

FISH

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Unavoidable and Significant Adverse Environmental Impacts

Compliance with laws and implementation of the mitigation measures described above would reduce impacts on fish. **There would be no unavoidable and significant adverse impacts on fish.**

WATER QUALITY

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Construction

Overall, the construction activities associated with the Proposed Action would not be expected to cause a measurable effect on water clarity, water quality, or biological indicators or affect designated beneficial uses.

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Runoff from the project area would be required to meet the terms and conditions of all permits issued for the On-Site Alternative; thus, water quality conditions would be expected to be maintained and **construction would not cause a measurable impact on water quality or affect designated beneficial uses.**

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Overall, the demolition activities associated with the On-Site Alternative would not cause a measurable impact on water quality or biological indicators, or affect designated beneficial uses.

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Impacts on water quality from in- and over-water work would be addressed in the Water Quality Monitoring and Protection Plan to be prepared by the Applicant and approved by Ecology. Impacts on water quality from dredging would be minimized with the preparation and implementation of a dredging plan in compliance with the dredged material management program (DMMP) as required by state agencies (Ecology and Washington State Department of Natural Resources) and federal agencies (the U.S. Army Corps of Engineers [Corps] and EPA). Adhering to a plan developed in compliance with DMMP would minimize water-quality impacts, ensuring that potential impacts are temporary and localized in nature. **No long-term changes in the baseline conditions in the study area would be expected to occur.**

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Impacts on water quality from in- and over-water work would be addressed in the Water Quality Monitoring and Protection Plan to be prepared by the Applicant. Impacts on water quality from dredging would be minimized with the preparation and implementation of a dredging plan in compliance with the dredged material management program (DMMP) as required by state agencies (Ecology and Washington State Department of Natural Resources) and federal agencies (the Corps and EPA). Adhering to a plan developed in compliance with DMMP would minimize water-quality impacts, ensuring potential impacts are temporary and localized in nature. **No long-term changes in the baseline conditions in the study area would be expected to occur.**

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Temporarily Introduce Hazardous or Toxic Materials from Demolition Activities

Demolition of the existing structures in the project area (i.e., cable plant building, potline buildings, and small ancillary structures) has the potential to affect water quality by disturbing soil or building parts and debris that could contain hazardous or toxic materials such as asbestos, lead, and concrete dust, which could cause harm to aquatic environments and organisms. This impact would be minimized by the collection and removal of all concrete and other structural debris and the collection and treatment of all stormwater from the site prior to discharge to surface waters. The implementation of best management practices in compliance with the NPDES Construction Stormwater Permit that would be obtained for the Proposed Action would reduce the potential for demolition-related pollutants to enter and contaminate surface waters. **Overall, the demolition activities associated with the Proposed Action would not be expected to cause a measurable effect on water quality or biological indicators, or affect designated beneficial uses.**

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Hazardous or Toxic Materials

Demolition of the existing structures (cable plant building, potline buildings, and small ancillary structures) in the project area has the potential to affect water quality by disturbing soil or building parts and debris containing hazardous or toxic materials such as asbestos, lead, and concrete dust, which could cause harm to aquatic environments and organisms. This impact would be minimized by the collection and removal of all concrete and other structural debris and the collection and treatment of all stormwater from the site prior to discharge to surface waters. The implementation of best management practices in compliance with the NPDES Construction Stormwater General Permit would be obtained for the On-Site Alternative, which would reduce the potential for demolition-related pollutants to enter and contaminate surface waters. **Overall, the demolition activities associated with the On-Site Alternative would not cause a measurable impact on water quality or biological indicators, or affect designated beneficial uses.**

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Introduce Contaminants from Coal Spills and Coal Dust

However, at a maximum deposition rate of 1.99 g/m²/year adjacent to the project area, and at the minimum flow² recorded over the 23-year period of record for 1 day, coal dust deposition directly into the river (assumed to be an area of approximately 3 million square meters [1.16 square miles]) in the study area would result in a change in suspended sediment concentration of less than 1 part per 10 billion (0.000075 milligrams per liter [mg/L]). **This change would not be measureable and is not anticipated to increase turbidity or water temperature, or affect marine organism functions (e.g., respiration, feeding).**

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Contaminants

Continued discharges at existing levels would not cause a measureable increase in chemical indicators in the Columbia River and would not cause a measurable impact on water quality or biological indicators or affect designated beneficial uses. Any changes in concentrations of these pollutants that may occur during operations would be addressed under the NPDES Industrial Stormwater Permit to ensure water quality standards continue to be met post discharge to the Columbia River.

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If coal dust from the project area accumulated without being disturbed throughout the dry season (assumed to be 120 days long), the anticipated change in TEEC concentration for the minimum recorded flow over one day would be on the order of 0.0000000001 to 0.000000000001 g/L, or 0.0001 to 0.000001 ppb. **Again, this change would not be measureable and is not anticipated to affect human health or affect marine organism functions (respiration, feeding).**

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If coal dust from the project area accumulated without being disturbed throughout the dry season (assumed to be 120 days long), the anticipated change in TEEC concentration for the minimum recorded flow over one day would be on the order of 0.0000000001 to 0.000000000001 g/L, or 0.0001 to 0.000001 ppb. **Again, this change would not be measureable and is not anticipated to affect human health or affect marine organism functions (respiration, feeding).**

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In summary, coal dust from operation of the Proposed Action is not expected to have a demonstrable effect on water quality. Additionally, the potential risk for exposure to toxic chemicals contained in coal (e.g., PAHs and trace metals) would be relatively low as these chemicals tend to be bound in the matrix structure and not quickly or easily leached.

Coal spilling into the Columbia River could occur during vessel loading operations. Cleanup efforts would be implemented quickly and it would be expected that the majority of the spilled coal would be recovered. **They would also not be expected to cause a measurable impact on water quality or biological indicators, or affect designated beneficial uses.**

Therefore, impacts of dispersed coal, coal dust, and coal dust constituents on water quality are anticipated to be low.

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In summary, coal dust from operations of the terminal is not expected to have a demonstrable effect on water quality. Additionally, the potential risk for exposure to toxic chemicals contained in coal (e.g., PAHs and trace metals) would be relatively low as these chemicals tend to be bound in the matrix structure and not quickly or easily leached.

Coal spilling into the Columbia River could occur during vessel loading operations. Cleanup efforts would be implemented quickly and it would be expected the majority of the spilled coal would be recovered. **They would also not be expected to cause a measurable impact on water quality or biological indicators, or affect designated beneficial uses.**

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Stormwater Runoff

Continued discharges at existing levels would not cause a measureable increase in chemical indicators in the Columbia River and would not cause a measurable impact on water quality or biological indicators or affect designated beneficial uses.

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Unavoidable and Significant Adverse Environmental Impacts

Compliance with laws and implementation of the measures and design features described above would reduce impacts on water quality. **There would be no unavoidable and significant adverse environmental impacts on water quality.**

SURFACE WATER

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Use Water for Operations

Operations of the Proposed Action would use water from rainfall runoff and on-site groundwater wells for dust suppression, washdown water, and fire-protection systems. Rainfall would be collected and treated and either stored in a detention pond to be constructed as part of the Proposed Action, or discharged to the Columbia River through the existing Outfall 002A. The Proposed Action would not withdraw water from the Columbia River or other surface waters in the study area to meet operations water demands. **Thus, no impacts on surface water and floodplains are anticipated related to water needs or use during operations.**

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Water Use

The terminal would use water from rainfall runoff and on-site groundwater wells for dust suppression, washdown water, and fire-protection systems. Rainfall would be collected and treated and either stored in a detention pond or discharged to the Columbia River through the existing Outfall 002A. Water would not be drawn from the Columbia River or other surface water in the study area for operations. **Thus, no impacts on surface water and floodplains are anticipated during operations.**

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Discharge Less Water to CDID #1 Ditches

Basins 2, 3, and 5 of the existing water management system at the project area currently discharge to CDID #1 drainage ditches. Once constructed, most of the project area would no longer drain to the CDID #1 ditches, with the exception of a portion of the access overpass and frontage improvements, which would continue to drain to the ditches. All stormwater and excess dust suppression water within the footprint of the project area would be collected, conveyed, treated, and either stored on site for reuse or discharged to the Columbia River. The ditches would remain as they exist today. Therefore, no negative impacts on the CDID #1 ditches would occur under the Proposed Action. **However, less water would be discharged to the ditches from the project area. As discussed below, this could have a beneficial indirect impact on the CDID #1 ditches.**

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Discharge to CDID #1 Ditches

Basins 2, 3, and 5 of the existing water management system at the project area currently discharge to CDID #1 drainage ditches. Once constructed, most of the project area would no longer drain to the CDID #1 ditches, with the exception of a portion of the access overpass and frontage improvements. All stormwater and excess dust suppression water within the project area would be collected, conveyed, treated, and either stored on site for reuse or discharged to the Columbia River. **Therefore, no negative impacts on the CDID #1 ditches would occur, and**

less water would be discharged to the ditches. As discussed below, this could have a beneficial indirect impact on the CDID #1 ditches.

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The CDID #1 ditches are much smaller than the Columbia River; therefore, changes to the volume of surface water discharged from the project area could potentially have a measurable effect on the capacity of the ditches. However, the proposed changes would reduce flow to the ditches from 88 million to 26.3 million gallons per year. This could be beneficial to the ditches because there would be additional capacity for drainage. As mentioned in Section 4.2.4.2, *Columbia River and Cowlitz River Floodplain*, the combined capacity of the CDID #1 pump stations is 700,000 gallons per minute. These pump stations are instrumental for removing stormwater and preventing local and area-wide flooding. **Any reduction in discharge to the CDID #1 ditch system could provide a benefit during significant rain events.**

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Unavoidable and Significant Adverse Environmental Impacts

Compliance with laws and implementation of the mitigation and design features described above would reduce impacts on surface waters and floodplains. **There would be no unavoidable and significant adverse environmental impacts on surface waters and floodplains.**