

INDIGENOUS MONITOR OVERVIEW REPORT

Month: January 2023

Project Region: Lower Mainland

Indigenous Monitor days on-site: 20

**Kilometre Posts (KPs) monitored:
Spread 7 KP 1165–1176**

Indigenous Monitors on the Trans Mountain Expansion Project – Overview

The Trans Mountain Expansion Project (the Project or TMEP) has retained Indigenous Monitors as integrated members of its construction Environmental Inspection team. Indigenous Monitors work with Environmental Inspectors to monitor compliance with mitigation measures to minimize impacts to traditional resource use and cultural/heritage impacts during construction. Indigenous Monitors have a strategic role in providing traditional knowledge directly and pragmatically to construction oversight practices and bring an Indigenous lens to daily environmental inspection activities.

This Overview Report provides highlights of the Indigenous Monitors' day-to-day work and key mitigation measures observed by the Monitors related to Project construction in the Lower Mainland. The purpose of this report is to provide an update on Indigenous Monitor activity to Indigenous groups.

During this reporting period, key Project activities in the Lower Mainland region involving Indigenous Monitors include construction at Westridge Marine Terminal (WMT), Burnaby Terminal and on Spread 7B. Activities included erosion and sediment control measures, WMT rock reef complex offsetting, underwater noise monitoring and fish deterrents, and monitoring at the Colony Farm Regional Park temporary workspace.

The Project Construction Progress Report (Condition 106) for January 2023, which reports environmental events and deficiencies in Tables 4 and 5 respectively, is found [here](#).

The Project has a process for sharing information related to potential Traditional Land Use (TLU) and Heritage Resource chance finds during construction. [Protecting TLU and Cultural Heritage Resources Fact Sheet \(link here\)](#) provides an overview of the chance find communication process. Applicable Indigenous groups are notified and engaged directly on potential chance finds.

For more information: email info@transmountain.com or call 1.866.514.6700.

Erosion and Sediment Control

Erosion and sediment control (ESC) measures are used to reduce erosion and limit sediment transport across construction sites to sensitive environmental features.

At Burnaby Terminal and WMT, the Indigenous Monitors conducted inspections to verify ESC measures throughout the terminals were installed effectively as prescribed in the Environmental Protection Plan. This included inspecting berms and exposed slopes were securely covered with polyethylene sheets. Ditches and other water conveyance measures throughout the terminal and along the perimeter of the Project footprint were also inspected to ensure they were free of construction materials and debris.

At Burnaby Terminal, the Indigenous Monitor observed and inspected road bars installed intermittently along active gravel roadways throughout the site. The road bars divert rainwater from the roads into drainage ditches flowing into the Burnaby Terminal water treatment plant. They also observed that sediment and debris was removed from check dams as required.

At Burnaby Terminal, the Indigenous Monitor observed the Eagle Creek and Silver Creek tributary realignment diversions were functioning as intended. No concerns were observed as the water being realigned was flowing well and as intended to mitigate any potential sediment migration.



Hydrovac cleaning out sediment and debris from a check dam on Lower Road at Burnaby Terminal.

Underwater Noise Monitoring and Fish Deterrents

Offshore pile driving activities resumed at WMT. The marine derrick barges installed steel piles using vibratory drivers and impact hammers. Standard mitigation measures during all in-water pile driving activities include monitoring underwater noise levels using hydrophones to verify noise levels are below the applicable thresholds for the protection of fish and marine mammals. This is a requirement of the Fisheries and Oceans Canada *Fisheries Act* Authorization for the Project.

During impact pile driving, noise shrouds and underwater bubble curtains are installed around the pile to reduce underwater noise levels. Analysis of



The DB General preparing for impact pile driving at Berthing Dock 9 at WMT.

underwater noise data indicates the use of two bubble curtains (primary and secondary) results in greater noise reduction than the primary bubble curtain alone.

To further mitigate potential impacts to fish, deterrent systems that combine high-intensity light with a low-frequency acoustic signal are deployed prior to impact pile driving. The purpose of the deterrent systems is to temporarily deter fish from the immediate area around the pile where elevated noise levels generated by impact pile driving could harm fish. The deterrent systems are used for all offshore impact pile driving.

During impact pile driving, marine mammal monitors are deployed and if a marine mammal is observed, pile driving activities are suspended for 30 minutes.

The Indigenous Monitor at WMT has been trained in the operation of the fish deterrent systems and inspected in-water pile driving activities to verify all relevant environmental protection measures and mitigations were being implemented and functioning properly.

WMT Rock Reef Complex

TMEP is constructing 10,441 m² of rock reef habitat in the form of a rock reef complex to offset the loss and alteration of 6,007 m² of rocky intertidal and subtidal habitats within the expanded foreshore terminal area. The rock reef complex will be constructed within the boundary of Trans Mountain's terminal water lot. The rock reef complex will be composed of three different types of reef nursery, integrated and adult reefs, designed to provide rocky habitat for juvenile and adult inshore rockfish. Reefs are expected to benefit a wide variety of species that are targeted by or support CRA fisheries. The design of the rock reef complex includes channels of soft-sediment habitat expected to be used by benthic invertebrates such as Dungeness crab for foraging at the reef edge and demersal finfish to forage in soft-sediment areas and seek refuge in the reef matrix when threatened.

TMEP has participated in consultation specific to the proposed habitat offsetting with Vancouver Fraser Port Authority (VFPA), municipal governments, First Nations, non-governmental organizations, members of the scientific community and the public, and has incorporated feedback into the offsetting design.



Rock reef bed matting being placed in one of the nursery reefs at WMT.



Resource Specialist taking water samples near the adult reef area.

At WMT, the Indigenous Monitor observed rock reef bed matting being placed in the reef nursery area. They also observed the Resource Specialist take water samples near the adult reef area inside the turbidity curtain.

Site Housekeeping

The Indigenous Monitors in the Lower Mainland regularly conduct inspections of construction areas for general housekeeping measures. This includes observing and documenting waste management practices and hazardous materials containment, as well as inspecting that spill kits are effectively placed and stocked with absorbent materials.

The Indigenous Monitors conducted housekeeping inspections at Burnaby Terminal and WMT. Indigenous Monitors also check that secondary containment is placed underneath machinery and stored petrochemicals such as paint and gasoline. At WMT, the Indigenous Monitor inspected the marine loading platforms for site housekeeping measures. No environmental concerns were identified.



Secondary containment placed under machinery inspected at WMT.

Colony Farm Regional Park Temporary Workspace

The Colony Farm Regional Park Temporary Workspace near KP 1167 is being used as a staging area for drilling equipment and pullback section for the Fraser River horizontal directional drill (HDD).

The Indigenous Monitor observed and inspected various environmental mitigations at the temporary workspace, including environmental feature signage, ESC measures, site housekeeping and secondary containment for equipment and machinery. No environmental concerns were identified.

The pipe had successfully been pulled from the HDD borehole at Colony Farm under the Fraser River through to the south side entry site. The Indigenous Monitor observed the removal of protective wooden matting that was used as a portable platform during pipeline construction to create paths for equipment, protect environmental features and avoid ground disturbance. During the removal of matting, the



Environmental signage inspected at Colony Farm.

Indigenous Monitor inspected for potential ground disturbance and potential chance finds.

The Indigenous Monitor identified a potential chance find during matting removal and participated in the implementation of the Heritage Resource Site Discovery Contingency Plan. The site was buffered to allow for ongoing assessments with the Resource Specialist, IM and EI. As part of the Contingency Plan, Trans Mountain initiated the communication process with Indigenous groups related to notification and engagement on potential TLU and Heritage Resources chance finds. The archaeologist determined the find was not an archaeological site and flagging was removed.



Gravel being removed after protective wooden matting had been lifted at Colony Farm.

Indigenous Monitor Request Dashboard

Indigenous Monitors are provided daily on-site field support from Environmental Inspectors and office support from Indigenous Monitor Coordinators. Indigenous Monitors can also make specific support requests or submit questions through their daily report. Examples include but are not limited to requests for Project reports, input from an environmental resource specialist or on-site support from an Elder or other cultural knowledge holder. Requests and their completion status are noted below.

Status	Rolling Total and Type of Requests				
	Project Reports/ Documents	Environmental Resource Specialists	Elder/Cultural Knowledge Holder	Other	Total
Total	4	0	0	0	4
Fulfilled	4	-	-	-	4
Outstanding		-	-	-	

This report has been reviewed by the active Indigenous Monitor(s)


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