

# Shelton-Fairmount Transmission Line Rebuild and Fiber Optic System Replacement Project

## Finding of No Significant Impact

Bonneville Power Administration  
DOE/EA-2224  
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### Introduction

Bonneville Power Administration (BPA) announces its environmental findings for the Shelton-Fairmount Transmission Line Rebuild and Fiber Optic System Replacement Project (Proposed Action or Project). The Proposed Action includes replacement of aged wood-pole transmission structures, conductors, fiber optic cable, overhead ground wire and associated hardware; disconnect of switching facilities; and upgrade or repair of portions of the access roads to transmission line structures. As part of the Project, BPA would replace fiber optic cable and some existing structures on two existing BPA transmission lines (Olympia-Shelton<sup>1</sup> and Fairmount-Port Angeles No. 1). BPA would also upgrade or repair access roads to accommodate fiber optic cable replacement activities.

BPA prepared an environmental assessment (EA) evaluating the Proposed Action and 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. Therefore, preparation of an Environmental Impact Statement (EIS) is not required for the Proposed Action and BPA is issuing this Finding of No Significant Impact (FONSI) for the Project.

BPA solicited and received comments on the Draft EA and responses to those comments are presented in Appendix I of the Final EA. As a result of public comments, refinements or changes to the Proposed Action and No Action Alternative and refinements or changes to the environmental analysis are presented in the Final EA.

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<sup>1</sup> The replacement fiber optic cable between the Olympia and Shelton substations would be attached to structures along two individual single circuit transmission lines (Olympia-Shelton No. 1 115-kV and Olympia-Kitsap No. 1 115-kV) and one double circuit lattice steel tower transmission line (Olympia-Shelton No. 5 230-kV and Satsop-Shelton No. 1 230-kV) that are generally located within a single shared right-of-way. For the purpose of this FONSI, this segment of the fiber optic system replacement is referred to as Olympia-Shelton.

BPA has prepared a Mitigation Action Plan (MAP, attached) that lists the minimization and mitigation measures and best management practices (BMPs) that BPA is committed to implementing as part of the Project.

## **Public Availability**

This FONSI will be mailed directly to interested parties who requested a copy. A notification of availability will be mailed and emailed to interested parties and other potentially affected parties. For copies of this FONSI and the Final EA, call BPA's toll-free document request line at 1-800-622-4520. The documents are also available on the Project website at: [www.bpa.gov/nepa/shelton-fairmount](http://www.bpa.gov/nepa/shelton-fairmount).

## **Proposed Action**

Under the Proposed Action, BPA would perform activities on the Shelton-Fairmount No. 1 transmission line, located in Mason and Jefferson counties, Washington, between the communities of Shelton, Quilcene, and Discovery Bay. Activities would also occur on the Olympia to Port Angeles Fiber Optic System in Thurston, Mason, Jefferson, and Clallam counties, Washington, between the communities of Olympia, Shelton, Quilcene, Discovery Bay, and Port Angeles. BPA would perform the following activities for the Proposed Action:

- Replace wood-pole transmission line structures in kind and add new structures where needed (structures not always replaced in same location).
- Replace cross arms, insulators, hardware, guy wire, and guy anchors.
- Reinforce existing lattice steel towers by replacing/reinforcing steel members.
- Install dampers on conductors.
- Replace conductors and replace or install overhead ground wire and counterpoise.
- Install two optical ground wires on the Shelton-Fairmount No. 1 segment and replace fiber optic cable on the Olympia-Shelton and Fairmount-Port Angeles No. 1 segments.
- Replace and upgrade substation equipment.
- Establish temporary construction areas including staging areas, helicopter landing zones, and conductor and fiber optic cable pulling/tensioning sites.
- Remove danger trees and other vegetation.
- Upgrade the access road system, including stream crossing facilities such as bridges and culverts.
- Mitigate unavoidable Project impacts to wetlands through the Hood Canal Coordinating Council (HCCC)'s In-Lieu Fee (ILF) Mitigation Program and BPA-led off-site wetland enhancement, restoration, and creation.

Additional details about the Proposed Action are presented in Chapter 2 of the Final EA.

## **No Action Alternative**

The No Action Alternative assumes BPA would continue to operate and maintain the Shelton-Fairmount No. 1 transmission line and Fiber Optic System in their current condition, replacing components as they fail, replacing aged and rotting structures as they deteriorate, maintaining access roads to allow access to structures on an as-needed basis, and managing vegetation for safe operation. However, the reliability and safety concerns that prompted the proposal for action would persist. The No Action Alternative would result in more frequent and disruptive maintenance activities than previously required. It would

be possible to plan some repairs, but many would likely occur on an emergency basis as the aging transmission line and fiber optic system continue to deteriorate.

## Significance of Potential Impacts of the Proposed Action

Chapter 3 of the Final EA identifies and evaluates potential impacts from construction, operation, and maintenance of the Proposed Action. The potential impacts associated with the Proposed Action are summarized below. The Proposed Action, with implementation of certain mitigation measures, 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. A detailed MAP was developed that lists the mitigation measures, components, persons responsible, and implementation schedule for each measure. The MAP includes measures to reduce some impacts, even when those impacts are not considered significant.

### Soils and Geologic Hazards

Impacts on geology and soils from the Proposed Action would be **low to moderate**, and some effects would be **beneficial**.

- Short- and long-term adverse impacts to soils due to construction would not be significant because compacted and excavated soils would return to their pre-construction productivity and function following completion of construction activities and because mitigation measures would be implemented to preserve soils and geology.
- There would be some **beneficial** impacts on soils in off-site wetland mitigation areas, which would include stabilizing soils, improving soil structure, improving infiltration and percolation of water through soil, and improving soil nutrient cycling.

### Vegetation

Impacts on vegetation from the Proposed Action would be **low to moderate**, and some effects would be **beneficial**.

- A total of approximately 97 acres of vegetation would be crushed, removed, or cut for Project activities, including approximately 34 acres of permanent impacts where vegetation would be lost due to the addition of a non-vegetated surface and approximately 63 acres of temporary impacts where vegetation would be disturbed, crushed, or removed for staging and construction activities and access. Most activities would occur near existing roads and structures where vegetation communities have been previously disturbed and degraded; in those areas, vegetation would be permanently removed and is not expected to be re-established. Re-seeding and replanting of vegetation in temporary disturbance areas would reduce impacts resulting from construction.
- Compensatory wetland mitigation actions would impact vegetation including crushing and removal, grading, excavating, planting, constructing habitat features, and removing undesirable plants. However, replanting and habitat improvement or enhancement would result in a long-term beneficial effect of more diverse native plant communities.

## Water Resources and Floodplains

Overall impacts to water resources and floodplains from the Proposed Action would be **low to moderate**, and some effects would be **beneficial**.

- Drainage improvements (installation of either properly sized or fish-passable culverts) and access road work would result in in-stream excavation, riparian ground disturbance, and riparian vegetation removal at 76 stream crossings. Temporary periods of elevated sediment and turbidity from in-stream excavation associated with drainage improvements and access road work would impact 138 streams, 56 fish-bearing and 82 non-fish-bearing. Impacts would be minimized by adhering to mitigation measures, including following in-water work windows, implementing erosion and sediment control measures, and reclaiming disturbed areas near streams. In addition, drainage improvements would benefit streams in the long term by improving flow, reducing streambed erosion, and minimizing sediment mobilization and downstream transport and deposition.
- Regulated stream buffers would be impacted as a result of new, improved, and reconstructed access roads, construction activities, and tree removal. Disturbed buffers of non-fish-bearing streams would be stabilized and reseeded with an appropriate native seed mix. Where disturbance would impact the buffers of fish-bearing streams, native shrubs and plants would be installed where feasible to provide shade for streams and encourage aquatic insects, a food source for fish, to drift downstream.
- Federal Emergency Management Agency (FEMA) 100-year floodplains would be temporarily and permanently impacted from re-gravelling road surfaces, minor regrading of improved and reconstructed access roads, and temporary use of a helicopter landing pad. Temporary disturbance areas would be reseeded with an appropriate native seed mix and because impacts would occur primarily along existing access roads or previously cleared areas with a minor amount of fill or regrading, no floodplain functions would be altered.
- Soil compaction during structure and access road work could temporarily impact groundwater recharge by reducing infiltration capacity and increasing surface runoff to streams. Accidental release of hazardous chemicals used during construction, removal of creosote or pentachlorophenol (PCP)-treated wood poles and creosote or PCP-contaminated soil excavated from existing structures holes, and leaching of PCP from treated poles into groundwater, including wells, could result in groundwater impacts. However, impacts would be low since groundwater recharge would not be affected long-term. Additionally, the use of BMPs and mitigation measures such as implementing a Storm Water Pollution Prevention Plan (SWPPP) and Spill Prevention and Response procedures as well as wrapping pole bases with impermeable material and embedding them inside corrugated metal pipes within 50 feet of wetlands and floodplains would be used to minimize the risk to groundwater quality.
- Off-site wetland mitigation actions would likely affect water resources and floodplains as mitigation is constructed. Effects could include temporary disturbance to streams and floodplains from grading, excavating, stream bank stabilization, restoring stream channels, or reconnecting floodplains and hydrologic processes. Depending on the nature of the mitigation action, short-term temporary adverse effects on water resources at wetland mitigation sites

could be moderate to high; however, these effects would be lessened to low to moderate with the implementation of mitigation measures. In the long-term, beneficial effects would result in improved or restored hydrologic processes and water resource functions.

## Wetlands

Permanent and temporary impacts to wetlands and wetland buffers would be **low to moderate** due to construction of the Proposed Action. Long-term **beneficial** effects would result from impacts in off-site compensatory wetland mitigation areas.

- Wetlands would be filled for access road improvements, drainage upgrades, landings, and structure installation resulting in 2.7 acres of permanent wetland impacts and 10.2 acres of permanent wetland buffer impacts. Temporary impacts on wetlands and wetland buffers would result from vegetation disturbance or removal (e.g., crushing or clearing vegetation) where staging areas, helicopter landing pads, pulling and tensioning sites, and temporary guard structures are located. Temporary wetland and wetland buffer impacts would total 11.2 acres and 42.7 acres respectively due to vegetation disturbance and removal. Permanent and temporary impacts to wetlands and wetland buffers would occur where areas have been previously disturbed or are degraded due to lack of tree canopy, ongoing vegetation maintenance, and prevalence of non-native species. Additionally, BPA would implement mitigation measures, including compensatory wetland mitigation, to further minimize impacts.
- Off-site wetland mitigation actions would affect wetlands during construction. Depending on the nature of the compensatory mitigation action, short-term temporary adverse effects to wetland mitigation sites could be moderate to high; however, these effects would be lessened to low to moderate with the implementation of mitigation measures. In the long-term, a net positive beneficial effect would result from wetland conditions that provide greater ecological structure, functions, and benefits within the watershed.

## Wildlife and Fish

The Proposed Action would have **no to low** impacts on wildlife, and some effects would be **beneficial**.

- *Wildlife*: Impacts due to temporary noise and human disturbance would result from construction-related physical noise generation and vegetation removal. A minor amount of incidental mortality may occur due to clearing and grading, and there is a risk of bird strikes on the fiber optic and transmission lines where risk is already present, but bird flight diverters would be installed at key locations to mitigate for this impact. Habitat loss due to vegetation removal would occur, but in areas where disturbance is temporary, habitat would be reclaimed to pre-existing conditions and permanent loss of habitat would be minimal relative to the heavily altered and disturbed habitat conditions within the existing transmission line corridor.
- *Federally Protected Wildlife*: Some Federally protected wildlife would be impacted by the Proposed Action. Impacts to Federally-protected species are as follows:
  - Marbled murrelet and northern spotted owl may be impacted by disturbance, displacement, and potential injury or mortality due to activities within and near suitable habitat during nesting season and potential collisions with fiber optic and transmission line cables. Mitigation measures such as pre-construction surveys, implementation of

seasonal timing restrictions, installation of bird flight diverters, and limiting removal of old-growth trees would minimize impacts.

- Olympia pocket gophers may be impacted by ground alterations. However, no significant impacts are expected due to highly degraded and disturbed soils and low probability of this species in the Project area. Construction activities in suitable habitat for the Olympia pocket gopher would minimize the amount of soil excavated and minimize compaction of soil to mitigate impacts. Surveys would also be conducted the year prior to construction to clear the area for activities.
- Oregon spotted frog may be disturbed and displaced due to construction of landings and road improvements, which would be mitigated to insignificant impacts by avoiding the use of equipment in wetlands near the Olympia Substation – Black Lake drainage basin.
- Due to the absence of northwestern pond turtle in the Project area and minimal impacts to aquatic habitat several miles from the closest known population, no adverse effects would result to this species.
- *Fish*: Minor and temporary direct and indirect effects on fish and aquatic resources are anticipated but aquatic noise and vibration disturbance would not exceed background ambient underwater noise levels. Mitigation measures such as temporary relocation of fish from work areas according to federal protocols, working during regulatory in-water work windows, and erosion control BMPs would minimize impacts on fish. The Project would improve fish passage conditions and would protect, or slightly improve, overall water quality. Similar impacts for general fish species would affect Endangered Species Act (ESA)-listed fish but the application of mitigation measures would result in no potential significant impacts.
- *State Protected and U.S. Forest Service (USFS) Fish and Wildlife Species*: Some state-listed and USFS-sensitive species may be impacted in the form of disturbance, displacement, and minor habitat loss, although most of these species would be rare in the previously cleared ROW. Impacts would be minor since mortality would be low and disturbance and habitat loss would be temporary and on a small scale.
- *Compensatory Wetland Mitigation*: Project construction would result in some unavoidable adverse impacts on wetland and stream habitat. Compensatory wetland mitigation would off-set these impacts by increasing available habitat for wildlife and fish by restoring off-site degraded habitat. Impacts to fish and wildlife would be minimized with BMPs and mitigation measures. In the long term, compensatory wetland mitigation sites are anticipated to increase the net quality and quantity of habitat available to wildlife and fish.

## Cultural Resources

The Proposed Action would have **no to low** impacts on cultural resources eligible for listing on the National Register of Historic Places (National Register).

- Project design for the rebuilding of the transmission line and replacement of the fiber optic system avoids permanent and temporary impacts to cultural resources to the maximum extent possible. Implementation of mitigation measures including archaeological monitoring, adhering to BPA's Inadvertent Discovery Procedure, and providing cultural resources awareness training

would reduce temporary and permanent impacts to cultural resources to a level of non-significance.

## Noise, Public Health, and Safety

The Proposed Action would have **low to moderate** impacts on noise, public health, and safety.

- Noise generated by the Proposed Action would be minimal due to the relatively short duration of construction; although on a temporary and intermittent basis, construction activities would elevate noise levels above natural levels within the Project area. Overall, due to the short duration of these construction-related elevated noise levels, impacts would be low with implementation of mitigation measures including adding sound-control devices to construction equipment and limiting construction noise to daylight hours.
- No noise impacts due to corona are anticipated since this effect is normally at very low levels when generated by transmission lines with voltages higher than 115 kilovolts.
- There are four toxic cleanup sites in or near the Olympia-Shelton section of the Project area: two are awaiting cleanup, one is undergoing cleanup, and another requires no further action. BPA would review the Project site information to identify any potential for contamination to be encountered and if there is a concern, the site manager would be notified prior to performing subsurface work. If any contamination is unexpectedly encountered, it would be reported to the Washington Department of Ecology.
- BPA would dispose of used treated wood poles, use clean fill materials, and dispose of debris and dredged material in line with all regulations. BPA would implement appropriate BMPs and mitigation measures, such as disposing of materials at an appropriate waste, recycling, or salvage facility.
- Risks to public health and safety would be mitigated through implementation of a Public Safety Plan, including public notification following standard industry practices.

## Environmental Justice

The Proposed Action would not have disproportionate and adverse impacts on environmental justice populations.

- Affected communities would be notified of upcoming construction activities and potential disruptions through implementation of a Public Safety Plan. The Project would provide long-term benefits to surrounding communities by improving the reliability of electrical transmission.

## Determination

Based on the information in the Final EA, as summarized in this FONSI, 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.

Finally, consistent with Department of Energy's regulations in 10 Code of Federal Regulations (CFR) § 1022 et seq. (Compliance with Floodplain and Wetland Environmental Review Requirements), the

Proposed Action would not result in significant impacts to any wetlands as referenced above and presented in Chapter 3 of the Final EA. Consistent with 10 CFR § 1022.12 and 1022.13, all impacts to floodplains from the Project have been assessed and proper notification provided. As discussed in 10 CFR § 1022.14, Chapter 2 of the Final EA includes a description of the Project Action and proposed mitigation measures to avoid and mitigate any potential impacts from these actions.

Issued in Portland, Oregon.

SCOTT G. ARMENTROUT  
Executive Vice President  
Environment, Fish and Wildlife



# Mitigation Action Plan

for the

## Shelton-Fairmount Transmission Line Rebuild and Fiber Optic System Replacement Project

### Summary

This Mitigation Action Plan (MAP) Identifies mitigation measures applicable to the Shelton-Fairmount Transmission Line Rebuild and Fiber Optic System Replacement Project (Project or Proposed Action). The Project includes full replacement of the aging Shelton-Fairmount No. 1 transmission line, replacement of fiber optic cable and some existing structures on two existing BPA transmission lines, replacement of fiber optic cable and all existing structures on the Shelton-Fairmount No. 1 transmission line, and upgrade or repair of access roads where needed to access transmission line structures and to accommodate fiber optic cable replacements activities.

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

Bonneville Power Administration (BPA) and its contractors are responsible for implementing mitigation measures outlined in this MAP during various phases of Project construction. BPA's Environmental Monitor will oversee compliance with mitigation measures and the BPA Project Manager will be ultimately responsible for full implementation of mitigation measures. Relevant portions of this MAP will be included in the construction contract specifications, which will obligate the contractor to implement the mitigation measures that relate to contractor responsibilities during and after construction. The MAP table lists each mitigation measure by resource category.

If you have general questions about the Shelton-Fairmount Transmission Line Rebuild and Fiber Optic System Replacement Project, contact the BPA Project Manager, Scott Lissit, toll-free at 800-622-4519, directly at 503-230-5057, or e-mail [salissit@bpa.gov](mailto:salissit@bpa.gov).

If you have questions about the MAP, contact the BPA Environmental Protection Specialist for the Shelton-Fairmount Transmission Line Rebuild and Fiber Optic System Replacement Project environmental review, Mike O'Connell, toll-free at 800-622-4519, directly at 503-230-7692, or e-mail [mjoconnell@bpa.gov](mailto:mjoconnell@bpa.gov).

If you have questions about the MAP during Project implementation, contact the BPA Physical Scientist (Environmental) for the Project's implementation, Aaron Siemers toll-free at 800-622-4519, directly at 503-230-3078, or e-mail [acsiemers@bpa.gov](mailto:acsiemers@bpa.gov).

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

### Minimization and Mitigation Measures

Minimization and mitigation measures identified to reduce potential impacts associated with the Proposed Action are identified in the minimization and mitigation measures table.

## Minimization and Mitigation Measures

<b>Minimization and Mitigation Measures</b>
<b>SOILS AND GEOLOGIC HAZARDS</b>
Stabilize permanent disturbance areas by applying weed-free gravel (if available) to the top layer of roadways.
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. This measure would not apply to Project construction within marbled murrelet occupied habitat or northern spotted owl habitat because of conflicts with the combined nesting season of March 1 to September 30.
Contact BPA geotechnical specialists if geotechnical issues, such as new landslides, arise during construction.
Install appropriate erosion-control devices where needed to minimize soil transport.
Retain vegetative buffers where possible to prevent sediments from entering waterbodies.
Include water control structures on reconstructed and improved access roads using low grades, water bars, and drain dips to help control runoff and prevent erosion.
Properly space and size culverts on access roads.
Apply water to access roads and work areas on an as-needed basis to minimize dust and reduce erosion due to wind.
Revegetate disturbed areas to help stabilize soils as soon as work in that area is completed and appropriate environmental conditions exist, such as moderate temperatures and adequate soil moisture.
Inspect revegetated areas to verify adequate growth and implement contingency measures as needed.
Verify access road improvements are constructed per engineer design specifications to ensure proper function and nominal erosion levels after construction.
On Washington Department of Natural Resources (WDNR)-managed land, backfill or otherwise replace all soil removed from excavation at the end of each day as practicable.
<b>VEGETATION</b>
Use the existing road system to access work locations to the greatest extent practicable.
Minimize the construction area and disturbance to vegetation to the extent practicable, especially in marbled murrelet and northern spotted owl habitat, wetlands, and waterbody crossings.
Where practicable, locate materials storage and staging areas in previously disturbed or developed areas to minimize soil and vegetation disturbance.
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. This measure would not apply to Project construction within marbled murrelet occupied habitat or northern spotted owl habitat because of conflicts with the combined nesting season of March 1 to September 30.
Conduct tree removal in a manner that minimizes disruption to remaining trees and shrubs.
Leave existing root system intact when cutting trees to help prevent erosion.
Prepare timber cruise or assessment for any trees removed outside the current easement area that are covered by the Washington Forest Practices Act in accordance with the WDNR Memorandum of Agreement (MOA).

<b>Minimization and Mitigation Measures</b>
Return temporarily disturbed areas to their original, pre-construction contours and conduct site restoration and revegetation measures before or at the beginning of the first growing season following construction.
Revegetate disturbed areas with species suitable to the location (e.g., wetland or upland) to ensure appropriate vegetation coverage and soil stabilization prior to the start of rainy season (November 1).
Keep pulling/tensioning equipment inside the transmission line right of way (ROW) for pulling/tensioning sites located on ROW.
Conduct monthly post-construction site restoration monitoring until site stabilization is achieved.
Prior to construction, identify noxious weed infestation areas for avoidance and/or treatment (as practicable).
Implement measures to minimize noxious weed spread, including washing vehicles before entering work areas, washing vehicles that have been operating in weed infested portions of the Project area prior to transporting them to other portions of the Project area, and inspecting vehicles before entering construction areas.
Do not use permanent paint or other types of markers on WDNR-managed land including within Natural Area Preserves (NAPs) and Natural Resource Conservation Areas (NRCAs).
Inform contractors how to identify noxious weed species that occur in the Project area and explain required actions to prevent their spread.
Store cleared vegetation next to the area from which it is stripped to avoid transporting soil-borne noxious weeds seeds, roots, or rhizomes.
Provide that erosion control measures, sediment-barrier installations, or mulch are from state-cleared sources that are free of noxious weeds.
<b>WATER RESOURCES AND FLOODPLAINS</b>
Use and/or upgrade existing access roads where possible to avoid additional stream crossings or impacts on floodplains.
When possible, conduct soil-disturbing activities during the dry season and culvert work when streams are dry.
Comply with applicable Clean Water Act (CWA) permits for work in streams.
Divert stream flow around work areas and maintain downstream flow if construction occurs during times when streams are flowing.
Isolate in-water work areas prior to culvert installations, dewater work area as necessary for construction and to minimize turbidity, and do not discharge turbid water to streams.
Return temporary disturbance areas for culvert and road work to pre-construction contours and perform mulching, seeding, and planting in accordance with plans and specifications.
When restoring vegetative cover in or near riparian zones, replace removed tree species with a species that would provide riparian function while limiting transmission line hazards.
Restrict construction vehicles and equipment to access roads and designated work areas.
Store, re-fuel, and maintain all vehicles and other heavy equipment in a designated upland staging area located at least 150 feet away from any stream, waterbody, or wetland, or where spilled material cannot enter natural or manmade drainage conveyances or well head protection areas.

<b>Minimization and Mitigation Measures</b>
Dispose of waste material generated from access road work in a stable upland site (in gentle terrain more than 200 feet from waterbodies or wetlands) approved by the BPA environmental lead, smooth to match adjacent grades, and seed for stability. In steep terrain or near waterbodies or wetlands, haul waste material offsite.
Design culverts (non-fish drainages) for the 100-year storm event to minimize future maintenance needs.
Adhere to Spill Prevention and Response Procedures to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances and pollutants produced by construction operations.
Confirm equipment is clean (e.g., power-washed) and does not have fluid leaks prior to contractor mobilization of heavy equipment to the site; inspect equipment and tanks for drips or leaks daily and make necessary repairs within 24 hours.
Contain petroleum product spills immediately, eliminate the source, and deploy appropriate measures to clean and dispose of spilled materials in accordance with federal, state, and local regulations.
Maintain emergency spill control materials, such as oil booms and spill response kits, on-site at all times and ready for immediate deployment at each ford or culvert replacement site.
Install cross-drains per BPA access road design specifications.
Revegetate disturbed areas using a slow-release fertilizer.
Limit the placement of fill for access road work in floodplains to the minimum required.
Install erosion-control measures prior to work in or near floodplains.
Prepare and implement a Storm Water Pollution Prevention Plan (SWPPP).
Use pole wraps and vertically sheath poles inside corrugated metal pipe on structures located within 50 feet of streams and within the 100-year floodplain.
<b>WETLANDS</b>
Comply with applicable CWA permit conditions for all work in wetlands, including compensatory wetland mitigation, use of wetland matting when appropriate, and installation of erosion-control measures prior to work in or near wetlands if there is risk of sediment-laden water entering wetlands.
Avoid depositing excavated material in wetland areas.
Avoid locating construction staging, equipment or materials storage, or vehicle fueling within 150 feet of wetland areas.
Mark work areas to limit vehicle and equipment access to designated routes and prevent entry into wetlands and wetland buffers.
Use existing roads to access structure locations where possible.
Remove any temporary equipment mats and revegetate.
Restore all temporary disturbance areas to original contours and decompact, if necessary.
Reseed all temporary disturbance areas in wetlands with species suitable to the location and monitor revegetated wetland areas to ensure adequate cover.
Use pole wraps and vertically sheath poles inside corrugated metal pipe on structures located within 50 feet of wetlands.

<b>Minimization and Mitigation Measures</b>
<b>FEDERALLY LISTED FISH AND WILDLIFE SPECIES AND OTHER FISH AND WILDLIFE</b>
Apply and adhere to the conservation measures and terms and conditions from the U.S. Fish and Wildlife Service (USFWS) Biological Opinion # 2022-0066971, March 27, 2024, to planned work activities in areas where habitat or direct ESA species effects could reasonably be expected.
Install bird flight diverters where the transmission line crosses rivers, wetlands, or other high bird-use areas, including marbled murrelet flight corridors as practicable when considering safety and operational requirements.
Restore areas disturbed by construction to pre-construction or better condition.
Remove danger trees (including from suitable marbled murrelet and northern spotted owl habitat) outside the combined marbled murrelet / northern spotted owl nesting season (March 1 to September 30).
Avoid the use of chain saws and heavy equipment within 65 yards of and avoid helicopter use (light utility) within 110 yards of potential suitable northern spotted owl Nesting, Roosting, and Foraging (NRF) habitat during the early breeding season (March 1 to July 15) or conduct Autonomous Recording Unit (ARU) surveys to clear the area for construction (see bullet below). Reference Biological Opinion #2022-0066971 for all details.
Conduct USFWS ARU-protocol surveys in suitable northern spotted owl NRF habitat the year prior to Project activities that have the potential to cause impacts on nesting northern spotted owls. If no northern spotted owls are detected, Project activities would commence with no restrictions. If northern spotted owls are detected, conduct work in these areas outside of the breeding/nesting season (March 1 to September 30) or consult with USFWS.
Plan all helicopter use in proximity to suitable and occupied marbled murrelet habitat according to all constraints detailed in the Project's Biological Opinion # 2022-0066971. Request maps as necessary and communicate measures to pilot and other crew.
Where permitted, schedule work as late in the marbled murrelet nesting season as practicable, while still ensuring work is completed prior to the start of the wet season.
Schedule work in suitable and occupied marbled murrelet habitat that must occur during the nesting season (April 1 to September 23) to begin 2 hours after sunrise and end 2 hours before sunset. Schedule pre-work meetings off site at a developed location.
Minimize excavation and soil compaction in potential suitable pocket gopher habitat to the greatest extent practicable.
Conduct protocol-level surveys for Olympia pocket gophers near the Olympia Substation in the year prior to construction to clear the area for soil disturbance. If Olympia pocket gophers are detected, consult with USFWS.
Install erosion and sediment control measures prior to construction in or adjacent to wetlands in the Black Lake basin to minimize impacts to the Oregon spotted frog.
Remove all food scraps and food packaging from Project sites and transport off-site after each workday; do not leave food exposed and unattended for any amount of time; do not feed wildlife or leave food for wildlife.
Provide environmental training to all Project personnel to make them aware of environmental mitigation measures.
Avoid blasting and construction within 660 feet of active bald eagle, peregrine falcon, or other sensitive raptor species nests during the nesting period (January 1 to August 31), unless otherwise authorized by WDFW and/or the USFWS.

<b>Minimization and Mitigation Measures</b>
Plan blasting within 0.25 mile of potential marbled murrelet and northern spotted owl habitat during the breeding seasons, April 1 to September 23 and March 1 to September 30, respectively, according to all constraints detailed in the project Biological Opinion # 2022-0066971. The northern spotted owl timing restriction may be waived if preconstruction ARU surveys demonstrate no owls are present.
Avoid removal of large snags and trees that are not hazardous to transmission line operation and worker safety and that may support nesting habitat for bald eagle and other bird species.
To the extent practicable, schedule tree and other vegetation removal between September 15 and March 1 to minimize impacts on migratory birds. If tree clearing is needed outside of that time, conduct a pre-construction nesting bird survey prior to tree removal. If active nests are found, do not remove trees until the young have fledged.
Do not remove danger trees or other trees in marbled murrelet critical habitat without additional consultation and approval by USFWS Washington Fish and Wildlife Office staff per Biological Opinion #2022-0066971.
Conduct all construction activities within Endangered Species Act (ESA) fish-bearing streams subject to BPA's ESA Section 7 Programmatic Conference and Biological Opinion (WCR-2014-1600) with the National Marine Fisheries Service (NMFS), as applicable. In-water work timing may be different than that listed in the most recent version of <i>Times When Spawning or Incubating Salmonids are Least Likely to be Present in Washington State Freshwaters</i> (WDFW 2018).
Install culverts in accordance with National Oceanic Atmospheric Administration (NOAA) or WDFW fish passage requirements as confirmed by respective staff.
Salvage fish present during in-water work according to WDFW and ESA guidelines.
Limit blasting within 575 feet of bull trout habitat to no more than six structures and apply all respective measures from Biological Opinion # 2022-0066971.
Implement BMPs to reduce erosion and sedimentation to adjacent aquatic habitat for northwestern pond turtles during spring and summer months and/or construction in the dry months. Avoid removal of any logs or stumps from wetlands in the following locations: Olympia-Shelton fiber optic system structures 3/8 to 4/2 and structure 6/3.
<b>CULTURAL RESOURCES</b>
Locate transmission structures, equipment and material storage areas, and access roads to avoid known cultural resource sites and limit ground disturbance.
Conduct archaeological monitoring in areas designated as high probability for containing unidentified archaeological resources.
Follow BPA's Inadvertent Discovery Procedure, which requires that all work in the vicinity stop immediately if an inadvertent discovery of cultural resources is made and immediately notify the BPA archaeologist, Washington Department of Archaeology and Historic Preservation (DAHP), affected Tribes, and federal and state archaeologists, if applicable.
Stop all operations 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 encountered during Project construction. Secure the area around the discovery and immediately contact local law enforcement, the BPA archaeologist, the Washington DAHP, affected Tribes, and federal and state archaeologists, if applicable.

<b>Minimization and Mitigation Measures</b>
During pre-construction meetings, provide cultural resources awareness training to explain cultural resource-related avoidance and mitigation measures to the BPA transmission line maintenance crew, construction contractors, and inspectors.
Depict cultural sites as sensitive areas to avoid in construction documents, on construction maps, and in the field.
<b>OTHER RESOURCES</b>
Prepare a Project-specific Public Safety Plan that includes measures to control wildfire ignition, limit public access to the Project area, and notify the public of any planned electrical outages.
Review the Washington Department of Ecology toxic cleanup site database results for the Project area, identify any potential for contamination to be encountered and contact the listed site manager if work could disturb toxic materials. Report any toxic material contact by the Project construction to Ecology.
Adhere to BPA Transmission Line and Fiber Optic Cable Master Specification Section 01 66 05 Material Yards requiring safe storage and handling of wood poles and other construction materials in material storage yards.
Provide a construction schedule, including timing of any planned power outages, to all potentially affected stakeholders.
Maintain existing access to residences and other areas during construction.
Coordinate with commercial timber landowners to ensure that access road enhancements, gates, and construction and maintenance activities would minimize disruptions to commercial forestry operations.
Adhere to the State Forest Practices Act on roads built or used within WDNR-managed land.
On WDNR-managed land, keep gates closed and park vehicles where they do not block gates. Travel off established roads by foot only.
Compensate landowners for the value of any property damaged by construction activities, as appropriate.
Use traffic safety signs and flaggers to inform motorists and manage traffic during construction activities on affected roads.
Install permanent gates at selected locations to minimize unauthorized use of BPA access roads and unauthorized entry to BPA ROW.
Where existing rural roadways are narrow, provide traffic control to ensure traffic safety.
Follow the applicable state, county, and city requirements for traffic control and lane closures.
Follow fire prevention laws and rules of the state (RCW 76.04 and WAC 332-24) to reduce the risk of wildfires.
Use water trucks to control dust during construction, as needed.
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 on access roads and in the ROW to minimize dust.
Locate staging areas as close to construction sites as practicable to minimize driving distances between staging areas and construction sites.
Use properly sized equipment for the job to maximize energy efficiency.

<b>Minimization and Mitigation Measures</b>
Recycle or salvage non-hazardous construction and demolition debris where practicable.
Dispose of wood poles at an appropriate facility in the local area where practicable.
Use local rock sources for road construction that meet road material and weed free standards, if possible.
Use non-reflective conductors.
Focus security lighting at staging areas and the material storage yard inward to minimize spillover of light and glare.
Require that contractors maintain a clean construction site and remove all construction debris.
Use sound-control devices on construction equipment with gasoline or diesel engines and limit construction noise to daylight hours to reduce noise impacts.
Develop and implement a blasting plan that identifies blasting procedures such as safety, use, storage, and transportation of explosives where blasting is needed, if necessary. The blasting plan would specify the locations where blasting is needed and require the use of a registered licensed blaster who would be required to secure all necessary permits and comply with regulatory requirements in connection with the transportation, storage, and use of explosives, and blast vibration limits for nearby structures, utilities, and wildlife.
Coordinate with the Squaxin Tribe's Salish Gold Club, Little Creek Casino Resort, and RV Park regarding timing and nature of construction activities to minimize disruption to these businesses during construction.
In agricultural lands, restore compacted soils, use BMPs to limit spread of noxious weeds, separate topsoil in croplands, and minimize disturbance to agricultural activities in farmlands.