

Allston to Astoria Rebuild Project

Mitigation Action Plan

SUMMARY

This Mitigation Action Plan is for the Allston-Astoria Rebuild Project. The project would rebuild the approximately 22-mile-long Allston-Driscoll No. 2 115 kilovolt (kV) and the approximately 21-mile-long Driscoll-Astoria No. 1 115 kV transmission lines in Clatsop and Columbia counties, Oregon. Together, the proposed rebuilding of the two lines is referred to as the Allston-Astoria Rebuild Project.

This Mitigation Action Plan is for the Allston-Astoria Rebuild Project 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 Mitigation Action Plan will be included in the construction contract specifications, which will obligate the contractor to implement the mitigation measures identified that relate to contractor responsibilities during and after construction.

If you have any general questions about the project, contact the Project Manager, Lisa Casey: toll-free telephone 800-622-4519, direct telephone 360-418-1771 or lacasey@bpa.gov.

If you have questions about the Mitigation Action Plan, contact the BPA lead for the environmental review, Laura Roberts: toll-free telephone 800-622-4519, direct telephone 503-230-5073, or e-mail laroberts@bpa.gov.

If you have questions about the mitigation action plan during implementation, contact the BPA environmental lead for project implementation, Samantha Rinker: toll-free telephone 800-622-4519, direct telephone 360-418-8304, or e-mail scrinker@bpa.gov.

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

MITIGATION MEASURES

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

Mitigation Action Plan Table

Resource	Minimization and Mitigation Measure	Implementation
Soils and Geologic Hazards	Stabilize permanent disturbance areas by applying a weed-free gravel top layer to the roadways.	During construction
	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.	During construction
	Contact BPA geotechnical specialists if geotechnical issues such as new landslides arise during construction.	During construction
	Install appropriate erosion-control devices where needed to minimize soil transport.	Before and during construction
	Retain vegetative buffers where possible to prevent sediments from entering waterbodies.	During construction
	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.	During design, during and after construction
	Properly space and size culverts on access roads.	During design
	Apply water from water trucks on an as-needed basis to minimize dust and reduce erosion due to wind.	During construction
	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.	After construction
	Where vegetation is used for erosion control on slopes steeper than 2:1, use a tackified seed mulch so the seed does not wash away before germination and rooting.	After construction
	Inspect revegetated areas to verify adequate growth and implement contingency measures as needed.	After construction
	Inspect and maintain access roads and cross-drains to ensure proper function and nominal erosion levels after construction.	After construction
	Use pole wraps for placement of any chemically treated poles in wetlands, streams, or the 100-year floodplain. Install pole wraps per the following requirements: Chemically treated transmission poles placed within 50 feet of a stream, in a wetland, or within the 100-year floodplain must be encapsulated or wrapped from the butt ends to at least 18 inches above the ground or channel surface with an appropriate material to prevent leaching of chemicals. In areas that have a high likelihood of abrasion they must be equipped with a wear strip.	Before and during construction

Resource	Minimization and Mitigation Measure	Implementation
Vegetation	Use the existing road system to access structure locations.	During construction
	Minimize the construction area and disturbance to vegetation to the extent practicable, especially in marbled murrelet habitat, wetlands, and waterbody crossings.	During design, before and during construction
	Locate material yard storage and staging areas in previously disturbed areas where feasible.	Before construction
	Conduct as much work as possible, including tree removal, during the dry season to minimize erosion and soil compaction.	During construction
	Conduct tree removal in a manner that minimizes disruption to remaining plants and shrubs.	During construction
	Cut trees and leave existing root systems intact to help prevent erosion.	During construction
	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.	After construction
	Revegetate disturbed areas with grasses, forbs, or shrubs to ensure appropriate vegetation coverage and soil stabilization during the optimal seeding window.	After construction
	Revegetate disturbed areas using a slow-release fertilizer.	After construction
	Keep pulling/tensioning equipment inside the transmission line ROW at pulling/tensioning sites located on ROW to minimize impacts to previously undisturbed vegetation.	During construction
	Conduct post-construction site restoration monitoring once a month until site stabilization is achieved.	After construction
	Prior to construction, identify noxious weed infestation areas for avoidance (as practicable).	Before construction
	Implement measures to minimize noxious weed spread, including inspection of vehicles before entering construction areas, remaining on established roads as much as possible, and installation and use of weed wash stations, or use of other appropriate equipment cleaning measures.	Before and during construction
	Conduct pre-construction surveys for Nelson's checkermallow within ground-disturbance areas in the portion of the corridor between Allston-Driscoll Structures 2/2 and 3/4.	Before construction
Water Resources, Floodplains, and Fish	Restrict construction vehicles and equipment to access roads and designated work areas.	During construction
	Conduct soil-disturbing activities during the dry season and culvert work when streams are dry, where possible.	During construction
	Comply with applicable Clean Water Act permits for work in streams.	During construction

Resource	Minimization and Mitigation Measure	Implementation
	Prepare and implement a storm water pollution prevention plan.	Before and during construction
	Install erosion-control measures (e.g., silt fences, straw wattles, and other sediment control measures) prior to work in or near floodplains and streams. Inspect and maintain as necessary to ensure their continued effectiveness until soils become stabilized.	Before, during, and after construction
	Operate equipment from the top of a streambank and conduct work outside of the active stream channel, as practicable.	During construction
	Use removable pads or mats to prevent soil compaction at all construction access points in riparian and wetland areas.	During construction
	Limit the placement of fill for access road work in floodplains to the minimum required.	During construction
	Install cross-drains per BPA access road design specifications.	During construction
	Design and install culverts in accordance with Oregon Department of Fish and Wildlife fish passage requirements and in accordance with BPA's SLOPES PBO (NMFS 2016 ¹)	During design
	Design culverts (non-fish drainages) for the 100-year storm event to minimize future maintenance needs.	During design
	Conduct in-water work between July 15 and September 15 for all streams east of Hunt Creek (near Driscoll-Astoria Structure 4/1) and between July 1 and September 15 for all streams west of Hunt Creek.	During construction
	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.	Before and during construction
	Return temporary disturbance areas for culvert and road work to pre-construction contours: mulch, seed, and plant as per plans and specifications.	After construction
	Dispose of excess material generated from access road work in stable upland site (in gentle terrain more than 150 feet from waterbodies or wetlands), smooth to match adjacent grades and seed for stability. In steep terrain or near waterbodies or wetlands, haul excess material off-site.	During construction

¹ NMFS (National Marine Fisheries Service). 2016. Endangered Species Act Section 7 Programmatic Conference and Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for Standard Local Operating Procedures for Endangered Species to Administer Maintenance or Rebuild Projects for Transmission Line and Road Access Actions Authorized or Carried out by the Bonneville Power Administration in Oregon, Washington, and Idaho. (Refer to: NMFS No.: WCR-2014-1600). National Marine Fisheries Service, Northwest Region. Portland, Oregon. September 22, 2016.

Resource	Minimization and Mitigation Measure	Implementation
	Confirm that any vehicle or mechanized equipment to be operated within 150 feet of water resources 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.	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.	During construction
	Maintain emergency spill control materials, such as oil booms and spill response kits, on-site at all times and ready for immediate deployment.	During construction
	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.	During construction
	Do not apply surface fertilizer within 50 feet of any wetland or water body.	After construction
	Remove all erosion control structures when the project is complete and soils are stabilized and vegetated.	After construction
	Obtain all necessary permits for water drafting sites (locations where contractor may fill water trucks) and locate to minimize adverse effects on stream channel stability, sedimentation, and in-stream flows.	Before construction
	Use pole wraps and corrugated metal pipes on structures located within 50 feet of a wetland, stream, or floodplain as outlined under soils and geologic hazards above.	During construction
Wetlands	Use existing roads to access structure locations.	During construction
	Use temporary equipment mats when working in wetlands and drive vehicles and equipment across wetlands only during the dry season.	During construction
	Comply with applicable Clean Water Act regulations for all work in wetlands and regulated water bodies.	During construction
	Install erosion control measures prior to work in or near wetlands (e.g., silt fences, straw wattles, and other sediment control measures). Inspect and maintain as necessary to ensure their continued effectiveness until soils become stabilized.	Before and construction
	Avoid mechanized equipment usage in wetlands except where no practicable alternative exists.	During construction

Resource	Minimization and Mitigation Measure	Implementation
	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.	During construction
	Confirm that any vehicle or mechanized equipment to be operated within 150 feet of wetlands is clean (e.g., power-washed) and 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.	During construction
	Dispose of excess material generated from access road work in a stable upland site (in gentle terrain more than 150 feet from waterbodies or wetlands), smooth to match adjacent grades, and seed for stability. In steep terrain or near waterbodies or wetlands, haul excess material off-site.	During construction
	Remove all felled danger trees from wetlands.	During construction
	Remove any temporary equipment mats and revegetate.	After construction
	Remove all erosion control structures when the project is complete, and soils are stabilized and vegetated.	After construction
	Restore all temporary disturbance areas to original contours and de-compact, if necessary.	After construction
	Reseed all temporary disturbance areas in wetlands with a wetland specific seed mix and monitor revegetated wetland areas to ensure adequate cover.	After construction
	Do not apply surface fertilizer within 50 feet of any wetland or water body.	During construction
	Use pole wraps and corrugated metal pipes on structures located within 50 feet of a wetland, stream, or floodplain as outlined under soils and geologic hazards above.	During construction
Wildlife	Conduct danger tree removal outside the breeding season for migratory birds (February 1 – August 30) and marbled murrelets (April 1 – September 23).	During construction
	Install bird diverter devices in areas with potentially high avian use as determined in final design.	During construction
	Install perch deterrents in areas with high potential raptor use as determined in final design.	During construction
	Restore areas disturbed by construction to pre-construction condition, as much as practicable.	After construction
	Limit helicopter use and flight paths to areas within and near the project ROW as much as practicable to minimize the extent of noise disturbance.	During construction

Resource	Minimization and Mitigation Measure	Implementation
	Between April 1 and September 23, prohibit construction in marbled murrelet habitat until 2 hours after sunrise and during the 2 hours prior to sunset. Potentially suitable marbled murrelet habitat is located adjacent to the project ROW and generally extends from Structures 19/3 to 20/2 and 20/4 to 21/1 on the Allston-Driscoll line and from Structures 4/4 to 7/2 and 20/4 to 21/5 on the Driscoll-Astoria line.	During construction
	No helicopter use would be permitted during the marbled murrelet critical breeding period (April 1 to August 5).	During construction
	Helicopter use would be avoided during the Columbia white-tailed fawning period (June 1 to July 15), and helicopter use outside the fawning period would be conducted at standard regulated altitudes.	During construction
	Remove all food scraps and food packaging of any kind from the project sites and transport it off-site after each workday; food cannot be left exposed and unattended for any amount of time; and no food may be fed to or left for wildlife.	During and after construction
	Locate staging areas and material yards in previously disturbed or graveled areas to minimize soil and vegetation disturbance where practicable.	Before and during construction
	Pre-construction nest surveys would be conducted to determine the presence of any raptor or other bird nests in structures where work would occur, and the nests would be removed outside of the nesting season. Additionally, pre-construction surveys for eagles would be conducted to identify nests located outside of the ROW but within the disturbance buffer that might be impacted by project activities and require timing restrictions.	Before construction
	If a bald eagle nest is identified, BPA would avoid construction activities within 0.5 mile of an active bald eagle nest during the breeding season and avoid snag and large tree removal to the extent practicable.	Before and during construction
Cultural Resources	Follow BPA's Inadvertent Discovery Procedure, which requires that if an inadvertent discovery of cultural resources is made, all work in the vicinity must stop immediately and the BPA archaeologist, the Oregon State Historic Preservation Office, and affected Indian Tribes, if applicable, must be notified immediately.	During construction

Resource	Minimization and Mitigation Measure	Implementation
	Stop all operations immediately within 200 feet of the inadvertent discovery of human remains or suspected human remains, or if any items suspected to be related to a human burial are encountered during project construction; secure the area around the discovery and immediately contact local law enforcement, the BPA archaeologist, the Oregon State Historic Preservation Office, and the affected Indian Tribes, if applicable.	During construction
	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 during preconstruction meetings.	Before construction
Transportation	Maintain access to residences and local businesses during construction.	During construction
	Distribute the proposed schedule of construction activities to all potentially affected landowners and businesses, and post in recreation areas along the rights-of-way.	Before construction
	Coordinate with landowners regarding locations of new or temporary access routes to limit access and traffic disruptions.	Before construction
	Establish traffic-control flaggers and post warning signs of construction activities, merging traffic, and traffic interruptions.	Before construction
	Coordinate with Oregon Department of Transportation on road construction activities and transmission line crossings of US-30, HWY-202 and HWY-47.	Before construction
	Repair damage to roads caused by construction.	After construction
Public Health and Safety	Secure the site at the end of each workday, as much as possible, to protect equipment and the general public.	During construction
	Comply with all fire safety laws, rules, and regulations of the state of Oregon and prepare a Fire Prevention and Suppression Plan to meet BPA, local authority, and land manager requirements.	During construction
	Conduct regular meetings between BPA and the contractor(s) to discuss safety concerns.	Before and during construction
	Conduct crew safety meetings at the start of each workday to review potential safety issues and concerns.	During construction
	Establish safety signage in and around the work areas, with a 150-foot buffer around construction zones within residential properties and businesses to limit risk to individuals.	Before and during construction
	Coordinate safety personnel to be present during construction to ensure non-construction individuals do not access the work sites during construction.	During construction

Resource	Minimization and Mitigation Measure	Implementation
Other BMPs	Place plastic ground covers and concrete blocks to keep wood poles off the ground in material yards and staging areas.	During construction
	Provide a construction schedule to all potentially affected landowners.	Before and during construction
	Maintain existing access to residences and other areas during construction.	During construction
	Coordinate with Oregon Department of Forestry and commercial timber landowners to ensure that access road enhancements, gates, and construction and maintenance activities would minimize disruptions to commercial forestry operations.	Before and during construction
	Compensate landowners for the value of any property damaged by construction activities, as appropriate.	After construction
	Use traffic safety signs and flaggers to inform motorists and manage traffic during construction activities on affected roads.	During construction
	Install permanent gates at selected locations to minimize unauthorized use of BPA access roads and unauthorized entry to BPA ROW.	During construction
	Provide traffic control where existing rural roadways are narrow to ensure traffic safety.	During construction
	Follow the applicable state, county, and city requirements for traffic control and lane closures.	During construction
	Use water trucks to control dust during construction, as needed.	During construction
	Keep all vehicles in good operating condition to minimize exhaust emissions.	During construction
	Turn off construction equipment during prolonged periods of non-use.	During construction (Contractor)
	Drive vehicles at low speeds (less than 5 miles per hour) on access roads and in the BPA ROW to minimize dust.	During construction
	Locate staging areas and material yards as close to construction sites as practicable to minimize driving distances between staging areas and construction sites.	Before and during construction
	Locate staging areas and material yards in previously disturbed or graveled areas to minimize soil and vegetation disturbance where practicable.	Before and during construction
	Encourage the use of the proper size of equipment for the job to maximize energy efficiency.	During construction
	Recycle or salvage non-hazardous construction and demolition debris where practicable.	During and after construction
	Dispose of wood poles at an appropriate facility in the local area where practicable.	During construction
	Use local rock sources for road construction that meet road material and weed free standards, if possible.	During construction

Resource	Minimization and Mitigation Measure	Implementation
	Use non-reflective conductors.	During construction
	Focus security lighting at staging areas and the material storage yard inward to minimize spillover of light and glare.	During construction
	Require that contractors maintain a clean construction site and remove all construction debris.	During construction
	Use sound-control devices on construction equipment with gasoline or diesel engines and limit construction noise to daylight hours (7:00 a.m. to 7:00 p.m.) to reduce noise impacts.	During construction
	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.	Before and during construction