

# Birch Creek Floodplain Restoration Project

## Mitigation Action Plan

### SUMMARY

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This Mitigation Action Plan is for the Birch Creek Floodplain Restoration Project. The project would fund floodplain restoration activities within about a 37-acre area and along about a one-mile segment (between river miles 1.8 and 2.7) of Birch Creek in Umatilla County, Oregon.

This Mitigation Action Plan 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.

The project sponsor would implement this project, and contractors would build it. *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, Tim Ludington at: toll-free telephone 800-622-4519, direct telephone 503-230-4988, or [tsludington@bpa.gov](mailto:tsludington@bpa.gov).

If you have questions about the mitigation action plan, contact the BPA lead for the environmental review, Jeff Maslow: toll-free telephone 800-622-4519, direct telephone 503-230-3928, or email [jjmaslow@bpa.gov](mailto:jjmaslow@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**

MINIMIZATION AND MITIGATION MEASURE	IMPLEMENTATION
<b>Geology and Soils</b>	
Follow the general standards for well abandonment, new well construction and maintenance under Oregon Department of Water Resources administrative rules to protect subsurface geology.	Before, during, and after construction.
Create a Sediment Control Plan, and include daily monitoring during in-water construction, regular inspection, and recording control measures.	Before and during construction.
Use sediment barriers, such as silt fences, ballast berms, and straw wattles.	During construction.
Minimize the area of disturbance.	During construction.
Apply mulch or straw, or reseed exposed soil areas to reduce erosion and dust and completing work within a given area.	During and after construction.
Sequence construction to minimize soil exposure and erosion potential.	Before and during construction.
Decompact staging areas and decommissioned access roads through subsoiling to a minimum of 18 inches and replanting.	After construction.
Continue monitoring channel formation, particularly to ensure that functioning channels are experiencing sustainable levels of aggradation and erosion.	After construction.
<b>Vegetation</b>	
Wash construction equipment before it is mobilized to the project area to control the spread of non-native species.	Before and during construction.
Minimize disturbance to native vegetation.	During construction.
Employ zero-swing excavators to decrease disturbance areas.	Before construction.
Replant with native seed mix as rapidly as possible following completion of construction.	After construction.
Develop a plan to monitor and maintain native-plant communities and control non-native and invasive plants.	Before construction.
Include mechanical and chemical treatment methods for non-native species.	During and after construction.
<b>Water Resources, Wetlands and Floodplains</b>	
Obtain Clean Water Act permits and apply permit-specific protection measures.	Before and during construction.
Follow Oregon groundwater law and all standards and procedures required under Oregon Water Resource Department administrative rules to minimize impacts to groundwater from contamination, waste, and loss of pressure.	During and after construction.
Monitor turbidity during construction by taking a baseline measurement 100 feet upstream and a second downstream measurement (approximately 50 feet downstream from construction activities) to ensure turbidity does not exceed levels established under ESA consultation with National Marine Fisheries Service (NMFS). If this monitoring indicates that turbidity controls are ineffective, immediately mobilize work crews to repair, replace, and reinforce controls as necessary.	During construction.
Obtain on-site materials for restoration activities to the degree possible.	During design; before and during construction.
Develop a Spill Prevention Control and Countermeasures Plan (SPCC) prior to project initiation.	During design; before construction.
Identify and locate staging areas, storage sites (fuel, chemical, equipment, and materials) potentially polluting activities, and secure them using methods	Before and during construction.

identified in the SPCC 150 feet or more from any natural water body or an adjacent, established road area in a location and manner that would preclude erosion into, or contamination of, the stream or floodplain.	
Use only hydraulic fluids approved for work in aquatic environments that are biodegradable.	During construction.
Wash heavy equipment before delivery to project site to remove oils, fluids, grease, weed seed.	Before and during construction.
Inspect and clean heavy equipment regularly. Repair any leaks immediately upon discovery.	During construction.
Identify pollution and control measures that would be implemented in the SPCC.	During design and construction.
Have a spill containment kit on site at all times during construction.	During construction.
Operate all small engines within a non-permeable container when operating near water.	During construction.
Perform all non-emergency maintenance of equipment off site.	During construction.
Dispose all waste (solid waste, hazardous materials, etc.) off site, as regulated by the state.	During and after construction.
Remove all equipment, materials, supplies, and waste from the project site when complete.	After construction.
Schedule activities and manage water flows and levels to provide dry working conditions as much as possible.	During construction.
Stockpiled soils would be covered if they would be inactive for more than a few days.	During construction.
Machinery for in-water work would be operate in out-of-stream areas as much as possible.	During construction.
<b>Fish and Aquatic Species</b>	
Construct only during in-water work windows (July 1 to October 31) specified by ODFW and NMFS.	During construction
A qualified fish biologist would be on site to conduct fish salvage after isolating work areas according to NMFS protocols for handling ESA-listed fish.	During construction.
Limit the amount of stream that is dewatered to the minimum practicable to accomplish the project objectives. This includes not filling the entire current channel to reduce the mortality.	During construction.
Preserve riparian vegetation to the extent possible during construction	During construction.
Implement all conservation measures relevant to listed anadromous fish and bull trout from HIP Biological Opinions (see Final EA Appendix A).	During construction.
<b>Wildlife</b>	
Schedule tree removal between September 15 and March 1 to protect migratory birds. If tree removal is necessary outside this window, a qualified biologist would conduct a preconstruction survey to determine whether nesting birds are present.	During construction.
If temporary construction areas provide suitable nesting habitat, implement actions that render that potential habitat unattractive to birds.	During construction.
<b>Cultural Resources</b>	
Maintain construction limits 30 feet away from historic property boundaries.	During construction
An archaeological monitor shall be present during ground-disturbing activities occurring within 100 feet of the south and east banks of Birch Creek and areas where work will reach depths below the plow zone and existing utilities such as the buried irrigation pipe. A monitoring report must be submitted to Bonneville and consulting parties after project completion.	During construction and after construction.
Explain cultural resource-related mitigation measures to construction contractors and inspectors, including field marking for avoidance, during	Before and during construction

preconstruction meetings. Depict cultural sites as sensitive areas to avoid in construction documents and on construction maps.	
Implement an Inadvertent Discovery Plan for cultural material (e.g., structural remains, Euro-American artifacts, or Native American artifacts) that details construction crew member responsibilities for reporting in the event of a discovery of cultural material during construction; require work to stop immediately and notification of local law enforcement officials (as required), appropriate BPA personnel, State Historic Preservation Officers, land managers, and affected tribes if cultural resources or human remains are discovered during construction activities.	Before and during construction.
Implement an Inadvertent Discovery Plan for 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). This will include the following procedures: <ul style="list-style-type: none"> <li>• Halt of activities. All survey, excavation, and construction activities shall cease. The human remains shall not be disturbed any further.</li> <li>• Notification. Local law enforcement official, the local government, and the Indian Tribal governments shall be contacted immediately.</li> <li>• Inspection. The county coroner, or appropriate official, shall inspect the remains at the project site and determine if they are prehistoric/historic or modern. Representatives from the Indian tribal governments shall have an opportunity to monitor the inspection.</li> <li>• Jurisdiction. If the remains are modern, the appropriate law enforcement officials shall assume jurisdiction and the cultural resource protection process may conclude.</li> <li>• Treatment. In Oregon, prehistoric/historic remains of Native Americans shall generally be treated in accordance with the procedures set forth in O.R.S. 97.740 and 97.760.</li> </ul>	During construction.
<b>Air Quality</b>	
Apply water from water trucks to excavation areas and set a low speed limit to reduce dust.	Before and during construction.
Limit idling for construction vehicles and machinery.	During construction.
<b>Climate Change</b>	
Limit idling for construction vehicles and machinery.	During construction.
<b>Noise</b>	
Limit construction to daylight hours (typically the hours between 7:00 a.m. and 7:00 p.m.)	During construction.
Fit equipment with best available sound muffling devices to the extent practicable, and check mufflers on a regular basis to ensure they function properly.	Before and during construction.
Review construction phasing to minimize the duration of particularly noisy activities and the overall duration of construction near residences.	Before construction.
<b>Public Health and Safety</b>	
Conduct construction safety meetings to start each workday to review potential safety issues and concerns.	Before and during construction.
Use adequate signage and other routine safeguards for worker and public safety, and especially when utilizing ingress and egress to ensure safe crossing over railroad tracks for vehicle traffic.	During construction.
Require workers to wear all necessary personal protective equipment when working with potentially hazardous materials.	During construction.