INDIGENOUS MONITOR OVERVIEW REPORT

Month: November 2022

Project Region: Lower Mainland

Indigenous Monitor days on-site: 21

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, construction housekeeping and monitoring at the Colony Farm Regional Park Temporary Workspace.

The Project Construction Progress Report (Condition 106) for November 2022, 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 polyethene sheeting or hydroseed. 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 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 transfer.

Polyethlene sheeting effectivly placed a berm near Lower Road at Burnaby Terminal.

Eagle Creek diversion entry point at Burnaby Terminal observed to be flowing well.

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

The DB General lowering the noise shroud for pile driving at WMT.

To further mitigate potential impacts to fish, 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, four 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 in November, performed regular inspections of the in-water pile driving activities to verify all relevant environmental protection measures and mitigations were being implemented and functioning properly.

Lowering the bubble curtain for pile driving at WMT.

A marine mammal monitor observing during impact piling activities at WMT.

Colony Farm Regional Park Temporary Workspace

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

To execute the Fraser River HDD, Trans Mountain's contractor requires a temporary workspace for staging pipe, to weld and coat the drag section for the new pipe that will be pulled under the Fraser River.

The Indigenous Monitor observed and inspected various environmental mitigations at the temporary workspace, including environmental feature signage, erosion and sediment control measures, site housekeeping and secondary containment for equipment and machinery. Inspections included ensuring signage posted at watercourses near the entry and exit pits, including the Fraser River (BC780), Port Mann Slough (BC780.1) and Unnamed Channel (BC780A1), were sturdy and visible.

Watercourse BC780A1 signage inspected at CWP 62.

In November, the pipe was pulled from the HDD borehole at Colony Farm under the Fraser River through to the south side entry site. After successfully pulling the pipe, the Indigenous Monitor observed the beginning stages of demobilizing machinery and equipment from the borehole pit area at Colony Farm. Observations included removal of the mud shaker and holding tanks. Material in the holding tanks was removed from the site for disposal at a Trans Mountain-approved facility. The Indigenous Monitor also observed that proper secondary containment measures were applied during the de-mobilization of equipment.	 Roadway installed around the HDD drill bore-pit hole. ESC measures along the roadway were intact and functioning to avoid sediment from entering watercourse BC780A1.

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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