

APPENDIX B: Environmental Commitments, Minimization Measures, and Best Management Practices for Task 5 and Task 6

The environmental commitments, minimization measures, and BMPs listed in the table below include practices, techniques, methods, processes, and activities commonly accepted and used throughout the construction and railroad industries that would be implemented as part of the Task 5 and Task 6 projects to facilitate compliance with applicable requirements and that provide an effective and practicable means of preventing or minimizing the environmental effects of an action. Also included are additional commitments that FRA identified through the environmental review process and in consultation with other state and Federal resource agencies (e.g., DAHP, USFWS, NMFS). WSDOT is responsible for implementing all measures identified in this Appendix B.

Environmental Commitment, Minimization Measure, or BMP	Task	Geology and Soils	Air Quality	Water Resources	Wetlands	Ecological Resources and Threatened and Endangered Species	Energy and Climate Change	Noise	Vibration	Hazardous Materials	Land Use and Recreation	Cultural Resources	Section 4(f) Resources	Socioeconomics and Environmental Justice	Aesthetics	Transportation	Public Services, Utilities and Safety
Prepare and follow a Temporary Erosion and Sediment Control (TESC) Plan to minimize potential erosion, surface water runoff, and dust generation.	5, 6	X	X	X	X	X				X							
Prepare and implement an approved Spill Prevention, Control, and Countermeasures Plan (SPCC) during construction. The SPCC would address construction activities related to equipment fueling and maintenance, including types of hydraulic fluids used, emergency spill containment procedures, and spill containment materials.	5, 6			X	X	X				X							
Prepare and implement a construction Stormwater Pollution Prevention Plan (SWPPP) to minimize sediment, spills, and dust from escaping the site.	5, 6	X	X	X	X	X											
Remove sediment prior to any stormwater runoff leaving the site using appropriate BMPs.	5, 6	X	X	X	X	X				X							
Stabilize exposed soils to prevent erosion (e.g., through hydroseeding or installing straw wattles).	5, 6	X	X	X	X	X				X							

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Install a temporary erosion control blanket immediately after seeding, fertilizing, and mulching in site specific locations as developed in the SWPP.	5, 6	X	X	X	X	X				X							
Handle and dispose of all on-site pollutants, including waste materials and demolition debris in accordance with sound practice to avoid contamination of stormwater.	5, 6	X	X	X	X	X				X							
Remove all waste oils and machinery fluids off-site when they are generated. No waste oils or fluids would be stored on site.	5, 6	X		X	X	X				X							
Apply chemicals such as fertilizers and pesticides in accordance with sound practices to avoid loss of chemicals to stormwater runoff.	5, 6	X		X	X	X				X							
Provide separate handling of highly turbid stormwater and contaminated wastewater.	5, 6	X		X	X	X											
Maintain proper surface drainage to unnecessary avoid ponding.	5, 6	X		X	X	X											

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Discharge drain flow back into affected areas, including wetlands, if it is necessary to install seepage drains for fill embankments.	6	X		X	X	X											
Stabilize disturbed areas with native grass and plant species following construction.	5, 6	X		X	X	X											
Prior to the start of construction, on-track vehicle machinery/maintenance, fueling locations, work staging and construction material stockpile areas would be identified and developed in upland locations.	5, 6			X	X	X				X							
Provide secondary containment equal to 150 percent of storage capacity for any on-site fuel storage.	5, 6			X	X	X				X							
If contaminated soils or groundwater are encountered during construction, the materials would be handled according to federal requirements and disposed of at an approved offsite facility.	5, 6									X							

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Cover disturbed soil areas so they would not remain open to become a possible source of offsite sediment pollution (i.e., storm water runoff or construction dust) for more than 7 days. Such areas would be stabilized.	5, 6	X	X	X	X	X											
Design temporary excavation slopes to prevent surface sloughing and shallow land sliding.	5, 6	X															
Design fill and impervious areas to drain away from construction areas and prevent ponding of water and softening of subgrade soils.	5, 6	X															
Limit cut slopes to no than 1.5 horizontal feet to 1 vertical foot (1.5H:1V) or using retaining walls, and including permanent drainage facilities designed for anticipated water flows. Stabilize final slopes to avoid sedimentation to wetlands and surface waters.	5, 6	X		X	X	X											

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Address soil conditions and geologic critical areas related to seismicity per geotechnical study of the Task 5 project. Conduct similar study and address identified issues for final design of Task 6.	5, 6	X															
Clearing/grading limits would be marked with stakes/flagging or high visibility, orange sediment fencing.	5, 6	X		X	X	X											
Import and use only clean fill sources from the suppliers with documentation certifying that the fill does not exceed Washington State soil cleanup standards.	5, 6	X		X	X	X											
Clearing activities will occur outside the nesting season for birds (March 1 through September 1). If clearing occurs during the nesting season, nest clearance surveys and exclusionary measures to prevent nesting will be implemented.	5, 6					X											

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Restrict permanent removal of existing and established native vegetation to what is required for safe signal and crossing sight distances.	5, 6				X	X											
Trim, not grub, existing and established vegetation to the minimum necessary for work access and safety.	5, 6				X	X											
During in-water work, isolate the work site using coffer dams and dewatering. If necessary, install coffer dams and sheet piles with vibratory pile driving methods to minimize underwater noise levels.	5, 6					X		X	X								
Minimize the amount of time spent operating machinery below the Ordinary High Water Line (OHWL).	5, 6					X											

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Monitor erosion control activities, including minimization measures and BMPs, and take corrective action if necessary to ensure protection of riparian areas and waterways. WSDOT will submit reports on its contractor's compliance with and the effectiveness of the erosion control BMPs and minimization measures to NMFS within 60 days of project completion.	5					X											
Monitor turbidity levels in UT3 near the confluence but prior to reaching the Columbia River, where turbidity levels are expected to fall to background levels or below. Report the results of the turbidity monitoring to NMFS within 60 days of project completion.	5					X											
Conduct fish exclusion, electrofishing, and relocation actions in accordance with applicable guidelines and Appendix I of the Biological Opinion from NMFS.	5					X											

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Document all Lower Columbia River (LCR) steelhead and LCR Coho salmon encountered during work area isolation by submitting an In-water Construction Monitoring Report or equivalent to NMFS within 30 days of work area isolation.	5					X											
Minimize damage and vegetation removal to the extent possible while creating and using access points for construction near and below the OHWL.	5					X											
Monitor the benthic recolonization rate below, within and above the culvert placement area, where in-water work was performed.	5					X											
Use vibratory pile driving methods to minimize the potential for sound flanking through sediments to the water column.	6					X											
Prepare and implement a Water Quality Monitoring and Protection Plan to isolate, dewater, and remove fish from the in-water work areas of the Coweeman River and Owl Creek.	5, 6			X		X											

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Design and construct the new BNSF driveway and Owl Creek Sand Company road culverts to meet the NMFS and the WDFW the water crossing design standards.	6					X											
Contain and regularly manage construction waste.	5, 6			X	X	X				X							
Place and regularly maintain portable toilet facilities throughout the project area.	5, 6			X	X	X											
Extend affected culvert sections by the minimum length necessary and design installations for passability of all appropriate fish life stages.	5					X											
Conduct all in-water work during the approved in- water work windows.	5, 6					X											
Handle and relocate all affected fish using the most current WSDOT protocols.	5, 6					X											
Install floating sediment curtains during construction activities within permanently inundated wetland areas to minimize turbidity and temporary degradation to off-channel rearing habitat for ESA listed species.	6				X	X											

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Submit an Underwater Noise Monitoring Plan at least 30 days prior to the start of in-water work; monitor at least one sheet pile. Submit the noise monitoring results to the NMFS within 6 months of the completion of the in-water work.	6					X											
Submit to NMFS a fish removal plan for the off-channel habitat and the cofferdams at least 14 days prior to the start of in-water work. The fish removal plan will follow the NMFS-approved WSDOT Fish Exclusion Protocols and Standards or most recent NMFS-approved guidance as closely as possible; and report the number and species of all listed fish handled during in-water work to the NMFS within 30 days of work area isolation.	6					X											

<p align="center">Environmental Commitment, Minimization Measure, or BMP</p>	<p align="center">Task</p>	<p align="center">Geology and Soils</p>	<p align="center">Air Quality</p>	<p align="center">Water Resources</p>	<p align="center">Wetlands</p>	<p align="center">Ecological Resources and Threatened and Endangered Species</p>	<p align="center">Energy and Climate Change</p>	<p align="center">Noise</p>	<p align="center">Vibration</p>	<p align="center">Hazardous Materials</p>	<p align="center">Land Use and Recreation</p>	<p align="center">Cultural Resources</p>	<p align="center">Section 4(f) Resources</p>	<p align="center">Socioeconomics and Environmental Justice</p>	<p align="center">Aesthetics</p>	<p align="center">Transportation</p>	<p align="center">Public Services, Utilities and Safety</p>
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<p>To minimize disruption and to protect park visitors during construction activities in Louis Rasmussen Day Use Park:</p> <p>Access: A route on Hendrickson Drive capable of supporting emergency services will be maintained at all times during construction .</p> <p>Timing: WSDOT and BNSF Railway will coordinate construction timing and schedule with the Port of Kalama to avoid impacts to recreation use.</p> <p>Maintenance: A future maintenance agreement between BNSF Railway and the Port will be secured prior to constructing the UT3 culvert.</p> <p>Design: Prior to proceeding with final design, WSDOT and BNSF Railway will provide the design and it review with the Port to ensure park resources and visitor safety is addressed with the culvert design. In general, the culvert will be constructed, and following construction the area will be restored, in a manner that conforms to the Port’s Louis Rasmussen Day Use Park Master Plan.</p> <p>Construction: The culvert outfall and natural stream conveyance will be constructed to ensure the safety of park visitors.</p> <p>Construction: WSDOT will oversee the construction and use WSDOT’s construction BMPs to control dust, noise, etc.</p>	5																			
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If ground-disturbing activities encounter human remains or archaeological materials, immediately stop work, secure the area, and contact DAHP, FRA, and the coroner.	5, 6											X	X				
Provide archaeological monitoring during construction activities exceeding depths of 15 feet below surface (approximate depth of natural soil surface) and prepare an Inadvertent Discovery Plan, in consultation with DAHP, to establish procedures for addressing the unanticipated discovery of archaeological resources during construction activities for the UT3 culvert replacement.	5											X	X				

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Should a construction easement be required through the off-site private property where streaked horned lark have been identified, the haul road footprint would be minimized to the greatest extent practical and would be restored back to its preexisting conditions following construction. The haul road will be made unsuitable for nesting prior to the nesting season to minimize effects to nesting birds.	6					X											
Avoid nighttime construction in residential neighborhoods.	5, 6							X	X								
Use specially quieted equipment with enclosed engines and/or high performance mufflers.	5, 6							X	X								
Locate stationary construction equipment as far as possible from noise-sensitive sites.	5, 6							X	X								
Construct noise barriers, such as temporary walls or piles of excavated material, between noisy activities and noise-sensitive receivers.	5, 6							X	X								

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Reroute construction-related truck traffic along roadways that would cause the least noise disturbance to residents.	5, 6							X	X								
Avoid impact pile driving near noise-sensitive areas, where possible. Drilled piles or the use of a sonic or vibratory pile driver are quieter alternatives where the geological conditions permit their use.	5, 6							X	X								
Establish a complaint resolution procedure to rapidly address any noise problems that may develop during construction	5, 6							X	X								
Normal operational maintenance of the tracks (e.g., rail profile grinding, surfacing the track, and replacing ties) would maintain the quality of the track over time, thereby minimizing the potential for increased noise as a result of rail and wheel wear.	5, 6							X									
Spray haul roads with water to reduce dust and particulate matter emissions.	5, 6		X														
If necessary, provide and implement wheel washing to remove particulate matter that vehicles would otherwise carry offsite.	5, 6	X		X	X	X											

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Remove particulate matter (mud and windblown dust) deposited on paved roadways.	5, 6	X	X	X	X	X											
Maintain construction equipment with required pollution-control devices.	5, 6		X				X										
Limit idling equipment to the extent practicable.	5, 6		X				X										
Encourage carpooling of construction workers.	5, 6		X				X									X	
Schedule delivery of materials during off-peak hours to allow trucks to travel to the site with less congestion and at fuel-efficient speeds.	5, 6		X				X									X	
Prepare and implement a project-specific hazardous material management plan to manage potential hazardous material effects from previously identified sites of concern or unreported spills.	5, 6									X							

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Develop and implement a traffic control plan in coordination with local jurisdictions to minimize traffic delays and periodic lane and/or access revisions.	5										X		X	X		X	X
	6										X			X		X	X
If archaeological deposits are encountered during construction, the provisions of the Inadvertent Discovery Plan would be implemented and consultation with the DAHP, tribes, and other interested stakeholders would be initiated to determine proper treatment and/or mitigation.	5, 6											X	X				

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Prior to construction, a pre-construction testing plan will be prepared and submitted to DAHP for review and approval. During construction, to minimize potential effects to archeological resources during construction of the culvert replacement at unnamed tributary 3, a WSDOT archaeologist would monitor construction activities.	5											X	X				
Maintain existing vegetation at the edge of the railroad right-of-way to screen the tracks from potential viewers.	5, 6													X			
Coordinate and work with BNSF to ensure that rail freight delivery meets customer needs during construction.	5, 6														X		

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Post construction schedule near affected crossings and temporary road closures, and provide information about construction schedules and closings to local newspapers for publication or to the local jurisdictions for distribution by mail to residents and businesses in the area. Post project updates, including construction schedules, on the WSDOT website	5										X		X			X	X
Limit the duration and number of utility outages affecting both business and residential customers.	5, 6															X	X
Coordinate with utility purveyors to confirm conflicts, implement strategies to avoid or minimize service disruptions, and provide public notification of service interruptions or disruptions.	5, 6																X

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Post signage alerting workers to the presence of overhead power, telephone, or cable lines to help prevent accidental interference or damage during construction.	5, 6																X
Monitor turbidity during in-water work as specified in the Section 401 of Clean Water Act certification and report the results of the monitoring to NMFS.	6			X		X											
Submit to NMFS the following: 1) Documentation showing the actual acreage of accessible off-channel habitat within the 57 acre wetland property acquisition; 2) documentation of the property acquisition and transfer to the Cowlitz Tribe; 3) the final plans for the off-channel restoration, the upland berm removal, and the new culverts; and 4) a post-construction report on all restoration activities, including post-construction site photos.	6					X											

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Construction personnel will dispose of food waste in a manner that does not attract corvids or other predators.	5, 6					X											
WSDOT will purchase, or have purchased, not less than 3.6 acres of mitigation credits at the Columbia River Wetland Mitigation Bank in Vancouver, Washington.	5				X												
WSDOT will purchase, or have purchased, not less than 6.8 areas of mitigation credits (or another amount required by subsequent USACE Section 404 permitting) from the Coweeman River Wetland Mitigation Bank (CRWMB), and fee acquisition of wetland properties for permanent preservation. If, for any reason, the required mitigation credits are not available at CRWMB, WSDOT will find suitable substitute mitigation in consultation with FRA and USACE. Such substitute mitigation might include permittee-responsible mitigation.	6				X												

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<p>The placement of fill in Wetland B for the new third main line track within the Task 5 project area would reduce stormwater conveyance capacity that could result in flooding. To maintain the current stormwater conveyance capacity, Wetland B would be expanded to offset the placement of the fill material.</p>	<p>5</p>			<p>X</p>	<p>X</p>												
<p>Approximately 0.5 acre of Wetland H would be restored, two existing, narrow culverts would be replaced with a larger, wider culvert at MP 100.29, an existing, narrow culvert under the Owl Creek Sand and Gravel Company access road at MP 101.60 would be replaced, and an upland berm at MP 101.05 would be removed.</p>	<p>6</p>					<p>X</p>											

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WSDOT will monitor and log construction activities (type and duration) specified in the Biological Opinion and adjacent to occupied/suitable habitat for streaked horned larks. A final report describing the type of equipment used, duration of use, and estimated sound levels of construction work to the USFWS within six months of completion of the project work.	5, 6					X											

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<p>A qualified biologist will monitor as much of the occupied/suitable habitat for streaked horned lark within 100 meters of the construction activities specified in the Biological Opinion, as possible, for a minimum of four days during the construction. Details for monitoring and reporting are described in the USFWS Biological Opinion for Task 6 in Appendix D and include:</p> <ul style="list-style-type: none"> i. Observers will document streaked horned lark presence and behavior (e.g., aerial displays, flying, chasing, singing, or any other behavior). ii. The four days will be evenly spaced throughout the duration of construction adjacent to these areas (e.g., construction takes 30 days, space four surveys days evenly over the 30 day period). iii. Surveys will be done according to a survey methodology coordinated with the USFWS. 	<p>5, 6</p>					<p>X</p>											

<p>iv. If the occupied/suitable habitat is not directly accessible, an attempt to monitor from the nearest accessible location will occur.</p> <p>v. Any streaked horned larks detected in and near the construction areas will be noted and their location mapped.</p> <p>vi. The bird surveyor will prepare a monitoring report that includes maps of these use areas and data sheets of the documented behaviors.</p> <p>vii. A final report describing the type of equipment used, duration of use, and estimated sound levels of construction will be submitted to USFWS within six months of completion of construction.</p>																				
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<p>FRA and WSDOT will assess the portion of the Vancouver, B.C. to Portland, OR rail corridor that contains the action area for CWTD habitat connectivity in the Washington State Service Development Plan, to be finalized in 2017. The habitat connectivity analysis will focus on CWTD in the range of CWTD. FRA and WSDOT will request assistance from the Service in assessing habitat connectivity along the rail line in the range of the CWTD. Measures identified in the plan will be implemented in the action area by the FRA, when reasonable to do so, as part of any subsequent rail improvement action funded by FRA.</p>	<p>5</p>					<p>X</p>											

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FRA and WSDOT will coordinate with the USFWS and BNSF to develop and implement an Animal Retrieval Plan that specifies methods and contacts for retrieval of CWTD found dead or injured on the BNSF right-of-way. Such a plan will be completed and implemented by FRA, WSDOT and BNSF by October 30, 2015.	5					X											
FRA and WSDOT will monitor and report the number of passenger train trips that occur each calendar year. Reports will be submitted annually to the USFWS by March 1 of the following year.	5					X											