



Westridge Marine Terminal Environmental Protection Plan

Westridge Marine Terminal Environmental Protection Plan: Overview



- **What**

- The Environmental Protection Plan (EPP) communicates environmental procedures and mitigation measures to field/construction personnel
 - Provides instructions for carrying out construction activities in a manner that will avoid or reduce adverse environmental effects
 - Serves as reference information for environmental inspection staff to support decision-making
 - Identifies mitigation measures to be implemented during construction activities
 - Provides direction to more detailed information (*i.e.*, resource-specific mitigation, management and contingency plans)

- **When**

- Project planning, construction, cleanup and reclamation

Westridge Marine Terminal Environmental Protection Plan: Mitigation Overview



- **Pre-Construction:** Protect environmental resource features
 - Identify and mark environmental resources
 - Ensure all required permits and approvals are in place
 - Mark all approved access

- **Construction:** Avoid or reduce adverse effects on environmental and socio-economic resources

- **Stormwater Management**
 - Site-specific Erosion and Sediment Control Plan to prevent runoff from entering the marine environment
 - Monitor erosion and sediment control measures
 - Implement water quality monitoring program for turbidity for all water discharges from the site

- **Wildlife, Rare Plants and Weeds**
 - Clear outside the migratory bird nesting period
 - Suspend activity if previously unidentified resources (rare plants or wildlife) are encountered

Construction Mitigation (cont'd)

Marine Water Quality

- Install turbidity curtain around work area during in-water excavation of rip rap
- Monitor turbidity outside of the turbidity curtain to ensure compliance with water quality guidelines
- Isolate all concrete work from the marine environment; collect all concrete contact water and monitor pH prior to discharge

Marine Fish and Fish Habitat

- Complete nearshore works during DFO least risk work window (Aug. 16 to Feb. 28):
- In-water excavation of rip rap
- Installation of bulkhead wall associated with the foreshore extension
- Install bubble curtains around piles during impact pile driving to reduce underwater noise/pressure levels

Marine Mammals

- Implement a marine mammal exclusion zone during impact pile driving
- Exclusion zone defined as area where underwater noise exceeds 160 dB re: 1 μ Pa
- Suspend pile driving if a cetacean or marine mammal species at risk is observed within exclusion zone
- Monitor underwater noise during impact pile driving to allow for changes to size of exclusion zone

Cleanup and Reclamation

- Re-establish the construction site to a stable condition acceptable for operational requirements



Burnaby Mountain Tunnel Environmental Protection Plan

Burnaby Mountain Tunnel EPP: Overview



- **What**

- The EPP communicates environmental procedures and mitigation measures to field/construction personnel
 - Provides instructions for carrying out construction activities in a manner that will avoid or reduce adverse environmental effects
 - Serves as reference information for environmental inspection staff to support decision-making
 - Identifies mitigation measures to be implemented during construction activities
 - Provides direction to more detailed information (*i.e.*, resource-specific mitigation, management and contingency plans)

- **When**

- All phases of the Project, from planning, through construction and reclamation and operations

Burnaby Mountain EPP: Mitigation Overview



Pre-Construction: Protect environmental resource features

- Identifying and marking environmental resources
- Delineate the construction site to prevent trespass
- Mark all approved access

Construction: Avoid or reduce adverse effects on residents and socio-economic and environmental resources

Wildlife, Rare Plants and Weeds

- Clear outside the migratory bird nesting period
- Suspend activity if previously unidentified resources (rare plants or wildlife) are encountered at the entry and exit points of the tunnel
- Adhere to the Project Weed and Vegetation Management Plan

Stormwater Management

- Site-specific erosion and sediment control plan to prevent runoff from entering natural drainage systems, watercourses or wetlands

Groundwater Management

- Prevent spills
- Dewater excavation sites

Construction Mitigation (cont'd)

Noise [NEB Condition 86: BMT Construction Noise Management Plan]

- Adhere to all applicable federal, provincial and municipal guidelines and legislation regarding noise management, where practical
Where compliance is not possible, abide by applicable permit/approval conditions.

Air Emissions [NEB Condition 52 Air Emissions Management Plan]

- Control dust via Particulate Matter Management Plan
- Public complaint response process

Traffic Management

- Develop a traffic management plan for hauling of tunnel waste materials

Cleanup and Reclamation

- Re-establish the construction site to meet safety and operational requirements