures

Minimization and mitigation measures have been identified to reduce potential impacts associated with the Proposed Action, and are provided in the Mitigation Action Plan Table.

## Mitigation Action Plan Table

<b>Land use and Recreation</b>
Provide a construction schedule to all potentially affected landowners and allow landowners to keep felled trees cut on their land as requested.
Post a construction schedule in affected recreational areas.
Maintain existing access to residences and other areas during construction.
Schedule construction during periods when active farms along the corridor are likely to be fallow, to the extent practicable, to minimize the potential for crop damage.
Leave gates as they were found to avoid disturbances to livestock.
Limit construction activities to the existing right-of-way and easements to minimize impacts to timber harvest and other forestry activities.
Coordinate with individual landowners to ensure that access roads and gates, and construction and maintenance activities would minimize disruptions to commercial forestry operations.
Compensate landowners for the value of property damaged or destroyed by construction activities.
Coordinate with local agencies to avoid construction activities that could conflict with their own construction activities.
Install permanent gates at selected locations to minimize unauthorized entry to private property crossed by BPA access roads and to BPA transmission line right-of-way.
Work with USFS to identify appropriate mitigation measures for project construction activities from access road, trail, or transmission line construction work on National Forest land.
<b>Geology and Soils</b>
Place new structures in existing structure holes to the maximum extent practicable to reduce ground disturbance.
Use multi-layer barrier wraps around base of pole to prevent preservative from leaching into surrounding soils.
Conduct project construction, including tree removal, during the dry season when rainfall, runoff and stream flow are low to minimize erosion, compaction, and sedimentation, to the extent practicable.
Follow <i>Landslide Investigation and Mitigation</i> guidance or other current geotechnical engineering guidance to minimize impacts from structure replacement and road work in known landslide hazard areas (Transportation Research Board 1996 <sup>1</sup> ).
Contact BPA geotechnical specialists if geotechnical issues, such as new landslides or potentially liquefiable soils, arise during design or construction.
Install sediment barriers and other appropriate erosion-control devices where needed to minimize sediment transport.
Retain vegetative buffers where possible to prevent sediment from entering waterbodies.
Control runoff and prevent erosion on access road work by using low grades, water bars, and drain dips.
Properly space and size culverts on access roads.
Use water trucks on an as-needed basis to minimize dust and reduce erosion due to wind.
Till or scarify compacted soil at structure sites prior to reseeding.
Reseed disturbed areas with a native seed mix as soon as work in that area is completed. On ODFW, BLM and National

<sup>1</sup> See Chapter 7 (*References*) of the Lane-Wendson No. 1 Transmission Line Rebuild Project Draft Environmental Assessment for citations used in the Mitigation Action Plan.

Forest land, coordinate with each agency prior to construction to specify seed mixes that are acceptable to each agency and BPA.
Inspect reseeded and revegetated areas to verify adequate growth; implement contingency measures as needed.
Conduct construction activities in coordination with agricultural activities to the extent practicable.
Assist farm operators in restoring productivity of compacted soils for structure sites on agricultural lands.
Allow agricultural activities to resume on temporarily disturbed lands as soon as construction is complete.
Stabilize permanently disturbed areas for new access roads with a top layer of gravel for the roadway and revegetate the roadway shoulders.
Inspect and maintain facilities to ensure proper function and nominal erosion levels after construction.
<b>Vegetation</b>
In areas near sensitive botanical resources—such as the population of documented Bradshaw’s lomatium immediately adjacent to the BPA right-of-way—demarcate vegetation clearing limits prior to disturbance.
Clearly mark trees identified for removal.
Use existing road systems, where practicable, to access structure locations.
Minimize the construction area (footprint) and disturbance to vegetation to the extent practicable, especially within wetlands and adjacent waterbody crossings; only remove vegetation that would interfere with the Proposed Action.
In areas near sensitive botanical resources or other sensitive natural resource areas—such as the population of documented Bradshaw’s lomatium immediately adjacent to the BPA right-of-way—delineate work areas around construction sites to prevent vehicle turnaround, materials storage, or other disturbance outside designated construction areas.
Place materials storage and staging areas in previously disturbed areas if possible, away from wetlands/waterbodies.
Conduct as much work as possible during the dry season when stream flow, rainfall, and runoff are low to minimize erosion, sedimentation, and soil compaction.
Cut and remove trees identified for removal during the dry season to minimize soil compaction. Conduct tree removal in a manner that minimizes disruption to remaining trees and shrubs.
Do not disturb existing root system of trees by “tipping over.”
Use a feller buncher (where access allows), a “cable and winch” removal approach, or equivalent method to limit damage to remaining trees and understory vegetation during tree removal in sensitive areas.
There is one documented population of a special-status plant species (Bradshaw’s lomatium) within the project area; this and any new populations of special-status plant species that are discovered prior to project implementation would be protected by adhering to the following recommendations for avoiding and minimizing impacts: <ul style="list-style-type: none"> <li>• Restrict equipment access to wood-pole structures near the populations.</li> <li>• Salvage special-status species where possible and replant after construction.</li> </ul>
Return temporarily disturbed areas to the original (pre-construction) contours and conduct site restoration and revegetation measures as soon as practicable following construction.
Revegetate disturbed areas with native grasses and forbs (or landowner-requested species) to ensure appropriate vegetation coverage and soil stabilization prior to rainy season (November 1).
Inspect seeded sites to verify adequate growth and implement contingency measures as needed.
Minimize ground disturbance in proximity to existing invasive plant populations.
Inspect all vehicles before entering construction areas for weeds, and install and use appropriate equipment cleaning measures and weed wash stations at selected locations along the transmission line right-of-way to minimize the introduction and broadcast of weed seeds/propagules. Require all vehicles and equipment entering ODFW or City of Eugene properties to use the wash station prior to entering the property.
Minimize disturbance to vegetation; only remove vegetation that would interfere with the proposed construction activities.
Restore all temporarily disturbed soils according to BLM and Forest Service requirements and agency Biological Opinions

for seeding and mulching, to minimize adverse impacts to vegetation.
Replant native riparian species at specified bridge/culvert replacement locations during the dormant season (November 1 to February 1).
In wetlands where there are temporary disturbances, salvage and stockpile selected topsoil for replacement on cut/fill slopes to improve site restoration and plant establishment.
Prior to construction, visit existing noxious weed infestations and conduct preemptive measures to minimize transport and expansion of weed occurrences during construction; flag infestations for avoidance (as practicable) during construction. Where practicable, treat noxious weeds adjacent to access roads and structure sites. Perform follow up monitoring and treat infestation areas after construction if needed. Vegetation management on BLM and National Forest lands would not include the use of herbicides, unless approved in advance by the appropriate agency.
Conduct post construction site restoration monitoring until site stabilization is achieved.
BPA would coordinate with ODFW, BLM and Forest Service prior to construction to specify seed mixes that are acceptable to each agency and BPA for revegetation.
In or near sensitive areas, place materials storage and staging areas in previously disturbed areas away from wetlands and waterbodies.
Prior to construction, conduct an invasive plant survey within the project area to more specifically identify existing infestations of invasive plants.
<b>Streams and Fish</b>
Conduct in-water work in all streams in the Upper Willamette River subbasin between July 1 and October 15 (Long Tom River tributaries) or during ODFW approved extensions.
Conduct in-water work in all streams in the Siuslaw River subbasin between July 1 and September 15 or during ODFW approved extensions.
Conduct fish salvage according to National Marine Fisheries Service (NMFS)/ODFW requirements (NMFS/NOAA, 2000; ODFW, 2014). Minimize size of dewatered work area as practicable, and dewater isolated work areas slowly to allow for fish salvage.
Divert stream flow around the work area and maintain downstream flow during construction.
Isolate in-water work areas prior to culvert and bridge installations. Dewater work area as necessary for construction and to minimize turbidity. Do not discharge turbid water to streams.
Comply with applicable Clean Water Act permits for all work in wetlands or streams.
Use existing road systems, where possible, to access structure locations.
Install culverts and bridge crossings in accordance with NMFS/ODFW fish passage requirements.
Install temporary construction bridges where repeated use of existing fords is necessary.
Restrict construction vehicles and equipment access to access roads and existing work areas only. Return temporary disturbance areas for bridge, culvert, and road work to pre-existing contours and seed.
Dispose of waste material generated from access road work in a stable upland site approved by a geotechnical engineer or other qualified personnel. Smooth to match adjacent grades, and seed for stability.
Conduct soil-disturbing activities during dry conditions to the greatest extent practicable.
Outslope access roads (e.g., 2 to 5%), maintaining natural drainage patterns and minimizing interceptions and concentration of upgradient runoff when practicable.
Restore all temporarily disturbed soils according to requirements in the Oregon Department of State Lands Removal/Fill Authorization and a US Army Corps of Engineers Section 404 Authorization for the project (pending), and the USFWS and NOAA Fisheries biological opinions for the project (USFWS 2015; NOAA 2016 [pending]), to minimize adverse impacts to streams and fish.
Utilize minimum of 18-inch diameter pipes for cross-drain replacements and installation of additional cross-drains; install in accordance with BPA construction standards.
Install cross-drains long enough so that outlets extend beyond road fill.

Excavate cross-drain inlets to allow for initial sediment influx after construction.
Armor first 25 feet of ditch upgradient from cross-drain and catch basin with rock (e.g., pit-run/jaw rock or equivalent) to decrease the water's energy and slow flow.
Armor cross-drain outlets (e.g., pit run/jaw rock, slash, or equivalent) to decrease the water's energy and slow flows.
Design headwaters culverts (non-fish drainages) for the 100-year storm event and include a blockage allowance when sizing culverts to minimize future maintenance needs.
Size non-fish culverts to provide a free flow condition for the 100-year storm event.
Develop, implement, and follow a spill prevention and spill response plan prior to rebuild construction.
Maintain emergency spill control materials, such as oil booms and spill response kits, on-site at each stream crossing site where in-water work would take place at all times and ready for immediate deployment.
Minimize dust by implementing vehicle speed limits on unimproved roads, application of water, or other approved methods.
Include small sorbent booms (sausage booms), sorbent sheets/pads and socks, vermiculite/kitty litter, duct tape, heavy-duty garbage bags, zip ties, and nitrile gloves in spill kits. Restock materials within 24 hours if used.
Outfit heavy machinery (e.g., excavators) with fire extinguisher, shovel, first aid kits, and caps and plugs for machine hydraulic lines and associated attachments (e.g., hammer/plate compactor, etc.).
Stockpile and make available large sorbent booms, straw bales, straw wattles, and turbidity curtains at each specified bridge/culvert replacement site to quickly respond to any spills or turbidity and erosion concerns during construction.
Store, fuel, and maintain all vehicles and other heavy equipment (when not in use) in a designated upland staging area located a minimum of 150 feet away from any stream, waterbody, or wetland or where any spilled material cannot enter natural or manmade drainage conveyances.
Confirm equipment is clean (e.g., power-washed) and that it does not have fluid leaks prior to contractor mobilization of heavy equipment to site. Inspect equipment and tanks for drips or leaks daily and make necessary repairs within 24 hours.
In the event of a spill, immediately contain the spill, eliminate the source, and deploy appropriate measures to clean and dispose of spilled materials in accordance with federal, state, and local regulations.
<b>Wetlands, Floodplains, and Groundwater</b>
<p>Minimize impacts to wetlands and waters, to the extent technically feasible, by narrowing road widths in wetlands and by complying with conditions in the Oregon Department of State Lands Removal/Fill Authorization and a US Army Corps of Engineers Section 404 Authorization. BPA would endeavor to limit impacts and disturbance to an area within 25 feet of wood-pole structures; however, field conditions and work and safety requirements may require areas to be disturbed in excess of 25 feet away from structures. Impacts identified in these authorizations include construction within the City of Eugene's Coyote Prairie North Wetland Mitigation Bank, a sensitive habitat.</p> <ul style="list-style-type: none"> <li>• Meet with the City of Eugene regarding construction within the Coyote Prairie North Wetland Mitigation Bank before, during, and after construction to coordinate tilling and restoration of the site; to identify the appropriate seed mix to use for restoration of areas disturbed by construction; and to coordinate the type, amount, and timing of any herbicide used.</li> <li>• If feasible, construction within the Coyote Prairie North Wetland Mitigation Bank would be limited to dry conditions. However, due to line outage scheduling, if conditions during construction are not dry, wetland mats or low ground pressure equipment would be used to avoid soil compaction and rutting.</li> </ul>
Obtain and comply with applicable US Army Corps of Engineers Clean Water Act and State of Oregon Removal/Fill permits for all work in wetlands or streams.
Identify and flag wetland boundaries before construction.
Install erosion-control measures prior to work in or near wetlands (e.g., silt fences, straw wattles, and other sediment control measures) and reseed disturbed areas as required.
Deposit and stabilize all excavated material not reused in an upland area outside of wetlands.

Avoid construction within wetlands to protect wetland functions and values, where possible. Avoid using these areas for construction staging, equipment or materials storage, or fueling of vehicles.
Use existing road systems, where possible, to access structure locations.
Remove all temporary fill and geotextile fabric and revegetate temporary roads built in wetlands after use.
Restore all temporary disturbance areas to original contours and decompact, if necessary.
Replant all temporary disturbance areas within wetlands with native species, as specified in project permits.
Purchase wetland mitigation bank credits and/or in-lieu fee program mitigation credits, and/or participate in payment-in-lieu programs, as mitigation for permanent wetland impacts, as described in the Oregon Department of State Lands Removal/Fill Authorization and a US Army Corps of Engineers Section 404 Authorization.
Deposit and stabilize all excavated material not reused in an upland area outside of floodplains.
Install erosion-control measures prior to work in or near floodplains.
Avoid construction within floodplains to protect floodplain function, where possible.
Prepare and implement a stormwater pollution prevention plan.
Inspect and maintain tanks and equipment containing oil, fuel, or chemicals for drips or leaks to prevent spills onto the ground or into water bodies.
Maintain and repair all equipment and vehicles on impervious surfaces away from all sources of surface water.
Refuel and maintain equipment away from natural or manmade drainage conveyances, including streams, wetlands, ditches, catch basins, ponds, and culverts.
Provide spill containment and cleanup, and use pumps, funnels, and absorbent pads for all equipment-fueling operations.
Keep, maintain, and have readily available appropriate spill containment and cleanup materials in construction equipment, in staging areas, and at work sites.
Place sorbent materials or other impervious materials underneath individual wood poles at pole storage and staging areas to contain leaching of preservative materials.
Use multi-layer barrier wraps around base of poles located in wetlands to help prevent leaching of the preservative material into surrounding areas.
Monitor revegetation and site restoration work for adequate growth; implement contingency measures as necessary.
Monitor erosion control BMPs to ensure proper function and nominal erosion levels.
<b>Wildlife</b>
Install bird diverters where the line crosses major waterways (e.g., rivers, wetlands) or other high bird-use areas, and where it would be technically feasible.
Minimize the construction area to the extent practicable.
Leave a small percentage of cut and felled danger trees as snags in upland and wetland areas within the transmission line as additional habitat/structure for wildlife, particularly small mammals and amphibians.
Restore areas cleared for construction to pre-construction.
Minimize vehicle speeds to 20 miles per hour or less within 100 feet of streaked horned lark nest sites.
Follow the measures, terms, and conditions outlined in the USFWS Biological Opinion (July 23, 2015), which includes monitoring the response of streaked horned larks to project construction activities and reporting results to the appropriate USFWS office. Pre-construction surveys for streaked horned lark would occur several weeks before construction. BPA would conduct three visits using point-count stations during the breeding season from March through July, with the last survey conducted within two weeks prior to construction. Surveys would begin 30 minutes before sunrise and end at 11 am or sooner on hot days ( $\geq 80^{\circ}\text{F}$ ). Observation periods would be five-minutes long at each point-count station. Observation points would be located along BPA's planned/existing access roads and spaced 200 meters apart. If larks are observed, then biologists would triangulate lark vocalizations to identify the location. BPA would assume vocalizing larks during the breeding period are nesting, and biologists would not conduct nest searches due to the high probability of disturbing nesting and the low probability of finding the actual nest.
Re-vegetate disturbed areas with weed-free seed mixes and plantings that include nectar plants for Fender's blue



butterfly.
Implement the following construction timing restrictions: <ul style="list-style-type: none"> <li>• Marbled murrelet critical breeding period: Avoid all work within established disruption distance (100 yards) and no more than 3 consecutive days of work within the established disturbance distance (0.25 mile) of occupied sites from April 1 to August 5 (See Section 2.1.7 and 3.6 of the Final EA for additional information on wildlife restrictions).</li> <li>• Marbled murrelet daily dawn/dusk timing restrictions: Avoid all work within established disturbance distance (0.25 mile) of occupied sites within two hours after sunrise or within two hours before sunset during the entire breeding period from April 1 to September 15.</li> <li>• Northern spotted owl critical breeding period: Avoid all work within established disruption distance (35 yards) and no more than 3 consecutive days of work within established disturbance distance (0.25 mile) of owl sites from March 1 to July 7.</li> <li>• Streaked horned lark peak breeding period: Avoid all work within suitable habitat that has documented presence from April 15 to July 15.</li> </ul>
<b>Cultural Resources</b>
Use existing access roads where possible to limit the possibility of new disturbance.
If ground-disturbing activities cause an inadvertent discovery, all activities near the find would be stopped per BPA's Inadvertent Discovery Procedure. Inadvertent discoveries can include human remains, structural remains, Native American artifacts, or Euroamerican artifacts that were previously unknown. The BPA archaeologist, Oregon SHPO, and affected Tribes would be notified immediately.
Operations would stop immediately within 200 feet of the inadvertent discovery of human remains, suspected human remains, or any items suspected to be related to a human burial (i.e., funerary items, sacred objects, or objects of cultural patrimony) are encountered during project construction. The area would be secured around the discovery and the Lane County Sheriff, the BPA archaeologist, the SHPO, and affected Tribes would be contacted immediately.
Develop an Inadvertent Discovery Plan that details crew member responsibilities for reporting in the event of a discovery during construction.
<b>Visual Quality</b>
Use non-reflective insulators (e.g., non-ceramic insulators or porcelain) to reduce refraction and glare.
Focus construction lighting on work areas to minimize spillover of light and glare.
Require that contractors maintain a clean construction site and remove all construction debris.
<b>Socioeconomics and Public Services</b>
Maintain access to all businesses, residences, and public facilities during construction.
Notify local agencies, residences, and business owners of upcoming construction activities and potential disruptions associated with the Proposed Action.
Coordinate with utility providers that share BPA right-of-way to determine the exact locations of utilities and minimize service disruptions to other utility lines.
Compensate landowners at market value for any new land rights required to acquire new, temporary, or permanent access roads on private lands and apply for applicable permits to obtain new access rights on public lands.
<b>Noise, Public Health, and Safety</b>
BPA would implement BMPs for the use of sound control devices on construction equipment with gasoline or diesel engines and limit construction noise to daylight hours, to reduce noise impacts.
BPA would implement spill prevent and response BMPs to avoid, minimize, or mitigate impacts to public health and safety from the Proposed Action.
Since there would be no significant changes to the electric and magnetic fields in the vicinity of the line, and no impacts would result from operational activities, no avoidance, minimization, or mitigation measures would be needed.
<b>Transportation</b>
Maintain existing access to residences and other areas during construction.



Prepare a notice about construction activities and a proposed schedule for posting on the Oregon Department of Transportation's (ODOT) traffic advisory web site called Trip Check ( <a href="http://www.tripcheck.com">http://www.tripcheck.com</a> ).
Schedule construction activities at transmission line crossings of OR 126 so as to avoid lane closures during peak travel times, as determined in coordination with ODOT.
Schedule road improvement and transmission line rebuild activities at the transmission line crossings at Parcel ID 180703000100 on BLM land so as to not preclude operations of active timber sale (2014-2017) in T18S R07W, Section 03, as determined in coordination with BLM and timber sale purchaser.
Use traffic safety signs and flaggers to inform motorists and manage traffic during construction activities on affected roads.
Notify affected landowners where and when construction would occur and the potential for traffic delays. In the letter, provide information on any alternative transportation routes, if available, during project construction.
Repair damage to roads caused by construction.
Keep construction activities and equipment clear of residential driveways to the extent possible.
<b>Air quality and Greenhouse gases</b>
Use water trucks to control dust during construction.
Keep all vehicles in good operating condition to minimize exhaust emissions.
Turn off construction equipment during prolonged periods of non-use.
Drive vehicles at low speeds (less than 5 miles per hour) on access roads and the BPA easement to minimize dust during high dust conditions.