

Environmental Surveillance Activity

Project Name	Trans Mountain Pipeline Reactivation
Parks Canada Internal File	J17-015
Project Proponent	Trans Mountain Pipeline ULC (TM)
Prime Contractor	Simpco Leducor Limited Partnership (SLLP)

Event Type	Parks Canada - IAMC Joint Field Inspection
Date	June 29 – 30, 2020
Location	Various locations within Jasper National Park
Environmental Surveillance Officer(s)	<ul style="list-style-type: none"> • Jasper National Park ESO • Indigenous Monitor - Lac St Anne Metis • Indigenous Monitor – Ermineskin Cree Nation
TM or SLLP representative	<ul style="list-style-type: none"> • Trans Mountain Indigenous Monitor (accompanied inspection for all of Day 2)
Description of Field Inspection	<ul style="list-style-type: none"> • Site visits of Construction yard • Post Construction sites along Caledonia and Snaring • Active construction Highway 16
Activities Monitored	<ul style="list-style-type: none"> • Construction • Construction yard operation and maintenance • Restoration

Observations
June 29, 2020

June 29, 2020 JNP ESO

- Meet IMs, group discussion about safety and COVID precautions required during inspection.
- Reviewed map sheets and discussed general construction works for digsites, sleeves and natural hazard remediation. Reviewed current project activities and developed a plan for site visits.

**Trans Mountain Construction Yard
KP 369**

- IMs repeated safety orientation (15-minute video). Although they had done it already for TMX, Reactivation is a different project from TMX and SLLP wished to have record of completion for the reactivation portion.
- Inspected yard. Generally tidy. Perimeter fenced for wildlife. No loose food waste, garbage or wildlife attractants seen. Waste bins were clean and well labelled, materials separated into correct bins. Topsoil piles covered for wind and water erosion. Fuelling area clean, no evidence of spills, drive-on grated catchment areas in good order, fire extinguishers up to date, large barrel and bag spill kits on site. Spill trays under stationary equipment, fuels and oils in secondary containment.

**Digs 26, 27, 28; Sleeves 10, 11, 12; Caledonia Temporary Bridge
KP382 – 392.9
Post-Construction/Restoration**

- Discussed overall seeding and planting efforts so far in all sites.
- Ermineskin IM investigated nearby culturally sensitive area to confirm area was not impacted by construction activities.
- Noted that high water flowing over the digsites (D26, 27 and Slv 10) seems to be helping seeds germinate, most of the rootballs still alive. No issues with erosion of topsoils at these sites as water is slow moving or standing.
- Dig 27 streambed (non-fish bearing stream) has coir wrapped banks with willow stakings starting to leaf out and grasses coming up.
- Caledonia bridge location – willows and alders that were cut (not grubbed) for bridge placement are regenerating well, lots of new suckers and leaves. No impacts to bed or banks of creek noted (bridge sat high up on the top of the bank, there was no digging in or cutting of the banks to set or remove the bridge – all done on top of snow and ice).
- Dig 28/Slv 11-12 was one continuous site – dry, no overland flows. Veg reestablishment is slower, some grasses and forbs starting to come up. Recently re-seeded by Trans Mountain. Noted some cracking in the soil above the pipe – observation passed on to TM Environment.
- Noted other archeological and historical sites in the area were off the digsite footprint and not impacted.
- All flagging, staking and site identifiers have been removed.

**Dig 24
KP380.1**

- Post-construction, restoration
- Discussed use of coarse woody debris left on site to create microsites for vegetation regeneration. Not much growing yet, fairly dry site.
- Hiking trail along south boundary of dig being used again by hikers and bikers.
- All flagging, staking and site identifiers have been removed.

Daily Debrief

- Debriefed the day's inspection, reviewed any concerns as well as things that were positive.
- Made plan for the following day's inspection.

June 29, 2020 | Lac St. Anne Metis Indigenous Monitor

TMX Yard

- Labeling on waste disposal containers present.
- Proper disposal of correct waste materials and well organized (pic # 1,2).
- Extra containment under fuel tanks and around fueling area (pic # 3).
- All machinery observed had proper second containment (pic # 4).
- Spill kits present in machinery observed.
- Yard was clean and well organized.
- Fencing around yard in place to keep out wildlife.

Caledonia Site

- Dig 26 (pic #5)
- Dig 27 - deer and elk tracks observed in the area.
- Dig 28 – some grass starting to grow.
- Fractured ground running along right of way.



Picture #1



Picture #2



Picture #3



Picture #4



Picture #5

June 29, 2020 | Ermineskin Cree Nation Indigenous Monitor

Stop 1 KP 369

- Mobilized to the Trans Mountain construction yard, Went over site orientation
- introductions between IMs and Parks Canada
- Observed the yard everything looks good with no concerns

Stop 2 KP 382-382.9

- Mobilized to dig site 26 observed the area everything is growing back to the original form. Also followed up on the rare trees and mushrooms that Ermineskin has identified last summer no concerns no entry or damage

Mobilized to sleeve 10 no concerns everything is in place and growing back

Dig #10 looks good no concerns willows and grass regrowing

Mobilized to dig 28 sleeves 11,12 no concerns seeding is in place growing back to its form

Observations

June 30, 2020

June 30, 2020 | JNP ESO

Parks Canada Compound Parking Lot

- Meet with the Trans Mountain Indigenous Monitor (TM-IM). IAMC Monitors and TM-IM spoke about the project.
- TM-IM would accompany us on the inspection for the day.
- Reviewed COVID-19 precautions

Dig 18

KP 371.8

Active construction

- Excavation completed, pipe exposed and sandblasted, waiting on results of Non-Destructive Examination (NDE).
- Access off highway is matted – no stripping of veg or soils.
- Excavation fencing secure, open excavation warning signs in place.
- Topsoil pile tarped against erosion
- Subsoil pile located on top of mats over geo, no soils escaping onto vegetation or topsoils. Area underneath not stripped.
- Smoking area and muster points clearly signed, fire extinguisher up to date and available.
- Approved workspace shrunk down to a minimum. They did not strip or use ~15m x 18m section nearest to Sucker Creek. No riparian vegetation removed, no impacts to creek.
- Spill trays underneath excavator.
- Noted that stakes indicating avoidance of nearby archaeological site were on the ground. Discussed archaeological and historical sites in area with TM-IM.
- Traffic Control Plan in place and being followed.
- No wildlife on site, though JNP ESO received a text from TM Environmental Inspector that a group of sheep was on the highway and walked past Dig 18 worksite and continued feeding in adjacent area. No concerns. Noted tracks of elk and sheep on highway shoulder between Digs 18 and 19.

Dig 19

KP 372.1

Active construction

- Received tailgate briefing from Dig 19 foreman, including site safety, communication with equipment operators, steep slope awareness, confined space awareness, COVID-19 expectations, PPE requirements and fuelling procedures.
- Hiked above rock outcrop to look at anchor configuration for temporary rockfall protective mesh. One douglas fir tree identified by TM arborist (from Estsek Environmental Services) as potentially hazardous is tied back as per Parks Canada request to retain the tree if at all possible, rather than cutting it down. Staking in place at the edge of workspace to mark 50m boundary around Swallow nest – the anchor trees are just within this boundary, but main construction is outside and at the bottom of a steep slope. No impacts to swallows is anticipated.
- Worksite generally tidy, no materials, soils, garbage etc. encroaching or nearby creeks. No wildlife attractants seen.
- Excavation almost complete – involves hydrovaccing, jackhammering and hand digging to install trench boxes. This dig is very confined between a rock outcrop and Highway 16. Trench boxes are installed to maintain steep ditch walls and protect workers.
- Gas generator fueling jackhammers – in secondary containment with fuel volume of each generator and spill tray capacity clearly labelled. Containment meets the 110% rule.

- Traffic Control Plan in place and being followed.

Snaring River South

KP 360.1

Post Construction, Restoration

- Followed COVID-19 precautions for cleaning and PPE
- All campground signage, garbage bins etc. have been replaced as required
- Access road beyond the campground was matted for construction. Grasses, shrubs and forbs growing well, difficult to tell this was an access route.
- Worksite area recently reseeded – so far very little growth. Site is quite wide open and dry, rocky substrate.
- Riparian – grasses coming up through coco matting, willow stakes starting to leaf out, some spruce rootballs that were salvaged are dead or dying. Northwest section (directly over pipe) does not seem to be growing, very little grasses emerging.
- No recent sign of wildlife seen.

Snaring River North

KP 360.1

Active construction

- No workers on site.
- Mat road access in good shape.
- Pipe replacement complete and backfilled – bellhole excavation remains open for pushing mud-plugs along the rest of the line.
- High water flows. Small side channel (usually dry) is flowing, but not impacted by construction – outside of workspace.
- Bank repair complete (prior issue with excessive loads of rip rap boulders over bank an no restoration. SLLP removed excess large rock about the water line, spread topsoil and seeded/willow staked to blend ditch line in with adjacent banks). Some stakes started to leaf.
- Topsoil pile tarped and surrounded by silt fence for erosion control.
- Excavation fenced with fast fence. One panel is tilted out to make room for de-watering hoses – potential spot where wildlife could get inside fence.
- Five trash pumps for dewatering set up. All pumps sitting in secondary containment trays, but trays are 1/2 full of rainwater. Pumps are >30m from Snaring main channel, but <30m from small side channel. Issue with trays unable to handle potential spills (unmaintained) and storing fuels near water.
- Material storage area – topsoil replaced, recently seeded, very little regrowth so far. Noted fresh coyote and deer tracks.
- Dewatering area – located >100m from river in forested area adjacent to workspace. Hoses secured to cloth filter bags with additional filter bag beneath. No issues with sedimentation on top of vegetation, or with erosion.

Vine Creek

KP 351.3

Pre-Construction

- Scheduled for January 2021. Workspace has been staked, pipes daylighted (by hand) and backfilled.
- Discussion about planned work activities and avoiding impacts to adjacent forest.

Inspection debrief and closure

- Reviewed sites visited, issues identified and actions to be taken to resolve.
- Discussed the format of the inspection, value in visiting post-construction sites, assessing restoration efforts and success.
- Discussed possible changes to inspection format, value in meeting with TM-IM or TM environment or construction reps.
- Discussed reporting responsibilities.
- Concluded inspection, IMs travel back to respective communities.

June 30, 2020 Lac St. Anne Metis indigenous Monitor

- TMX indigenous monitor commented that he had no concerns.

Dig 18

- rig mats being used for equipment with geotext underneath (pic #6).
- Fencing around exposed hole with signage for open excavation.
- Elk and deer tracks in the area.

Dig 19

- Coal seam around pipe is making it harder to expose.
- Proper fencing and signage around open excavation (pic # 7).
- Site is right beside a rock face with netting on the face to hold back any loose debris.
- Douglas Fir tree on top of rock face is tethered back for safety and to preserve the tree (above work site).

Snaring River Crossing South Side

- Coconut matting along rivers edge for erosion and grass growth (pic # 8 & 9)
- The larger area away from the river had recently been reseeded, no grass sprouting yet
- TMX have removed some larger rocks that had previously been placed in the contributory as debris had been hanging up on them

Snaring River Crossing North Side

- Fencing around open excavation needed to be fixed as mid-sized animals were able to make it through. Parks Canada sent an email to TMX regarding this issue and it was addressed the following day.
- Secondary containment under trash pumps
- Rig mats in place from main road to open excavation (approximately 2 miles)

Vine Creek

- Flagging and survey stakes in place
- To protect some trees, flagging had been placed on them (large and small birch)
- No other activity in this zone as of yet

Conclusion

During the TMEP/Jasper field activity, the overall condition of all of the sites visited were well maintained and organized, free from any garbage or debris that isn't naturally on the land.



Picture #6



Picture #7



Picture #8



Picture #9

June 30, 2020 | Ermineskin Cree Nation Indigenous Monitor

- Mobilized to parks compound meet up with trans mountain IM touch base on some of the dig sites

Stop 3 KP 371.8-372.1

- mobilized to dig 18 to observe and looked no concerns
- Signed on to tailgate on dig 19 in progress and foremen said it's going slow due to coal and rocks, foremen talk about covid procedures two-meter apart and masks if your riding in the same vehicle
- observed the dig site and everything is doing smooth and no concerns

KP 360.2

- Mobilized to Snaring river to look after the pipe that they layer down
- Coconut fabric along with the rebuild of banks at Snaring to stabilize the bank trees and grass growing back no concerns
- Mobilized to the north side of Snaring looked at dewatering stations pumps in secondary containment's so that's good the only concerns are they need to fix the fence and drain out the water that's built up inside the containers where pumps are in.
- Corrective action was in place a crew came and emptied the drip trays and removed pumps

KP 351.3

- The Vine creek was observed, everything was good flagging and markers are in place; isolation on the creek will be done this coming winter. They couldn't do it during summer due to heavy water

Conclusion

Debrief was done between IMs and Parks Canada settled and lay down the concerns we saw and corrective acting was taking they fix the fence and removed the pumps and drip trays. overall it was a great inspection and was great working with Parks.

Schedule of Action Items

Item No.	Date Identified	Issue to be Addressed	Action	Response
1.	June 30	Archy staking near Dig 18 fallen down	Email from ESO to SLLP Lead Enviro and TM Lead EI	Will be fixed first day back on shift (July 9)
2.	June 30	Snaring South - Portion of riparian area showing very little veg. regrowth compared to other areas.	Email from ESO to SLLP Lead Enviro and TM Lead EI	SLLP Enviro confirmed seeding was completed – will monitor and reseed if required.
3.	June 30	Fast fence around Snaring North excavation partially open – potential wildlife trap	Noted in June 30 daily meeting by ESO – asked that hoses be removed and fence closed	July 1 – received photos from SLLP showing properly closed fencing around open excavation. Photos forwarded to IMs.
4.	June 30	Five trash pumps at Snaring North – within 30m of watercourse and secondary containment not properly maintained	Noted in June 30 daily meeting by ESO – asked that pumps be removed from site while on days off, and they be positioned >30m from water and containment is maintained	July 1 – received photos from SLLP showing pumps removed from site for days off. Photos forwarded to IMs.