

File: 292-30/OGC2022-001

February 16, 2022

**Re: Request for Information – Release**  
***Freedom of Information and Protection of Privacy Act (FOIPPA)***

I am writing further to your request received by the BC Oil and Gas Commission (Commission) for:

***All internal communications related to construction and engineering plans for drilling and installing pipe of the Coastal GasLink pipeline under and adjacent to the Morice River near Houston BC, (Section 7) including emails, texts, iMessage, fax and WhatsApp messages. Date Range: Jan 1, 2021 to Jan 6, 2022.***

Some information has been withheld pursuant to the following section(s): s13 (Policy advice or recommendations); s15 (Disclosure harmful to law enforcement); s16 (Disclosure harmful to intergovernmental relations or negotiations); s17 (Disclosure harmful to financial or economic interests of a public body); s18.1 (Disclosure harmful to interests of an Indigenous people); s19 (Disclosure harmful to individual or public safety); and s22 (Disclosure harmful to personal privacy). A complete copy of FOIPPA is available online at: [Freedom of Information Act](#)

Please note, a copy of these records will be published on the Commission's website within 72 hours after release. To find out more about the proactive disclosure of requests, please access the Commission's website at: <https://www.bcogc.ca/about/freedom-of-information/>

Your file is now closed.

Pursuant to section 52 of the FOIPPA, you may ask the Office of the Information and Privacy Commissioner (OIPC) to review any decision, act, or failure to act with regard to your request under FOIPPA.

**Please note that you have 30 business days to file your review with the OIPC. In order to request a review please write to:**

*Information and Privacy Commissioner  
PO Box 9038 Stn Prov Govt  
4<sup>th</sup> Floor, 947 Fort Street  
Victoria BC V8W 9A4  
Phone: 250.387.5629 Fax: 250.387.1696  
Email: [info@oipc.bc.ca](mailto:info@oipc.bc.ca)*

If you request a review, please provide the OIPC with a copy of your original request, a copy of the Commission's response, and the reasons or grounds upon which you are requesting the review. Further information on the complaint and review process can be found on the OIPC website: <https://www.oipc.bc.ca>

Please write [FOIIntake@bcogc.ca](mailto:FOIIntake@bcogc.ca), if you have any questions regarding your request or require any further clarification.

Yours truly,

*Dana Keough*  
BC Oil and Gas Commission

## Keough, Dana

---

**From:** Zimmer, Dean E  
**Sent:** Thursday, December 30, 2021 10:47 AM  
**To:** Pancera, Norberto; McNutt, Dawn  
**Subject:** FW: CGL sump AA#100113743 over OWS/WFN trails  
**Attachments:** AD100113743\_PERMIT\_2021DEC30.pdf

It is approved in AMS.



**Dean Zimmer**  
Executive Director, Permit Adjudication  
[Dean.Zimmer@bcogc.ca](mailto:Dean.Zimmer@bcogc.ca)

Fort St John BC  
[Office Address Directory](#)  
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T. 250 794-5278  
F. 250-794-5390  
s17



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**From:** Zimmer, Dean E  
**Sent:** Thursday, December 30, 2021 10:43 AM  
**To:** Pancera, Norberto <Norberto.Pancera@bcogc.ca>  
**Subject:** RE: CGL sump AA#100113743 over OWS/WFN trails



**Dean Zimmer**  
Executive Director, Permit Adjudication  
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**From:** Pancera, Norberto <[Norberto.Pancera@bcogc.ca](mailto:Norberto.Pancera@bcogc.ca)>  
**Sent:** Thursday, December 30, 2021 9:55 AM  
**To:** Zimmer, Dean E <[Dean.Zimmer@bcogc.ca](mailto:Dean.Zimmer@bcogc.ca)>  
**Subject:** FW: CGL sump AA#100113743 over OWS/WFN trails

Hi Dean,

The subject permit draft is ready for your review and signature at:  
s15

I added a condition suggested in the closing letter from Nov. 26:

*At the completion of construction activities, the permit holder must restore any identifiable trails traditionally used by First Nations that were impacted by construction, to the level of access that existed prior to construction if the location of the trail is made known to the permit holder by a First Nation or the Commission prior to the permit holder's notice of construction start.*

Thank you,



---

**Norberto Pancera**  
Review Approval Resource Officer  
[Norberto.Pancera@BCOGC.ca](mailto:Norberto.Pancera@BCOGC.ca)

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---

**From:** McNutt, Dawn <[Dawn.McNutt@bcogc.ca](mailto:Dawn.McNutt@bcogc.ca)> **On Behalf Of** Permit Generation  
**Sent:** Thursday, December 30, 2021 9:44 AM  
**To:** Pancera, Norberto <[Norberto.Pancera@bcogc.ca](mailto:Norberto.Pancera@bcogc.ca)>  
**Subject:** RE: CGL sump AA#100113743 over OWS/WFN trails

s15



---

**Dawn McNutt**  
Permitting Assistant  
[Dawn.McNutt@BCOGC.ca](mailto:Dawn.McNutt@BCOGC.ca)

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December 30, 2021

Coastal GasLink Pipeline Ltd.  
450 - 1st Street SW  
Calgary, AB T2P 5H1

Attention: Coastal GasLink Pipeline Ltd.

**RE: Determination of Application Number 100113743**

**Permit Holder:** Coastal GasLink Pipeline Ltd.

**Date of Issuance:** December 30, 2021

**Effective Date:** December 30, 2021

**Application Submission Date:** July 9, 2021

**Application Determination Number:** 100113743

**Approved Disturbance Footprint:** 2.605 ha

## **ACTIVITIES APPROVED**

<b>Associated Oil &amp; Gas Activity No.:</b> 00215445	<b>Type:</b> Sump
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## **GENERAL AUTHORIZATIONS AND CONDITIONS**

### **AUTHORIZATIONS**

#### **Land Act**

1. The BC Oil and Gas Commission (the "Commission") pursuant to section 39 of the *Land Act* hereby authorizes the Permit Holder referenced above to construct and operate a related activity(s) as detailed in, Activities Approved table above and the Activity Details table(s) below, when applicable, for the purposes of carrying out oil and gas activities as defined in the *Oil and Gas Activities Act* (OGAA); subject to the conditions set out herein.
2. The authorizations granted under this permit are limited to the area identified in the spatial data submitted to the Commission in the permit application as identified and dated above; herein after referred to as the 'activity area'.
3. The Commission, pursuant to section 39 of the *Land Act*, hereby authorizes the occupation and use of any Crown land located within the activity area.
  - a. A licence authorized under section 39 of the Land Act for the Crown land portion of this application will follow. The permit holder is subject to the conditions contained in the Licence.
  - b. The authorization to occupy and use Crown land under the Licence expires two years from the date of issuance, unless the Commission has received notice of construction start, or this permit is otherwise extended, suspended, cancelled, surrendered or declared spent.
  - c. The authorization to occupy and use Crown land does not entitle the permit holder to exclusive possession of the activity area.
  - d. The total disturbance within the activity area must not exceed the total approved disturbance footprint as referenced above.

## CONDITIONS

### Notification

4. A notice of construction start must be submitted, as per the relevant Commission process at the time of submission, at least 48 hours prior to the commencement of activities under this permit.
5. Within 60 days of the completion of construction activities under this permit, the permit holder must submit to the Commission a post-construction plan as a shapefile and PDF plan accurately identifying the location of the total area actually disturbed under this permit. The shapefile and plan must be submitted via eSubmission.
6. The Permit Holder must notify the First Nation(s) copied on this permit/authorization at least 5 (five) working days prior to project commencement.

### Environmental

7. Construction activities must not result in rutting, compaction or erosion of soils that cannot be reasonably rehabilitated to similar levels of soil productivity that existed on the activity area prior to the construction activities taking place.
8. Any temporary access must be constructed and maintained in a manner that provides for proper surface drainage, prevents pooling on the surface, and maintains slope integrity.
9. The permit holder must make reasonable efforts to prevent establishment of invasive plants on the activity area resulting from the carrying out of activities authorized under this permit.
10. Following completion of construction associated with the associated activities set out in the authorized Activities table above, the permit holder must, as soon as practicable
  - a. decompact any soils compacted by the activity;
  - b. if natural surface drainage pattern was altered by the carrying out of the activity, the permit holder must restore, to the extent practicable, to the drainage pattern and its condition before the alteration;
  - c. re-vegetate any exposed soil on the activity area including, where necessary, using seed or vegetative propagules of an ecologically suitable species that:
    - i. promote the restoration of the wildlife habitat that existed on the area before the oil and gas activity was begun, and
    - ii. stabilize the soil if it is highly susceptible to erosion.
  - d. any retrievable surface soils removed from the activity area must be redistributed so that the soil structure is restored, to the extent practicable, to its condition before the activity was begun.
11. At the completion of construction activities, the permit holder must restore any identifiable trails traditionally used by First Nations that were impacted by construction, to the level of access that existed prior to construction if the location of the trail is made known to the permit holder by a First Nation or the Commission prior to the permit holder's notice of construction start.

### Clearing/Forest Act

12. The permit holder is permitted to fell any trees located on Crown land within 1.5 tree lengths of the activity area that are considered to be a safety hazard according to Workers Compensation Act regulations and must be felled in order to eliminate the hazard. Trees or portions of these trees that can be accessed from the activity area without causing damage to standing timber may be harvested.

## Archaeology

13. If an artifact, feature, material or thing protected under the *Heritage Conservation Act* is identified within the activity area, the permit holder must, unless the permit holder holds a permit under Section 12.4 of the *Heritage Conservation Act* issued by the BC Oil and Gas Commission in respect of that artifact, feature, material or thing:
  - a. Immediately cease all work in the vicinity of the artifacts, features, materials or things;
  - b. Immediately notify the BC Oil and Gas Commission; and
  - c. Resume work in the vicinity of the artifacts, features, materials or things in accordance with direction from the BC Oil and Gas Commission.

## **ADVISORY GUIDANCE**

1. Construction Plan - CGE4703-MSI-G-MP-1834\_Morice\_MBC\_6\_Sketch\_Rev0.PDF is for the permit holder's internal reference only and was not reviewed as a decision tool for this permit, nor does it form an integral part of this permit.
2. Instructions for submitting notice of construction start, as required by regulation, can be found in the Oil and Gas Activity Operations Manual on the Commission's website.
3. Unless a condition or its context suggests otherwise, terms used in this approval have the same meaning as the Environmental Protection and Management Regulation under the Oil and Gas Activities Act.
4. Appropriate tenure may be issued upon acceptance of the post-construction plan. Submission of the original application and submission of the post-construction plan is considered an application for all subsequent applicable Land Act tenures. Upon the Commission's acceptance of the post-construction plan no further applications for replacement tenure are required.

All pages included in this permit and any attached documents form an integral part of this permit.



Dean Zimmer  
Authorized Signatory  
Commission Delegated Decision Maker

Copied to:

Land Agent – CWL Energy Management Ltd.  
First Nations – Office Of The Wet'suwet'en, Skin Tyee Nation, Wet'suwet'en First Nation, Nee Tahi Buhn Indian Band (NTBIB)

## Keough, Dana

---

**From:** Pancera, Norberto  
**Sent:** Wednesday, December 29, 2021 4:40 PM  
**To:** Permit Generation; Phillips, Lori L; Zimmer, Dean E  
**Cc:** Thoroughgood, Garth  
**Subject:** CGL sump AA#100113743 over OWS/WFN trails  
**Attachments:** 100113743 - Determination Rationale.docx

Good morning,

The subject application is ready for decision – it consists of a sump for the Morice River microtunneling drilling waste.  
s13

My review is attached and the SDM task is ready to go (I left Lori as the decision maker). The only issue I found with the review is that  
s18.1

Dawn, the PQC is ready at:

s15

Thank you,



**Norberto Pancera**  
Review Approval Resource Officer  
[Norberto.Pancera@BCOGC.ca](mailto:Norberto.Pancera@BCOGC.ca)

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## **BC Oil and Gas Commission (the Commission) Application Determination Rationale**

**Application Area (AA) Number: 100113743**

**Applicant: Coastal GasLink Pipeline Ltd. (CGL)**

**Application Type: New Associated Oil and Gas Activity - Sump**

**Summary:** CGL is requesting the use of Crown land for the construction of a sump within their construction corridor for the purpose of disposing of drilling waste from the Morice River microtunnel construction.

Area required: 2.605 ha over Crown Provincial land, with no new cut on Crown land required.

Geographical Location: the proposed sump will be located at NTS unit 8, block K, group 93-L-3.

Approximately 85 kilometers East of Kitimat (direct vector), within the Skeena Natural Resource Region.

Access via Forest Service Road R05235-7.

### **Government's Environmental Objectives (GEOs) as per the Environmental Protection and Management Regulation (EPMR):**

#### **Section 4- Water:**

- (a) Reviews show there are no water works, water storage reservoirs, water supply wells or groundwater capture zones within 100 m of the proposed project.
- (b) Reviews show the proposed project does not conflict with identified groundwater recharge areas, designated watersheds, or identified aquifers.

GEOs as per Section 4 of the EPMR will be met.

#### **Section 5- Riparian Values:**

No streams intersected by proposed activities noted.

No lakes intersected by proposed activities.

No wetlands intersected by proposed activities.

This application proposes no new disturbances to riparian values.

GEOs as per Section 5 of the EPMR will be met.

#### **Section 6- Wildlife and Wildlife Habitat:**

- (a) There are no overlaps with Wildlife Habitat Areas (WHA), Ungulate Winter Ranges, or Fisheries Sensitive Watersheds. This project overlaps a proposed WHA for grizzly bears (ID 6-336). CGL has an approved Grizzly Bear Mitigation and Monitoring Plan to protect and/or restore this species' habitat.
- (b) The activity will be carried out at a time and in a manner that does not result in physical disturbance to high priority wildlife or their habitat, including disturbance during sensitive seasons and critical life-cycle stages. \*
- (c) The proposed project does not overlap any approved WTRAs.
- (d) No wildlife habitat features have been identified within the project area.

\*The Northern Mountain Caribou population (Telkwa herd) has its range intersected by the proposed activities. CGL will apply their Caribou Mitigation and Monitoring Plan and other pertinent wildlife mitigation measures from their pipeline Environmental Management Plan, in the event a caribou herd is identified during any phase of the project. All the plans referenced in this section have been requested and approved by the Environmental Assessment Office.

GEOs as per section 6 of the EPMR will be met.

#### **Section 7- Old Growth Management Areas (OGMAs), Resources Features, Cultural Heritage Resources (CHRs):**

- (a) The proposed project does not overlap with any OGMAs.

(b) No Resource Features have been identified within the proposed project area.  
(c) No Cultural Heritage Resources have been identified within the proposed project area.  
GEOs as per section 7 of the EPMR will be met.

**Map Reserves and NOIs:**

This application does NOT overlap with any Land Act Sections: 15 Order in Council, 16 Map Reserve, or 17 Designated Use Area.

The application area is within a Notation of Interest (file #7409630, tenured to CGL) with Gas and Oil Pipeline listed as its purpose; therefore, the proposed activities are of compatible use with this notation.

**Rights Holder Engagement (RHE):**

CGL has engaged all affected parties with rights within the proposed activity's area. No written submission or outstanding concerns regarding this project have been indicated in the application deliverables.

CGL has received a variance to submit this application prior to elapsing the rights holder's response period. RHE commenced on June 14, 2021.

**Forestry:**

No new cut on Crown land required. No cut proposed on Ministry of Transportation and Infrastructure road allowances, woodlots, private land, or protected areas.

**Agriculture:**

No non-farm land use/new land is required and no area applied for is within Agricultural Land Reserves. Agriculture review and an application to the Agricultural Lands Commission (ALC) are not required.

**Area Based Analysis (ABA):**

This application does not intersect any ABA polygons.

**Archaeology:**

No archaeological sites were identified within 200m of the proposed activities.

No further work was recommended by the consulting archaeologist. The proposed development overlaps with a previous assessment completed for the CGL Project.

Standard condition will be placed on the permit to address artifacts that may be identified during construction.

s16, s18.1

**Engineering:**

Engineering review not required.

**Other Relevant Considerations:**

The Application Area is not within any Areas Established by the Commission or by Order, or Oil and Gas Permit Condition/Considerations areas.

It has been confirmed that the construction plan matches the spatial data submitted with the application.

The application area is adjacent to existing disturbances such as an active forest service road, cutblocks, and approved pipeline rights-of-way and workspaces. No new clearing is required, thus minimizing the proposed footprint and new disturbances anticipated.

**Government Referrals:**

No referral required to the ALC or to the Ministry of Forests, Lands and Natural Resource Operations & Rural Development for this application.

**Type of Land Access:**

Crown land access granted under section 39 of the Land Act (Associated Oil and Gas Activity without any other Enactment authorization).

**Decision:**

After reviewing all applicable information, I have decided, as the Delegated Decision Maker, to approve this project as applied for.

**Norberto Pancera**

**January 31, 2022**

## Keough, Dana

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**From:** Phillips, Lori L  
**Sent:** Friday, December 17, 2021 2:25 PM  
**To:** s19 Lang, Randy  
**Cc:** Friedrich, Hardy; Anderson, Justin  
**Subject:** FW: CGL OGC January 2022 Watercourse Crossing Report #21  
**Attachments:** CGL4703-CGP-BCOGC-REG-LTR-5077\_January WCC Report 21\_17-Dec-21.pdf

FYI



**Lori Phillips**  
Authorizations Manager  
[Lori.Phillips@BCOGC.ca](mailto:Lori.Phillips@BCOGC.ca)

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**From:** Shelley McInnis (Contractor) <shelley\_mcinnis@tcenergy.com>  
**Sent:** Friday, December 17, 2021 12:21 PM  
**To:** Post Permit Requests <postpermitrequests@bcogc.ca>  
**Cc:** Phillips, Lori L <Lori.Phillips@bcogc.ca>; Smook, Patrick <Patrick.Smook@bcogc.ca>; eao.compliance@gov.bc.ca; Smith, Clayton H EAO:EX <Clayton.H.Smith@gov.bc.ca>; Parks, Chris EAO:EX <Chris.Parks@gov.bc.ca>; Adair Rigney <adair\_rigney@tcenergy.com>; Dan Wyman <dan\_wyman@tcenergy.com>; Joseph Campbell (Contractor) <joseph\_campbell@tcenergy.com>; Glenn Todd (Contractor) <glenn\_todd@tcenergy.com>; Autumn Cousins (Contractor) <autumn\_cousins@tcenergy.com>; Tom Hicks <thicks@ecofishresearch.com>; Lead IESCA <LeadIESCA@ecofishresearch.com>  
**Subject:** CGL OGC January 2022 Watercourse Crossing Report #21

Good afternoon,

Please find attached CGL's Scheduled Watercourse Crossings Report #21 for January. This report covers the planned construction of pipeline crossings of watercourses throughout the Project and is filed in response to the following conditions:

- Pipeline Section 1, AD 100082293, Condition 9
- Pipeline Section 2, AD 100082292, Condition 9
- Pipeline Section 3, AD 100082299, Condition 8
- Pipeline Section 4, AD 100082252, Condition 9
- Pipeline Section 5, AD 100082251, Condition 9
- Pipeline Section 6, AD 100082422, Condition 9
- Pipeline Section 7, AD 100082423, Condition 8



- Pipeline Section 8, AD 100084230, Condition 9

Please contact Dan Wyman if you have any questions regarding the contents of this report.

Thank you,

**Shelley McInnis**

Regulatory Administrative Analyst

Coastal GasLink

Contractor representing TC Energy

[shelley.mcinnis@tcenergy.com](mailto:shelley.mcinnis@tcenergy.com)

cell s22 desk: 403-920-1370



450 – 1 Street S.W. Calgary, AB  
Canada, T2P 5H1

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Thank you

December 17, 2021

Lori Phillips  
Applications Manager  
BC Oil and Gas Commission  
6534 Airport Road  
Fort St. John, B.C. V1J 4M6

Coastal GasLink LLP  
450 – 1st Street S.W.  
Calgary, AB, Canada T2P 5H1

Tel: 403.920.6296  
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Email: [dan\\_wyman@tcenergy.com](mailto:dan_wyman@tcenergy.com)  
Web: [www.TCenergy.com](http://www.TCenergy.com)

**CGL4703-CGP-BCOGC-REG-LTR-5077**

Dear Ms. Phillips,

**Re: Coastal GasLink Pipeline Project (Project)  
Scheduled Watercourse Crossings Report #21  
References: AD 100082293 Condition 9, AD 100082292 Condition 9, AD 100082299  
Condition 8, AD 100082252 Condition 9, AD 100082251 Condition 9, AD 100082422  
Condition 9, AD 100082423 Condition 8, and AD 100084230 Condition 9**

As cited in the above conditions Coastal GasLink is required to:

*At least one week prior to the beginning of each month, the permit holder must submit a schedule to the Commission indicating the location and timing of horizontal directional drilling, micro-tunneling or in-stream work planned to commence the following month.*

Coastal GasLink is submitting the following monthly Watercourse Crossing Schedules to the BC Oil and Gas Commission (OGC) for January 2022:

- Table 1: Horizontal Directional Drill (HDD) and Direct Pipe Installation (DPI) Status and Schedule
- Table 2: Section 1 (AD 100082293) Watercourse Crossings Status and Schedule
- Table 3: Section 2 (AD 100082292) Watercourse Crossings Status and Schedule
- Table 4: Section 3 (AD 100082299) Watercourse Crossings Status and Schedule
- Table 5: Section 4 (AD 100082252) Watercourse Crossings Status and Schedule
- Table 6 Section 8 (AD 100084230) Watercourse Crossings Status and Schedule

No other in-stream work associated with the construction of pipeline crossings is currently scheduled in the remaining pipeline sections for this month.

Coastal GasLink notes the timing of construction provided in the attached tables are based on the current Project schedule and the best information available to Coastal GasLink on the date of filing. These dates are, however, subject to change without notice due to changing site conditions, final execution plans, permitting and other external factors.

Should you have any questions do not hesitate to contact me at 403-920-6296 or [dan\\_wyman@tcenergy.com](mailto:dan_wyman@tcenergy.com).

Sincerely,



Daniel RK Wyman  
Team Lead, Regulatory  
Coastal GasLink

Table 1: HDD and DPI Schedule

Watercourse Name HDD/DPI	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	Easting	Northing	Work Scheduled to Start	Work Scheduled to End	Summary of Activities Planned for the month
Murray River	1	61.00-WC	10B1	S1A	HDD	25+217	617896.01 e	6172089.74 n	28-Sep-2020	10-Jul-2021	Complete
Sukunka River	1	186.00-WC	51B1	S1A	HDD	64+431	617896.01 e	6157225 n	15-Jun-2021	15-Nov-2021	Complete
Burnt River	2	270.00-WC	72	S1B	DPI	96+886	617896.01 e	6131508.33 n	3-Aug-2021	21-Sep-2021	Complete
Parsnip River	3	560.00-WC	205	S1A	DPI	189+659	617896.01 e	6069086 n	25-Oct-2021	14-Feb-2022	- Equipment testing and commissioning - Tunnelling and drilling waste disposal - Demobilization
Crooked River	3	654.00-WC	235	S1B	DPI	212+345	617896.01 e	6056162 n	13-Nov-2020	28-Nov-2020	Complete
Salmon River	4	781.00-WC	277	S1A	DPI	254+104	617896.01 e	6027443 n	23-Sep-2021	17-Nov-2021	Complete
Stuart River	4	880.00-WC	SRR9	S1A	DPI	298+052	617896.01 e	6004956.59 n	13-Oct-2020	11-Dec-2020	Complete
Morice River	7	1677.00-WC	558	S1A	Microtunnel	558+400	617896.01 e	6004956.59 n	1-Feb-2022	30-Aug-2022	Access and Pad Prep
Kitimat River	8	2098.00-WC	191C	S1A	DPI	667+162	617896.01 e	5989905.36 n	13-Jul-2020	31-Aug-2020	Complete

Table 2: Section 1 Watercourse Crossings Schedule

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Coldstream Creek	1	0037.0-WC	8	S1B	Isolate if flowing, Open Cut if dry or frozen	15+784	10	627114	6171639	January 4, 2022	January 31, 2022	Grade banks, Install isolation

Table 3: Section 2 Watercourse Crossings Schedule

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Unnamed Tributary (Rocky Creek)	2	0295.0-DR	J18.01	S6	Isolate if flowing, Open Cut if dry or frozen	104+159	10	575510	6126703	January 4, 2022	January 12, 2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0298.0-WC	22C	S6	Isolate if flowing, Open Cut if dry or frozen	105+843	10	575182	6125176	January 7, 2022	January 18, 2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	N/A	J19.97	S6	Isolate if flowing, Open Cut if dry or frozen	105+807	10	575209	6125206	January 7, 2022	January 18, 2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0292.0-WC	77	S6	Isolate if flowing, Open Cut if dry or frozen	103+282	10	575577	6127550	January 10, 2022	January 18, 2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	N/A	J18.07	S6	Isolate if flowing, Open Cut if dry or frozen	104+440	10	575537	6126428	January 18, 2022	January 26, 2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	N/A	J18.09	S6	Isolate if flowing, Open Cut if dry or frozen	104+464	10	575549	6126410	January 18, 2022	January 26, 2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0293.0-WC	77.1T	S6	Isolate if flowing, Open Cut if dry or frozen	103+702	10	575515	6127162	January 26, 2022	February 3, 2022	Dig, Install, Backfill and Reclaim
Hamilton Creek	2	0473.0-WC	159	S2	Bore	161+183	10	551420.1	6087051.41	January 12, 2022	January 22, 2022	Bore Watercourse

Table 4: Section 3 Watercourse Crossings Schedule

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Unnamed Tributary (Anzac River)	3	0507.0-WC	65C	S3	Bore	173+784	10	542105	6080443	3-Jan-2022	16-Jan-2022	Bore Watercourse
Unnamed Tributary (Anzac River)	3	0508.0-WC	66C	S3	Bore	173+871	10	542019	6080411	3-Jan-2022	16-Jan-2022	Bore Watercourse
Unnamed Tributary (Anzac River)	3	-	A3488	S4	Isolate if flowing, Open Cut if dry or frozen	183+444	10	535394	6074023	17-Jan-2022	21-Jan-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Anzac River)	3	0546.0-WC_R0	197	S3	Isolate if flowing, Open Cut if dry or frozen	184+760	10	534665	6072930	24-Jan-2022	28-Jan-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Anzac River)	3	0547.0-WC	198	S4	Isolate if flowing, Open Cut if dry or frozen	185+400	10	534288	6072406	24-Jan-2022	28-Jan-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Parsnip River)	3	0573.0-WC	207	S2	Isolate if flowing, Open Cut if dry or frozen	191+680	10	530848	6067780	3-Jan-2022	12-Jan-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Redrocky Creek)	3	0604.0-WC	12D	S4	Isolate if flowing, Open Cut if dry or frozen	201+564	10	523711	6061826	4-Jan-2022	11-Jan-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Redrocky Creek)	3	0611.0-WC	221	S4	Isolate if flowing, Open Cut if dry or frozen	203+349	10	522896	6060264	26-Jan-2022	2-Feb-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Redrocky Creek)	3	0621.0-WC	96C	S3	Isolate if flowing, Open Cut if dry or frozen	206+474	10	520839	6058823	10-Jan-2022	16-Jan-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Redrocky Creek)	3	0622.0-WC	97C	S4	Isolate if flowing, Open Cut if dry or frozen	206+782	10	520563	6058702	26-Jan-2022	2-Feb-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Crooked River)	3	0628.0-WC	230	S3	Isolate if flowing, Open Cut if dry or frozen	208+519	10	519163	6057751	12-Jan-2022	18-Jan-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Crooked River)	3	0661.0-WC	237	S3	Isolate if flowing, Open Cut if dry or frozen	213+950	10	514487	6055431	7-Dec-2021	5-Apr-2022	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Unnamed Tributary (Crooked River)	3	0664.0-WC	239	S3	Isolate if flowing, Open Cut if dry or frozen	214+797	10	513985	6054814	10-Dec-2021	8-Apr-2022	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Unnamed Tributary (Crooked River)	3	0667.0-WC	242	S2	Isolate if flowing, Open Cut if dry or frozen	215+646	10	513439	6054192	3-Dec-2021	1-Apr-2022	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Unnamed Tributary (Crooked River)	3	0669.0-WC-R3	243	S4	Isolate if flowing, Open Cut if dry or frozen	216+051	10	513130	6053970	9-Jan-2022	16-Jan-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Crooked River)	3	0678.0-WC-R3	104C	S4	Isolate if flowing, Open Cut if dry or frozen	219+711	10	510185	6051884	6-Jan-2022	13-Jan-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Muskeg River)	3	698.00-WC-R3	110C	S4	Isolate if flowing, Open Cut if dry or frozen	227+744	10	503439	6048058	2-Dec-2021	10-Feb-2022	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Unnamed Tributary (Merton Creek)	3	0742.0-WC	269	S3	Isolate if flowing, Open Cut if dry or frozen	239+024	10	497811	6039141	17-Jan-2022	14-Feb-2022	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Unnamed Tributary (Merton Creek)	3	0743.0-WC	125C	S4	Isolate if flowing, Open Cut if dry or frozen	239+167	10	497772	6039016	7-Oct-2021	17-Jan-2022	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Unnamed Tributary (Merton Creek)	3	0749.0-WC-R3	270	S4	Isolate if flowing, Open Cut if dry or frozen	240+860	10	496715	6037744	18-Nov-2021	3-Feb-2022	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Unnamed Tributary (Merton Creek)	3	0749.0-WC-R3	270	S4	Isolate if flowing, Open Cut if dry or frozen	240+860	10	496715	6037744	3-Jan-2022	28-Mar-2022	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Unnamed Tributary (Merton Creek)	3	756.00-WC	272	S3	Isolate if flowing, Open Cut if dry or frozen	244+520	10	494868	6034635	4-Jan-2022	29-Mar-2022	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Unnamed Tributary (Merton Creek)	3	757.00-WC	127C	S4	Isolate if flowing, Open Cut if dry or frozen	244+606	10	494842	6034550	5-Jan-2022	30-Mar-2022	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim

Table 5: Section 4 Watercourse Crossings Schedule

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
West Creek	4	819.00-WC	291	S3	Isolate if flowing, Open Cut if dry or frozen	272+157	10	474994.24	6016637.4	10-Jan-2022	7-Feb-2022	Install sheet piles, Dig, Install, Backfill, Reclaim, Remove Sheet piles

Table 6: Section 8 Watercourse Crossings Schedule

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Unnamed Tributary (Burnie River)	8	1755.00-WC	25D	S2	Isolated Open Cut	592+645	9	578137	6001240	15-Jan-2022	5-Feb-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Clore River)	8	1823.00-WC	50C2A	S2	Isolated Open Cut	609+013	9	568263	5991058	15-Jan-2022	24-Feb-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Clore River)	8	1824.00-WC	51C2A	S2	Isolated Open Cut	609+109	9	568171	5991051	15-Jan-2022	24-Feb-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Clore River)	8	1825.00-WC	52C2A	S3	Isolated Open Cut	609+166	9	568117	5991046	15-Jan-2022	24-Feb-2022	Dig, Install, Backfill and Reclaim
Kitimat River	8W	1884.00-WC	677	S1B	Open Cut	623+416	9	557044	5989905	20-Jan-2022	12-Feb-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Hirsch Creek)	8W	2024.00-WC	727	S2	Open Cut	652+915	9	531605	5992838	4-Jan-2022	16-Jan-2022	Dig, Install, Backfill and Reclaim
Hirsch Creek	8W	2020.00-WC	182C	S1B	Open Cut	650+855	9	533411	5993699	14-Jan-2022	29-Jan-2022	Dig, Install, Backfill and Reclaim
Hirsch Creek (Side Channel)	8W	2018.00-WC	725	S1B	Open Cut	650+669	9	533587	5993758	30-Jan-2022	12-Feb-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Hirsch Creek)	8W	1970.00-WC	57C2A	S1B	Open Cut	637+434	9	544519	5992883	15-Nov-2021	29-Jan-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Sumgas Creek)	8W	2089.00-WC	741.1T	S2	Auger Bore	665+614	9	522139	5987442	10-Dec-2021	13-Jan-2022	Excavate Bore Bays and Set up, Install Casing, Pull Product
Kitimat River (Side Channel)	8W	2096.00-WC	S1073	S2	Auger Bore	666+513	9	521244	5987405	28-Oct-2021	30-Jan-2022	Excavate Bore Bays and Set up, Install Casing, Pull Product
Unnamed Tributary (Pine Creek)	8W	2083.00-WC	740.1T	S3	Auger Bore	664+645	9	523108	5987447	27-Oct-2021	12-Jan-2022	Excavate Bore Bays and Set up, Install Casing, Pull Product
Unnamed Tributary (Pine Creek)	8W	2082.10-WC	740	S2	Auger Bore	664+662	9	523128	5987447	27-Oct-2021	12-Jan-2022	Excavate Bore Bays and Set up, Install Casing, Pull Product



## Keough, Dana

---

**From:** Post Permit Requests  
**Sent:** Tuesday, December 14, 2021 1:49 PM  
**To:** 'Joseph Campbell (Contractor)'; Post Permit Requests  
**Cc:** Phillips, Lori L; Thoroughgood, Garth; Dan Wyman; Shelley McInnis  
**Subject:** RE: CGL Section 7 ATWS Leave Request  
**Attachments:** Leave of the Commission Letter CGL- Section 7-Condition 17, 18, 19, 23.pdf

Hi All

Find attached the leave of the Commission letter for CGL Section 7, conditions 17, 18, 18 and 23.

If you have any questions, let us know.

Justin



**Justin Anderson**  
Authorizations Manager  
[Justin.Anderson@BCOGC.ca](mailto:Justin.Anderson@BCOGC.ca)

Fort St John BC  
[Office Address Directory](#)  
[bcogc.ca](http://bcogc.ca)

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---

**From:** Tracy Young <tracy\_young@tcenergy.com>  
**Sent:** Tuesday, November 23, 2021 5:26 PM  
**To:** Post Permit Requests <postpermitrequests@bcogc.ca>  
**Cc:** Phillips, Lori L <Lori.Phillips@bcogc.ca>; Thoroughgood, Garth <Garth.Thoroughgood@bcogc.ca>; Dan Wyman <dan\_wyman@tcenergy.com>; Shelley McInnis <shelley\_mcinnis@tcenergy.com>  
**Subject:** CGL Section 7 ATWS Leave Request

Good afternoon,

Please find attached a leave request for ATWS in Section 7 on the east side of the Morice River, at the drill entry pad.

Thank you,

**Tracy Young**  
Senior Regulatory Analyst  
Contractor representing TC Energy

## Keough, Dana

---

**From:** Post Permit Requests  
**Sent:** Tuesday, December 14, 2021 3:08 PM  
**To:** 'Joseph Campbell (Contractor)'; Post Permit Requests  
**Cc:** Phillips, Lori L; Thoroughgood, Garth; Dan Wyman; Shelley McInnis  
**Subject:** RE: CGL Section 7 ATWS Morice River West Side  
**Attachments:** Leave of the Commission Letter CGL-Section 7 conditions 19, 23, 34.pdf

Hi All

Find attached the leave of the Commission letter for CGL Section 7, conditions 19, 23, and 34.

If you have any questions, let us know.

Justin



**Justin Anderson**  
Authorizations Manager  
[Justin.Anderson@BCOGC.ca](mailto:Justin.Anderson@BCOGC.ca)

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---

**From:** Tracy Young <tracy\_young@tcenergy.com>  
**Sent:** Tuesday, November 23, 2021 5:45 PM  
**To:** Post Permit Requests <postpermitrequests@bcogc.ca>  
**Cc:** Phillips, Lori L <Lori.Phillips@bcogc.ca>; Thoroughgood, Garth <Garth.Thoroughgood@bcogc.ca>; Dan Wyman <dan\_wyman@tcenergy.com>; Shelley McInnis <shelley\_mcinnis@tcenergy.com>  
**Subject:** CGL Section 7 ATWS Morice River West Side

Please find attached a leave request for ATWS in Section 7 on the west side of the Morice River.

Thank you,

**Tracy Young**  
Senior Regulatory Analyst  
Contractor representing TC Energy

December 14, 2021

Coastal GasLink Pipeline Ltd.  
450 - 1st Street SW  
Calgary, Alberta T2P 5H1

**Attention: Coastal GasLink Pipeline Ltd.**

**RE: Leave Request for Pipeline Permit: 9708371 (Section 7)**

**Permit Holder:** Coastal GasLink Pipeline Ltd.  
**Date of Leave Issuance:** December 14, 2021  
**Permit AD Number:** 100082423  
**Legacy OGC File Number:** 9708371

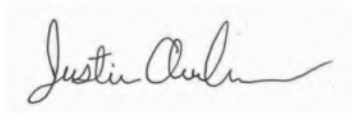
The Commission has reviewed the materials submitted on November 23, 2021 in relation to conditions 19, 23 and 34, set out in the above noted pipeline permit:

19. *Except as shown on the construction plans or with leave of the Commission, incremental clearing for additional work space is not permitted within:*
- a) *a wildlife habitat area;*
  - b) *an ungulate winter range; or*
  - c) *old growth management areas.*
23. *Clearing and site preparation, other than those identified in the construction plans referenced in Permissions, must be located on any previously disturbed areas located within the construction corridor unless:*
- a) *a previously disturbed area is less than 2 hectares;*
  - b) *such clearing and site preparation is required to avoid one or more of the areas or features identified in Conditions 16, 17, 18, or 19; or*
  - c) *the permit holder is granted leave by the Commission to carry out such clearing and site preparation.*
34. *Except with leave of the Commission, the permit holder must not undertake clearing or significant maintenance activities within 1000 metres of UWR U-6-003 between October 31 and June 15.*

The Commission confirms that, after reviewing the submission, leave of the Commission is granted for conditions 19 c, 23, and 34 for the area identified in Table 1 – New ATWS Outside OGC Footprint, attached.

The permit holder must comply with all conditions in permit 100082423 (Legacy: 9708371).

Sincerely,

A handwritten signature in black ink, appearing to read "Justin Anderson", is positioned above a horizontal line.

Justin Anderson  
Authorizations Manager  
Authorized Signatory

pc: First Nations: (Nee Tahi Buhn Indian Band, Wetsuwet'en First Nation, Skin Tyee Nation, Office of the  
Wet'suwet'en, Witset First Nation)  
OGC File: 9708371

**Table 1 – New ATWS Outside OGC Footprint**

<b>Area No.</b>	<b>KP (Rev G)</b>	<b>Area (ha)</b>	<b>Construction Consideration</b>
ATWS – RRF-0032-1	KP 558+700	0.77	There is steep terrain in this area and additional footprint is required to be able to complete the work safely and efficiently.
ATWS-RRF-0032-2	KP 558+700	0.10	There is steep terrain in this area and additional footprint may be required to be able to complete the work safely and efficiently.
ATWS-RRF-0032-3	KP 558+700	0.34	There is steep terrain in this area and additional footprint is required to be able to complete the work safely and efficiently.
Total:		1.21	

December 14, 2021

Coastal GasLink Pipeline Ltd.  
450 - 1st Street SW  
Calgary, Alberta T2P 5H1

**Attention: Coastal GasLink Pipeline Ltd.**

**RE: Leave Request for Pipeline Permit: 9708371 (Section 7)**

**Permit Holder:** Coastal GasLink Pipeline Ltd.  
**Date of Leave Issuance:** December 14, 2021  
**Permit AD Number:** 100082423  
**Legacy OGC File Number:** 9708371

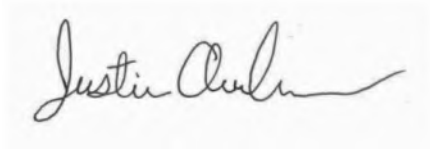
The Commission has reviewed the materials submitted on November 23, 2021 in relation to conditions 17, 18, 19 c, and 23, set out in the above noted pipeline permit:

17. *Clearing and site preparation must not occur within a RMA except:*
- a) *the pipeline right of way, temporary workspace and shooflies, as shown on the construction plans;*
  - b) *to facilitate a stream or wetland crossing;*
  - c) *where it does not involve new clearing and existing clearings do not have a reestablished vegetative cover; or*
  - d) *with leave of the Commission.*
18. *Clearing and site preparation, inclusive of work space, must not occur within a wildlife tree retention area except:*
- a) *as shown on the construction plans; or*
  - b) *with leave of the Commission.*
19. *Except as shown on the construction plans or with leave of the Commission, incremental clearing for additional work space is not permitted within:*
- a) *a wildlife habitat area;*
  - b) *an ungulate winter range; or*
  - c) *old growth management areas.*
23. *Clearing and site preparation, other than those identified in the construction plans referenced in Permissions, must be located on any previously disturbed areas located within the construction corridor unless:*
- a) *a previously disturbed area is less than 2 hectares;*
  - b) *such clearing and site preparation is required to avoid one or more of the areas or features identified in Conditions 16, 17, 18, or 19; or*
  - c) *the permit holder is granted leave by the Commission to carry out such clearing and site preparation.*

The Commission confirms that, after reviewing the submission, leave of the Commission is granted for conditions 17, 18, 19 c, and 23 for the area identified in Table 1 – New ATWS Outside OGC Footprint, attached.

The permit holder must comply with all conditions in permit 100082423 (Legacy: 9708371).

Sincerely,

A handwritten signature in black ink, appearing to read "Justin Anderson", is positioned above a horizontal line.

Justin Anderson  
Authorizations Manager  
Authorized Signatory

pc: First Nations: (Nee Tahi Buhn Indian Band, Wetsuwet'en First Nation, Skin Tyee Nation, Office of the  
Wet'suwet'en, Witset First Nation)  
OGC File: 9708371

**Table 1 – New ATWS Outside OGC Footprint**

<b>Area No.</b>	<b>KP (Rev G)</b>	<b>Area (ha)</b>	<b>Construction Consideration</b>
ATWS - Morice R	KP 557+980	0.11	Clearing of trees adjacent to the proposed entry pad for the microtunnel crossing of the Morice River is required to ensure the safety of crews and equipment.
Total:		0.11	



## Keough, Dana

---

**From:** Swan, Ian  
**Sent:** Friday, December 10, 2021 2:51 PM  
**To:** Anderson, Justin  
**Subject:** FW: Indigenous Groups Notification Table - Section 7 Leave of Commission Request for Morice River ATWS

FYI...



**Ian Swan**  
First Nations Liaison Officer  
[Ian.Swan@BCOGC.ca](mailto:Ian.Swan@BCOGC.ca)

Victoria BC  
[Office Address Directory](#)  
[bcogc.ca](http://bcogc.ca)

T. 250 419-4485  
F. 250-419-4403  
s17



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---

**From:** Stark, Ryan <Ryan.Stark@bcogc.ca>  
**Sent:** Wednesday, December 8, 2021 1:24 PM  
**To:** Freda Huson <fhuson@gmail.com>; 'karlatait@gmail.com' <karlatait@gmail.com>; 'Unist'ot'en (Dark House)' <tsewedielh@gmail.com>; 'warnerlwilliam@gmail.com' <warnerlwilliam@gmail.com>  
**Cc:** Nielsen, Angela C <Angela.Nielsen@bcogc.ca>  
**Subject:** Re: Indigenous Groups Notification Table - Section 7 Leave of Commission Request for Morice River ATWS

Good afternoon Karla and Freda,

At Dark House's request, Coastal GasLink (CGL) has forwarded to the Commission correspondence between Dark House and CGL concerning a recent Leave Request in support of ongoing construction of the CGL pipeline.

Should you wish to discuss the Leave of Commission process, please advise and I'll make the necessary arrangements.

Sincerely,  
Ryan





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---

**From:** Freda Huson <[fhuson@gmail.com](mailto:fhuson@gmail.com)>  
**Sent:** Friday, December 3, 2021 11:46 AM  
**To:** Jill Salus <[jill\\_salus@tcenergy.com](mailto:jill_salus@tcenergy.com)>  
**Cc:** Brenda Michell ([brmichell@hotmail.com](mailto:brmichell@hotmail.com)) <[brmichell@hotmail.com](mailto:brmichell@hotmail.com)>; CCRM Communications <[communications.crossroadscrm@gmail.com](mailto:communications.crossroadscrm@gmail.com)>; Karla Tait <[karlatait@gmail.com](mailto:karlatait@gmail.com)>; Rick Budhwa ([rick@crossroadscrm.com](mailto:rick@crossroadscrm.com)) <[rick@crossroadscrm.com](mailto:rick@crossroadscrm.com)>; TSE WE DI ELH <[tsewedielh@gmail.com](mailto:tsewedielh@gmail.com)>; Tiffany Murray <[tiffany\\_murray@tcenergy.com](mailto:tiffany_murray@tcenergy.com)>; Warner William (Knedebas) ([warnerw1949@gmail.com](mailto:warnerw1949@gmail.com)) <[warnerw1949@gmail.com](mailto:warnerw1949@gmail.com)>; warnerlwilliam ([warnerlwilliam@gmail.com](mailto:warnerlwilliam@gmail.com)) <[warnerlwilliam@gmail.com](mailto:warnerlwilliam@gmail.com)>  
**Subject:** Re: [EXTERNAL] Re: Indigenous Groups Notification Table - Section 7 Leave of Commission Request for Morice River ATWS

Our response should also be sent to the BC oil and gas commission

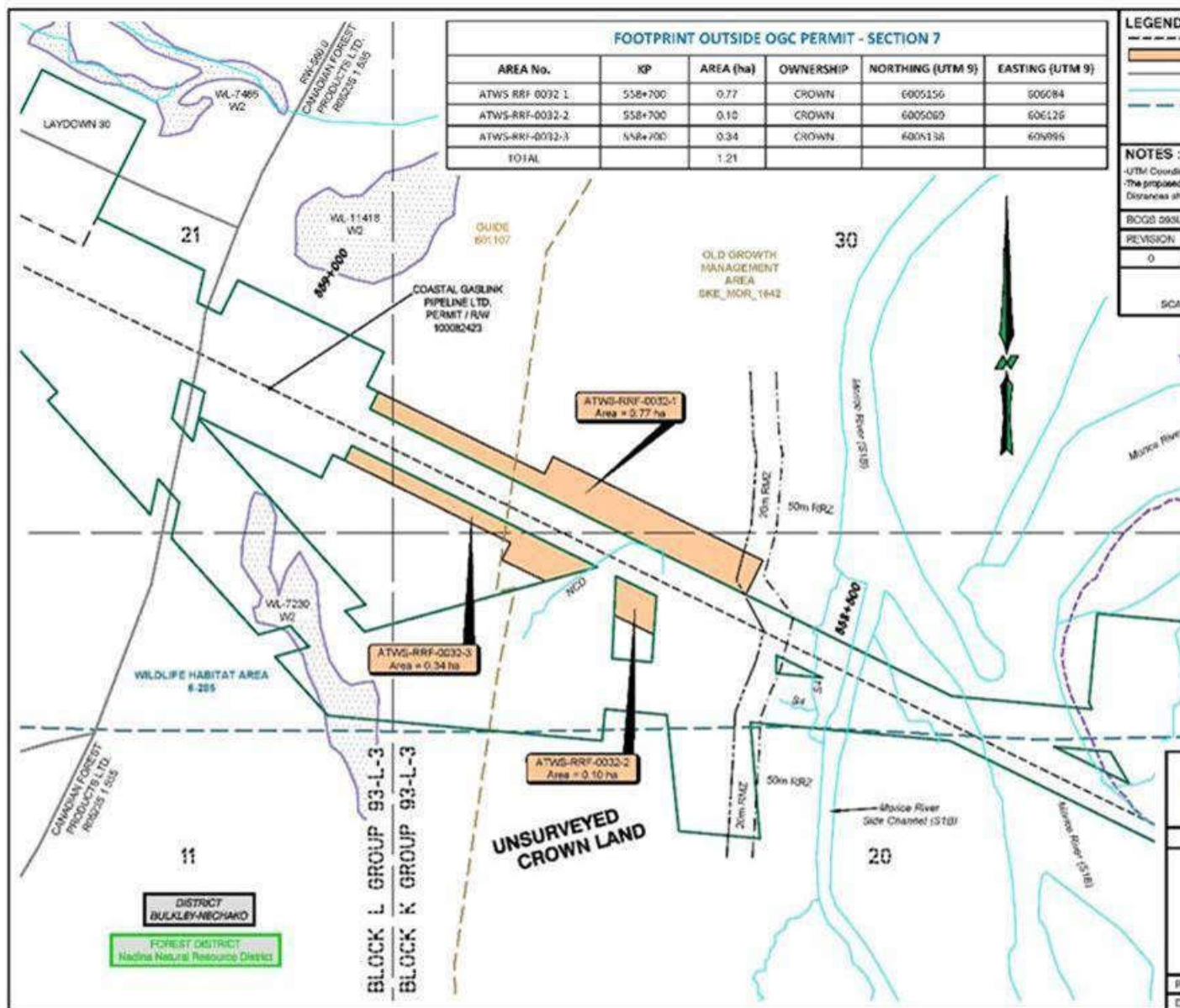
---

**From:** Jill Salus <[jill\\_salus@tcenergy.com](mailto:jill_salus@tcenergy.com)>  
**Sent:** Friday, December 3, 2021 8:12 AM  
**To:** Karla Tait <[karlatait@gmail.com](mailto:karlatait@gmail.com)>  
**Cc:** Brenda Michell ([brmichell@hotmail.com](mailto:brmichell@hotmail.com)) <[brmichell@hotmail.com](mailto:brmichell@hotmail.com)>; CCRM Communications <[communications.crossroadscrm@gmail.com](mailto:communications.crossroadscrm@gmail.com)>; fhuson ([fhuson@gmail.com](mailto:fhuson@gmail.com)) <[fhuson@gmail.com](mailto:fhuson@gmail.com)>; Rick Budhwa ([rick@crossroadscrm.com](mailto:rick@crossroadscrm.com)) <[rick@crossroadscrm.com](mailto:rick@crossroadscrm.com)>; TSE WE DI ELH <[tsewedielh@gmail.com](mailto:tsewedielh@gmail.com)>; Warner William (Knedebas) ([warnerw1949@gmail.com](mailto:warnerw1949@gmail.com)) <[warnerw1949@gmail.com](mailto:warnerw1949@gmail.com)>; warnerlwilliam ([warnerlwilliam@gmail.com](mailto:warnerlwilliam@gmail.com)) <[warnerlwilliam@gmail.com](mailto:warnerlwilliam@gmail.com)>; Tiffany Murray <[tiffany\\_murray@tcenergy.com](mailto:tiffany_murray@tcenergy.com)>  
**Subject:** RE: [EXTERNAL] Re: Indigenous Groups Notification Table - Section 7 Leave of Commission Request for Morice River ATWS

Hi Karla,

s18.1

s18.1



**Figure 1: ATWS on the west side of the Morice River (KP 558+550 to 558+950)**

As shown in Figure 1, the total area of the three ATWS areas required (highlighted in orange) is 1.21 hectares all are within the pipeline construction corridor which was captured by the Project's Environmental Assessment Application. The ATWS is located within the pipeline corridor starting at Kilometer Post (KP) 558+550 (558km and 550 meters) up to KP 558+950. Therefore, inclusion of the ATWS is not anticipated to change the environmental features traversed by the Project and is not anticipated to result in any significant environmental effects.

Under Environmental Assessment Certificate Schedule Condition 20 states:

- *The Holder must, to the extent practicable, avoid incursions into Old Growth Areas. Where it is not practicable to avoid an incursion into an Old Growth Area, the Holder must:*
  - *adhere to any orders under provincial legislation which apply to the Old Growth Area;*
  - *prepare a report in consultation with FLNR, identifying all such incursions, and submit the report to FLNR; and*
  - *where the area of the incursion exceeds a threshold set out in an applicable order or FLNR policy or process, prepare a proposal for replacement or recruitment of that area, consistent with the applicable order, policy or process for such replacements.*

s18.1



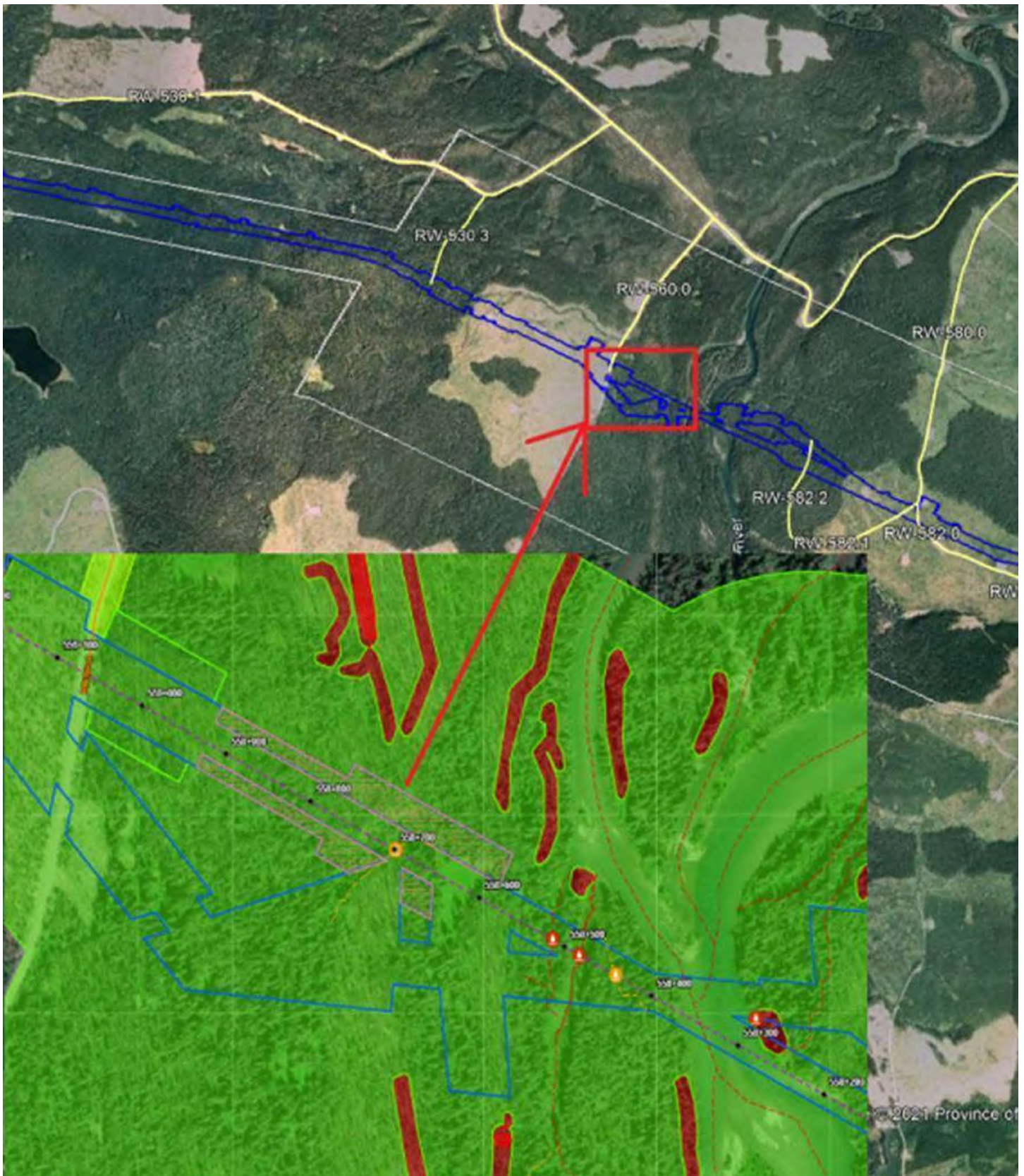


Figure 2: ATWS on the west side of the Morice River (KP 558+550 to 558+950) -Satellite image with zoomed-in insert

I hope this information clarifies the reason we have submitted a Leave of commission to the BCOGC and why I am giving you the heads up as per CGL/DH territory acknowledgement agreement.  
Happy to answer any additional question you may have.

Take care,

Jill

-----Original Message-----

From: Karla Tait <[karlatait@gmail.com](mailto:karlatait@gmail.com)>

Sent: Tuesday, November 23, 2021 9:46 AM

To: Jill Salus <[jill\\_salus@tcenergy.com](mailto:jill_salus@tcenergy.com)>

Cc: Brenda Michell ([brmichell@hotmail.com](mailto:brmichell@hotmail.com)) <[brmichell@hotmail.com](mailto:brmichell@hotmail.com)>; CCRM Communications <[communications.crossroadscrm@gmail.com](mailto:communications.crossroadscrm@gmail.com)>; fhuson ([fhuson@gmail.com](mailto:fhuson@gmail.com)) <[fhuson@gmail.com](mailto:fhuson@gmail.com)>; Rick Budhwa ([rick@crossroadscrm.com](mailto:rick@crossroadscrm.com)) <[rick@crossroadscrm.com](mailto:rick@crossroadscrm.com)>; TSE WE DI ELH <[tsewedielh@gmail.com](mailto:tsewedielh@gmail.com)>; Warner William (Knedebas) ([warnerw1949@gmail.com](mailto:warnerw1949@gmail.com)) <[warnerw1949@gmail.com](mailto:warnerw1949@gmail.com)>; warnerlwilliam ([warnerlwilliam@gmail.com](mailto:warnerlwilliam@gmail.com)) <[warnerlwilliam@gmail.com](mailto:warnerlwilliam@gmail.com)>; Tiffany Murray <[tiffany\\_murray@tcenergy.com](mailto:tiffany_murray@tcenergy.com)>  
Subject: [EXTERNAL] Re: Indigenous Groups Notification Table - Section 7 Leave of Commission Request for Morice River ATWS

EXTERNAL EMAIL: PROCEED WITH CAUTION.

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe. If this email looks suspicious, report it.

=====

Hello Jill,

s18.1

Karla.

Sent from my iPhone

> On Nov 23, 2021, at 8:28 AM, Jill Salus <[jill\\_salus@tcenergy.com](mailto:jill_salus@tcenergy.com)> wrote:

>

> Good afternoon,

>

> Please be advised that Coastal GasLink plans to submit a BC OGC Leave of Commission Request for additional temporary work space for the west side of the Morice River (KP 558+550 to 558+950) on November 23, 2021. Please see the attached notifications table for further details.

>

> Please do not hesitate to contact me with any questions or concerns.

>

> Sincerely,

>

> Jill

>

November 23, 2021

Ms. Lori Phillips  
Authorizations Manager  
BC Oil and Gas Commission  
6534 Airport Road  
Fort St. John, B.C. V1J 4M6

Coastal GasLink  
450 – 1<sup>st</sup> Street SW  
Calgary, AB, Canada T2P 5H1

Tel: 403.920.7648  
Fax: 403.920.2443  
Email: [tracy\\_young@tcenergy.com](mailto:tracy_young@tcenergy.com)  
Web: [www.TCenergy.com](http://www.TCenergy.com)

CGL4703-CGP-REG-LEAVRQ-0121

Dear Ms. Phillips,

**Re: Coastal GasLink Pipeline Project (Project)  
Leave of the Commission Request  
Section 7 Pipeline Permit (AD # 100082423) Condition 19, 23 and 34**

Please find enclosed a request for Leave of Commission for the noted conditions in BC Oil and Gas Commission (OGC) Section 7 permit, Condition 19 – incremental clearing in an old growth management area, Condition 23 – additional temporary workspace (ATWS) and Condition 34 – clearing in wildlife habitat area (WHA) between September 1 and June 15.

In order to provide certainty to our construction contractors, Coastal GasLink is seeking a determination from the OGC on this request prior to January 4, 2021.

Should you have any questions do not hesitate to contact me at 403.920.7648 or [tracy\\_young@tcenergy.com](mailto:tracy_young@tcenergy.com).

Sincerely



Tracy Young  
Senior Regulatory Analyst  
Coastal GasLink

**Coastal GasLink**



## 1.0 PERMIT CONDITION – LEAVE REQUEST

Coastal GasLink Pipeline Ltd. (Coastal GasLink) requests leave of the Commission for the following condition in the British Columbia (BC) Oil and Gas Commission (OGC) permit for Section 7 (AD# 100082423):

*19. Except as shown on the construction plans or with leave of the Commission, incremental clearing for additional work space is not permitted within:*

*c) old growth management areas.*

*23. Clearing and site preparation, other than those identified in the construction plans referenced in Permissions, must be located on any previously disturbed areas located within the construction corridor unless:*

*c) the permit holder is granted leave by the Commission to carry out such clearing and site preparation.*

And

*34. Except with leave of the Commission, the permit holder must not undertake clearing or significant maintenance activities within WHAs 6-283, 6-285 and 6-286 between September 1 and June 15.*

## 1.1 REASON FOR REQUEST

The right of way (ROW) was assessed and locations have been identified where minor changes are necessary for the purpose of addressing site-specific construction issues due to engineering, terrain, safety or environmental constraints. The locations and reasoning for the change, including reference to the attached map, are indicated in Table 1. As the location of these incremental additional temporary workspace (ATWS) areas are outside of the existing OGC permitted footprint, Coastal GasLink requires leave of the Commission.

Coastal GasLink requires incremental ATWS of 1.21 ha outside of the current footprint, within the construction corridor. Across all of the Section 7 Pipeline Permit, through discussion with the contractor, Coastal GasLink has reduced the total size of disturbance on crown land by approximately 172.4 ha overall and this requested additional space will not cause an exceedance of the permitted limit of new cut on crown land.

A portion of the ATWS overlaps with old growth management area (OGMA) SKE\_MOR\_1542 established in 2016 as well as wildlife habitat area (WHA) 6-285. Therefore, Coastal GasLink will also require leave of the Commission for Condition 19 and Condition 34 in addition to Condition 23 of the Section 7 Pipeline Permit.

The right of way (ROW) from approximately KP 558+550 to 558+850 and the ATWS described in Table 1, that intersects with WHA 6-285, will require clearing prior to June 15, 2022 to avoid impact to project delivery.

## 2.0 JUSTIFICATION

### 2.1 CONSTRUCTION CONSIDERATION

Detailed justification for specific changes is identified in Table 1 and ATWS area depicted with orange shading in the attached mapsheet (CGW4703-MCSL-G-MP-2910) as referenced.

**Table 1 – New ATWS Outside OGC Footprint**

Area No.	KP (Rev G)	Area (ha)	Construction Consideration
ATWS – RRF-0032-1	KP 558+700	0.77	There is steep terrain in this area and additional footprint is required to be able to complete the work safely and efficiently.
ATWS-RRF-0032-2	KP 558+700	0.10	There is steep terrain in this area and additional footprint may be required to be able to complete the work safely and efficiently.
ATWS-RRF-0032-3	KP 558+700	0.34	There is steep terrain in this area and additional footprint is required to be able to complete the work safely and efficiently.
Total:		1.21	

### 2.2 ENVIRONMENTAL EFFECT

The OGC Pipeline and Facility Application (the Application) outlines the pipeline construction corridor approach to allow for flexibility during construction, which included contemplation for additional temporary workspace locations. The pipeline construction footprint and additional temporary workspace adjacent to the pipeline construction footprint will remain within the limits of the pipeline construction corridor.

WHA 6-285 Gosnell/Thaudil Confluence Staging Area was established on July 30, 2009. These areas provide spawning and staging areas for data sensitive species. Incremental clearing is required within this WHA to facilitate construction of the Coastal GasLink Pipeline Project.

The ATWS identified in Table 1 are within the pipeline construction corridor and captured by the assessment provided in the Application. Inclusion of the ATWS does not change the environmental features traversed by the Project and does not result in any significant environmental effects.

### **3.0 MITIGATION AND COMMITMENTS**

Coastal GasLink has developed Project-specific environmental protection measures as outlined in the Environmental Management Plan (EMP) to avoid and reduce potential environmental adverse effects during construction of the Project. Mitigation measures identified in the EMP applicable to clearing and site preparation include, but not limited to:

#### Clearing (Section 8.2 of the EMP)

- During clearing, fell trees towards the ROW, wherever practical. Recover trees that inadvertently fall into adjacent undisturbed vegetation.
- Avoid disturbance to environmentally sensitive features during clearing as identified by the appropriate signage or fencing. The Environmental Inspector(s) and appropriate Resource Specialist will determine the size of avoidance buffer surrounding these features, if appropriate.
- Where practical, leave stumps in place, particularly on streambanks, to provide surface stability. Dispose of stumps removed from the required work areas by burning or chipping, or stockpile for use in access or line-of-sight control.
- Reduce grading throughout the ROW, especially at watercourses, wetlands, and rare plant sites and on moderately steep slopes, if practical. Reduce the width of grading in order to limit the potential for erosion and subsoil compaction, where practical.

#### Surface Material Removal, Salvage, and Grading (Section 8.3 of the EMP)

- Develop and follow site-specific topsoil depth salvage requirements for each soil map unit.
- Use machinery appropriate to the season and conditions for all soil salvage operations.
- Plan construction operations to reduce the number of times and distances that salvaged soils are moved.
- Do not conduct surface material salvage except where grading is required (Appendix B, Dwg. STDS-03-ML-05-443, STDS-03-ML-05-410, STDS-03ML-05-445, and STDS-03-ML-05-446). The area stripped is to correspond to the area to be graded.
- Salvage the organic layer (i.e., leaf litter layer) where surface material salvage is required.

- Stabilize exposed surface material and subsoil where the potential for erosion exists. Refer to the Soil Erosion Contingency Plan (Appendix C.7) for additional information.
- Ensure surface material storage areas are in approved ROW and temporary workspace.

Coastal GasLink has also developed specific mitigation for clearing and construction activities within OGMAs as indicated in Table 7-1 of the EMP. Coastal GasLink will implement, as applicable, the following mitigation measures as outlined in the EMP to avoid or reduce potential residual adverse effects on WTRAs during clearing activities:

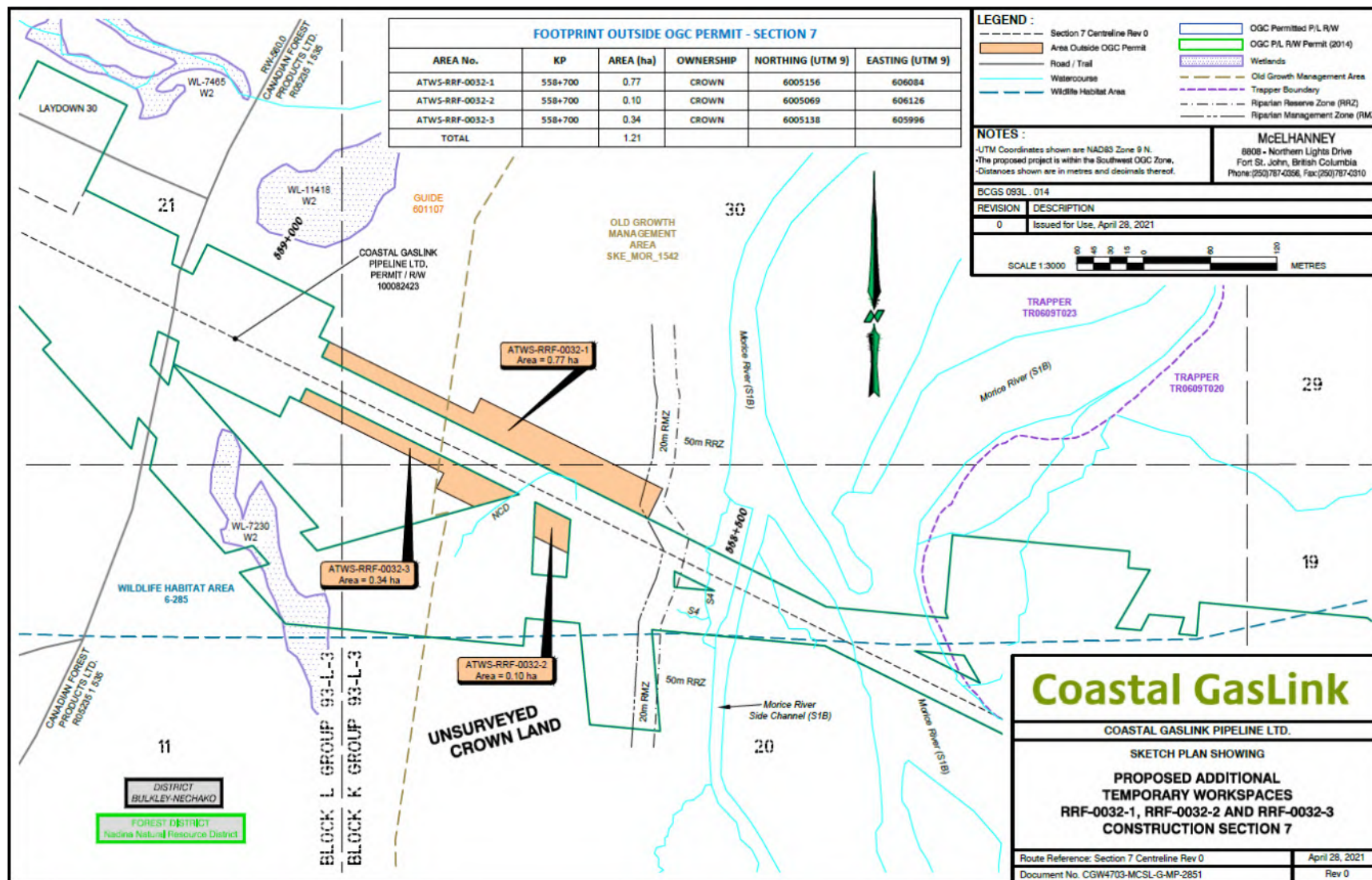
- Avoid or reduce disturbance within OGMAs and Wildlife Tree Patches (WTPs), where practical (e.g., narrow the width of the ROW, avoid extra temporary workspace).
- In cases where WTPs cannot be avoided, develop an appropriate strategy to address disturbance of site-specific wildlife habitat values in the WTPs, in consultation with the relevant regulatory agencies.

No new mitigation measures other than those outlined in the Project EMP are required as a result of the ATWS request. Coastal GasLink will implement mitigation measures developed in consultation with provincial and federal authorities and Indigenous groups which was approved by the EAO in early 2016.

In addition, Coastal GasLink has developed a Reclamation Program which will be used to promote the re-establishment of natural ecosystems that are compositionally and functionally similar to pre-disturbance conditions as well as the project-specific Post-Construction Monitoring Program which describes monitoring to review the effectiveness of mitigation and the approach to adaptive management.

### **3.1 CONCLUSION**

Coastal GasLink requires leave of the Commission for the incremental ATWS identified in this request to provide for safe and efficient construction in areas of challenging terrain and to accommodate minor changes in the location of footprint for pipeline location adjustment. All of the new ATWS are directly adjacent to the approved footprint. Granting the requested leave of the Commission will not change the conclusions of the environmental assessment conducted for the Project.





FOOTPRINT OUTSIDE OGC PERMIT - SECTION 7					
AREA No.	KP	AREA (ha)	OWNERSHIP	NORTHING (UTM 9)	EASTING (UTM 9)
ATWS-RRF-0032-1	558+700	0.77	CROWN	6005156	606084
ATWS-RRF-0032-2	558+700	0.10	CROWN	6005069	606126
ATWS-RRF-0032-3	558+700	0.34	CROWN	6005138	605996
TOTAL		1.21			

LEGEND :

Section 7 Centreline Rev 0

Area Outside OGC Permit

Road / Trail

Watercourse

Wildlife Habitat Area

OGC Permitted P/L R/W

OGC P/L R/W Permit (2014)

Wetlands

Old Growth Management Area

Trapper Boundary

Riparian Reserve Zone (RRZ)

Riparian Management Zone (RMZ)

NOTES :

-UTM Coordinates shown are NAD83 Zone 9 N.  
-The proposed project is within the Southwest OGC Zone.  
-Distances shown are in metres and decimals thereof.

McELHANNEY

8808 - Northern Lights Drive  
Fort St. John, British Columbia  
Phone:(250)787-0356, Fax:(250)787-0310

BCGS 093L . 014

REVISION	DESCRIPTION
0	Issued for Use, April 28, 2021

SCALE 1:3000

60 45 30 15 0 60 120

METRES

The map displays the proposed additional temporary workspaces for the Coastal GasLink Pipeline Ltd. project, specifically Section 7. The workspaces are identified as ATWS-RRF-0032-1 (Area = 0.77 ha), ATWS-RRF-0032-2 (Area = 0.10 ha), and ATWS-RRF-0032-3 (Area = 0.34 ha). These areas are situated within the Morice River (S1B) and Morice River Side Channel (S1B) corridors. The map also shows the Old Growth Management Area (SKE\_MOR\_1542), Wildlife Habitat Area (6-285), and various management zones including the Riparian Reserve Zone (RRZ) and Riparian Management Zone (RMZ). The map is overlaid with a grid of blocks L and K, and forest districts. A north arrow and scale bar are included.

# Coastal GasLink

COASTAL GASLINK PIPELINE LTD.

SKETCH PLAN SHOWING  
PROPOSED ADDITIONAL  
TEMPORARY WORKSPACES  
RRF-0032-1, RRF-0032-2 AND RRF-0032-3  
CONSTRUCTION SECTION 7

Route Reference: Section 7 Centreline Rev 0	April 28, 2021
Document No. CGW4703-MCSL-G-MP-2851	Rev 0

Request OGC2022-001 Page 40 of 255



## Indigenous Groups Notifications Table

## Construction Section 7

November 22, 2021

Notification Type	Regulatory Authority	File #	KP/Location	Rationale	Application Submission Date
Request for Leave of Commission	BC OGC	100082423	KP 558+550 to 558+950	Leave from Condition 19, 23 and 34 for ATWS that overlaps with old growth management area and wildlife habitat area. Clearing will be required in area that overlaps with wildlife habitat area between Sept 1st and June 15th. Additional workspace is required to safely execute the trenchless crossing of the Morice River.	23-Nov-21

## Keough, Dana

---

**From:** Smook, Patrick  
**Sent:** Thursday, December 9, 2021 11:16 AM  
**To:** Johnson, Andy; O'Neill, Sean; s19 Thoroughgood, Garth  
**Subject:** FW: Morice Drill Pad Question

FYI



**Patrick Smook** RPF, MBA  
Executive Director, Compliance &  
Enforcement  
[Patrick.Smook@BCOGC.ca](mailto:Patrick.Smook@BCOGC.ca)

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[Office Address Directory](#)  
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F. 250-794-5390  
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---

**From:** Dan Wyman <[dan\\_wyman@tcenergy.com](mailto:dan_wyman@tcenergy.com)>  
**Sent:** Thursday, December 9, 2021 10:59 AM  
**To:** Smook, Patrick <[Patrick.Smook@bcogc.ca](mailto:Patrick.Smook@bcogc.ca)>  
**Cc:** Joseph Campbell (Contractor) <[joseph\\_campbell@tcenergy.com](mailto:joseph_campbell@tcenergy.com)>  
**Subject:** Morice Drill Pad Question

Hi Patrick, I've confirmed that grading has restarted at the Morice drill pad, we expect civil and preparatory work to continue all the way through until drilling starts in January. We've also closed and gated the Martin road with support from FLNRORD.

-Dan

---

**Dan Wyman**

Team Lead, Regulatory  
Coastal GasLink

[dan\\_wyman@transcanada.com](mailto:dan_wyman@transcanada.com)

mobile s22 desk: 403-920-6296



450 – 1 Street S.W. Calgary, AB  
Canada, T2P 5H1



**Keough, Dana**

---

**From:** Smook, Patrick  
**Sent:** Friday, December 3, 2021 10:43 AM  
**To:** Phillips, Lori L; Thoroughgood, Garth  
**Subject:** RE: PDF Maps

Thanks very much to both of you for your feedback.

I've discussed these ideas with Arielle at the secretariat. She's likely going to turn around an updated version by the end of next week.

Cheers,



---

**Patrick Smook** RPF, MBA  
Executive Director, Compliance &  
Enforcement  
[Patrick.Smook@BCOGC.ca](mailto:Patrick.Smook@BCOGC.ca)

Fort St John BC  
[Office Address Directory](#)  
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T. 250 794-5314  
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---

**From:** Phillips, Lori L <Lori.Phillips@bcogc.ca>  
**Sent:** Tuesday, November 30, 2021 10:09 AM  
**To:** Smook, Patrick <Patrick.Smook@bcogc.ca>; Thoroughgood, Garth <Garth.Thoroughgood@bcogc.ca>  
**Subject:** RE: PDF Maps

Hi Patrick and Garth,

I have a few ideas:

s17



**Lori Phillips**  
Authorizations Manager  
[Lori.Phillips@BCOGC.ca](mailto:Lori.Phillips@BCOGC.ca)

Fort St John BC  
[Office Address Directory](#)  
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T. 250 794-5318  
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---

**From:** Smook, Patrick <[Patrick.Smook@bcogc.ca](mailto:Patrick.Smook@bcogc.ca)>  
**Sent:** Thursday, November 25, 2021 11:12 AM  
**To:** Thoroughgood, Garth <[Garth.Thoroughgood@bcogc.ca](mailto:Garth.Thoroughgood@bcogc.ca)>; Phillips, Lori L <[Lori.Phillips@bcogc.ca](mailto:Lori.Phillips@bcogc.ca)>  
**Subject:** FW: PDF Maps

Hi Lori and Garth,

I've been collaborating with Arielle at the LNG Secretariat in order to create a reference map of the Morice area. Attached is the first draft.

Please have a look and let me know if you have any ideas for improvement. So far, I'll be suggesting:

s13

Thanks for any further ideas.

Cheers,

P



---

**Patrick Smook** RPF, MBA  
Executive Director, Compliance &  
Enforcement  
[Patrick.Smook@BCOGC.ca](mailto:Patrick.Smook@BCOGC.ca)

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---

**From:** Boivin, Arielle EMLI:EX <[Arielle.Boivin@gov.bc.ca](mailto:Arielle.Boivin@gov.bc.ca)>  
**Sent:** Wednesday, November 24, 2021 6:35 PM  
**To:** Smook, Patrick <[Patrick.Smook@bcogc.ca](mailto:Patrick.Smook@bcogc.ca)>

**Cc:** Spence, Karen EMLI:EX <[Karen.Spence@gov.bc.ca](mailto:Karen.Spence@gov.bc.ca)>

**Subject:** FW: PDF Maps

Hi Patrick,

Sorry for the delay to get the Google Earth maps over to you.

Please find attached a few different snap shots for the activities in the area of section 6/7/8. As you know, many of the sites were removed over November 18<sup>th</sup> and 19<sup>th</sup> when RCMP enforced the injunction.



Thank you,

Arielle Boivin (she/her)

**Project Coordinator,**

**LNG Canada Implementation Secretariat**

Ministry of Energy, Mines and Low Carbon Innovation

**Phone:** 778-974-2813

*Respectfully acknowledging that I currently work and reside in the traditional territories of the Lekwungen peoples and the Songhees, the Esquimalt, the Schian'exw, the Ts'ouke, the Elwa Klallam and the Makah Nations.*

---

**From:** Boivin, Arielle EMLI:EX

**Sent:** November 22, 2021 11:27 AM

**To:** Smook, Patrick <[Patrick.Smook@bcogc.ca](mailto:Patrick.Smook@bcogc.ca)>

**Cc:** Spence, Karen EMLI:EX <[Karen.Spence@gov.bc.ca](mailto:Karen.Spence@gov.bc.ca)>

**Subject:** PDF Maps

Hi Patrick,

As promised, please find attached the Overview map and Detailed maps the Secretariat created in collaboration with GeoBC, for the CGL pipeline.

There are a couple of caveats to note:

- 1) these were produced November 2<sup>nd</sup> and therefore will not include sites of interest following that date
- 2) due to the current state of affairs, especially as it relates to S.6 & 7, information related to sites of interest can change at any time

I will send you a couple of Google Earth maps later today/early tomorrow. Depending on the outcome of the discussion with your boss, we can work together to get you updated maps as we update on our end.



Thank you,  
Arielle Boivin (she/her)  
**Project Coordinator,**  
**LNG Canada Implementation Secretariat**  
Ministry of Energy, Mines and Low Carbon Innovation  
**Phone: 778-974-2813**

*Respectfully acknowledging that I currently work and reside in the traditional territories of the Lekwungen peoples and the Songhees, the Esquimalt, the Schian'exw, the Ts'ouke, the Elwa Klallam and the Makah Nations.*

## Keough, Dana

---

**From:** Currie, Graham  
**Sent:** Friday, December 3, 2021 5:09 PM  
**To:** Leadership Group  
**Cc:** Communications DL; Rauscher, Tarilee; Drummond, Conan; Bentley, Kelly; Jonsson, Corey; Gerlach, Lisa; Parfitt, Lannea; Bligh, Stacey  
**Subject:** (No) Issue Notes & Media Tracker - Week of Nov. 29-Dec. 3, 2021  
**Attachments:** TRACKER\_Weekly Media\_3Dec2021.pdf; AD100113748\_PERMIT\_2021SEPT07.pdf

Good afternoon – the media tracker for you, plus an extra permit we provided to an outlet (as it's not on our site).

Have a good weekend everyone,

Graham



**Graham Currie**  
Executive Director, Public & Corporate  
Relations  
[Graham.Currie@bcogc.ca](mailto:Graham.Currie@bcogc.ca)

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**Weekly Media Tracker**  
**Nov. 29 – Dec. 3, 2021**

Total requests: 3 (2 new, 1 carried over from last week)

Date:	Topic:	Media outlet:	Reporter / Requester:	Commission SME:	Status:
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s13

<b>Nov. 29</b>	Permits associated with drilling under the Morice River	The Narwhal	Matt Simmons	Lori Phillips Garth Thoroughgood	Response sent Dec. 2
<p><b>Questions:</b></p> <ul style="list-style-type: none"> <li>Reaching out in the hopes that you can provide me with copies of all permits associated with TC Energy's plans to drill and lay pipe under the Morice River.</li> </ul> <p><b>Response:</b></p>					

- There are a number of permits that can be linked to drilling activities; therefore, there is not one, single permit for “drilling”. We are providing the permits issued to Coastal GasLink that are linked to the drilling at the Morice River site. The pipeline permit for section 7 provides the overall authority.

Pipeline companies must adhere to CSA Z662 Oil & Gas Pipeline Systems as well as all of our legislative and regulatory frameworks including OGAA, the Pipeline Crossing Regulation, the Pipeline Regulation and the Environmental Management and Protection Regulation.

[100109299](#) – IUP – IUP within the pipeline construction corridor, associated with sump 100113748.

[100110975](#) – IUP – IUP within the pipeline construction corridor.

[100113748](#) – Sump – within the pipeline construction corridor. (see attached permit)

[100110956](#) – s. 10 – Two point of diversions (POD) on this s. 10, but only one (POD 2) is at that specific location. For both, the water was proposed for use as access support, fire control, dust control, hydrostatic testing and boring.

s13

s13



September 7, 2021

Coastal GasLink Pipeline Ltd.  
450 - 1st Street SW  
Calgary, AB T2P 5H1

Attention: Coastal GasLink Pipeline Ltd.

**RE: Determination of Application Number 100113748**

**Permit Holder:** Coastal GasLink Pipeline Ltd.

**Date of Issuance:** September 7, 2021

**Effective Date:** September 7, 2021

**Application Submission Date:** July 27, 2021

**Application Determination Number:** 100113748

**Approved Disturbance Footprint:** 1.513 ha

## **ACTIVITIES APPROVED**

<b>Associated Oil &amp; Gas Activity No.:</b> 00215459	<b>Type:</b> Sump
--	-------------------

## **GENERAL AUTHORIZATIONS AND CONDITIONS**

### **AUTHORIZATIONS**

#### **Land Act**

1. The BC Oil and Gas Commission (the "Commission") pursuant to section 39 of the *Land Act* hereby authorizes the Permit Holder referenced above to construct and operate a related activity(s) as detailed in, Activities Approved table above and the Activity Details table(s) below, when applicable, for the purposes of carrying out oil and gas activities as defined in the *Oil and Gas Activities Act* (OGAA); subject to the conditions set out herein.
2. The authorizations granted under this permit are limited to the area identified in the spatial data submitted to the Commission in the permit application as identified and dated above; herein after referred to as the 'activity area'.
3. The Commission, pursuant to section 39 of the *Land Act*, hereby authorizes the occupation and use of any Crown land located within the activity area.
  - a. A licence authorized under section 39 of the Land Act for the Crown land portion of this application will follow. The permit holder is subject to the conditions contained in the Licence.
  - b. The authorization to occupy and use Crown land under the Licence expires two years from the date of issuance, unless the Commission has received notice of construction start, or this permit is otherwise extended, suspended, cancelled, surrendered or declared spent.
  - c. The authorization to occupy and use Crown land does not entitle the permit holder to exclusive possession of the activity area.
  - d. The total disturbance within the activity area must not exceed the total approved disturbance footprint as referenced above.

## CONDITIONS

### Notification

4. A notice of construction start must be submitted, as per the relevant Commission process at the time of submission, at least 48 hours prior to the commencement of activities under this permit.
5. Within 60 days of the completion of construction activities under this permit, the permit holder must submit to the Commission a post-construction plan as a shapefile and PDF plan accurately identifying the location of the total area actually disturbed under this permit. The shapefile and plan must be submitted via eSubmission.
6. The Permit Holder must notify the First Nation(s) copied on this permit/authorization at least 5 (five) working days prior to project commencement.

### Environmental

7. Construction activities must not result in rutting, compaction or erosion of soils that cannot be reasonably rehabilitated to similar levels of soil productivity that existed on the activity area prior to the construction activities taking place.
8. Any temporary access must be constructed and maintained in a manner that provides for proper surface drainage, prevents pooling on the surface, and maintains slope integrity.
9. The permit holder must make reasonable efforts to prevent establishment of invasive plants on the activity area resulting from the carrying out of activities authorized under this permit.
10. Following completion of construction associated with the associated activities set out in the authorized Activities table above, the permit holder must, as soon as practicable
  - a. decompact any soils compacted by the activity;
  - b. if natural surface drainage pattern was altered by the carrying out of the activity, the permit holder must restore, to the extent practicable, to the drainage pattern and its condition before the alteration;
  - c. re-vegetate any exposed soil on the activity area including, where necessary, using seed or vegetative propagules of an ecologically suitable species that:
    - i. promote the restoration of the wildlife habitat that existed on the area before the oil and gas activity was begun, and
    - ii. stabilize the soil if it is highly susceptible to erosion.
  - d. any retrievable surface soils removed from the activity area must be redistributed so that the soil structure is restored, to the extent practicable, to its condition before the activity was begun.

### Clearing/Forest Act

11. The permit holder is permitted to fell any trees located on Crown land within 1.5 tree lengths of the activity area that are considered to be a safety hazard according to Workers Compensation Act regulations and must be felled in order to eliminate the hazard. Trees or portions of these trees that can be accessed from the activity area without causing damage to standing timber may be harvested.

### Archaeology

12. If an artifact, feature, material or thing protected under the *Heritage Conservation Act* is identified within the activity area, the permit holder must, unless the permit holder holds a permit under Section 12.4 of the *Heritage Conservation Act* issued by the BC Oil and Gas Commission in respect of that artifact, feature, material or thing:
  - a. Immediately cease all work in the vicinity of the artifacts, features, materials or things;

- b. Immediately notify the BC Oil and Gas Commission; and
- c. Resume work in the vicinity of the artifacts, features, materials or things in accordance with direction from the BC Oil and Gas Commission.

## **ACTIVITY SPECIFIC DETAILS, PERMISSIONS AND CONDITIONS**

### **ASSOCIATED OIL AND GAS ACTIVITIES**

#### **ACTIVITY DETAILS**

<b>AOGA Number:</b> 00215459	<b>AOGA Type:</b> Sump
------------------------------	------------------------

*All authorizations for this activity are subject to the following conditions:*

#### **Associated Oil and Gas Activity Conditions**

- 13. Drilling waste disposal, sump construction, registration, and decommissioning must be performed in accordance with the requirements of the British Columbia Oil and Gas Handbook Drilling Waste Management Chapter.

## **ADVISORY GUIDANCE**

- 1. Construction Plan - CGE4703-MSI-G-MP-1830\_Morice\_MBC\_4A\_Sketch\_Rev0.PDF is for the permit holder's internal reference only and was not reviewed as a decision tool for this permit, nor does it form an integral part of this permit.
- 2. Instructions for submitting notice of construction start, as required by regulation, can be found in the Oil and Gas Activity Operations Manual on the Commission's website.
- 3. Unless a condition or its context suggests otherwise, terms used in this approval have the same meaning as the Environmental Protection and Management Regulation under the *Oil and Gas Activities Act*.
- 4. Appropriate tenure may be issued upon acceptance of the post-construction plan. Submission of the original application and submission of the post-construction plan is considered an application for all subsequent applicable *Land Act* tenures. Upon the Commission's acceptance of the post-construction plan no further applications for replacement tenure are required.

All pages included in this permit and any attached documents form an integral part of this permit.



Rebecca Bromba  
Authorized Signatory  
Commission Delegated Decision Maker

Copied to:

Land Agent – CWL Energy Management Ltd.  
First Nations – Office Of The Wet'suwet'en, Skin Tyee Nation, Wet'suwet'en First Nation, Nee Tahi Buhn Indian Band

## Keough, Dana

---

**From:** Thoroughgood, Garth  
**Sent:** Wednesday, December 1, 2021 4:38 PM  
**To:** Swan, Trevor; Paulson, Ken; O'Hanley, James G  
**Subject:** RE: CGL call tomorrow

s13

We may want to put a pipeline construction 101 together for Deborah?



---

**Garth Thoroughgood**  
Executive Director, Major Projects  
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---

**From:** Swan, Trevor <Trevor.Swan@bcogc.ca>  
**Sent:** Wednesday, December 1, 2021 3:36 PM  
**To:** Thoroughgood, Garth <Garth.Thoroughgood@bcogc.ca>; Paulson, Ken <Ken.Paulson@bcogc.ca>; O'Hanley, James G <James.O'Hanley@bcogc.ca>  
**Subject:** RE: CGL call tomorrow

It's important that we have a clear picture as to what is proposed to happen and when.



---

**Trevor Swan** RPF, LLB, C.Dir.  
Executive Vice President, Liabilities &  
Orphans  
[Trevor.Swan@BCOGC.ca](mailto:Trevor.Swan@BCOGC.ca)

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**From:** Thoroughgood, Garth <[Garth.Thoroughgood@bcogc.ca](mailto:Garth.Thoroughgood@bcogc.ca)>  
**Sent:** Wednesday, December 1, 2021 3:33 PM  
**To:** Swan, Trevor <[Trevor.Swan@bcogc.ca](mailto:Trevor.Swan@bcogc.ca)>; Paulson, Ken <[Ken.Paulson@bcogc.ca](mailto:Ken.Paulson@bcogc.ca)>; O'Hanley, James G <[James.O'Hanley@bcogc.ca](mailto:James.O'Hanley@bcogc.ca)>  
**Subject:** CGL call tomorrow

Trevor and Ken,  
Tomorrow at 10:30 we have our call with CGL.

I will be asking CGL to clarify something for me. I believe on the Tuesday morning ADM call Deborah Bowman stated that CGL would be drilling under the Morice between February and June.....and would then pull the pipe in the Fall.

s13

Just want you guys to know why I'm asking the questions that I intend to ask tomorrow.

G



---

**Garth Thoroughgood**  
Executive Director, Major Projects  
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## Keough, Dana

---

**From:** Thoroughgood, Garth  
**Sent:** Thursday, November 25, 2021 12:24 PM  
**To:** Smook, Patrick; Phillips, Lori L  
**Subject:** RE: PDF Maps

Thanks Patrick. These maps give us a much better view of things than we had previously.

I agree with most of what you have noted.

s13



**Garth Thoroughgood**  
Executive Director, Major Projects  
[Garth.Thoroughgood@BCOGC.ca](mailto:Garth.Thoroughgood@BCOGC.ca)

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---

**From:** Smook, Patrick <Patrick.Smook@bcogc.ca>  
**Sent:** Thursday, November 25, 2021 10:12 AM  
**To:** Thoroughgood, Garth <Garth.Thoroughgood@bcogc.ca>; Phillips, Lori L <Lori.Phillips@bcogc.ca>  
**Subject:** FW: PDF Maps

Hi Lori and Garth,

I've been collaborating with Arielle at the LNG Secretariat in order to create a reference map of the Morice area. Attached is the first draft.

Please have a look and let me know if you have any ideas for improvement. So far, I'll be suggesting:

s13

Thanks for any further ideas.

Cheers,

P



**Patrick Smook** RPF, MBA  
Executive Director, Compliance &  
Enforcement  
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---

**From:** Boivin, Arielle EMLI:EX <[Arielle.Boivin@gov.bc.ca](mailto:Arielle.Boivin@gov.bc.ca)>  
**Sent:** Wednesday, November 24, 2021 6:35 PM  
**To:** Smook, Patrick <[Patrick.Smook@bcogc.ca](mailto:Patrick.Smook@bcogc.ca)>  
**Cc:** Spence, Karen EMLI:EX <[Karen.Spence@gov.bc.ca](mailto:Karen.Spence@gov.bc.ca)>  
**Subject:** FW: PDF Maps

Hi Patrick,

Sorry for the delay to get the Google Earth maps over to you.

Please find attached a few different snap shots for the activities in the area of section 6/7/8. As you know, many of the sites were removed over November 18<sup>th</sup> and 19<sup>th</sup> when RCMP enforced the injunction.



Thank you,  
Arielle Boivin (she/her)  
**Project Coordinator,**  
**LNG Canada Implementation Secretariat**  
Ministry of Energy, Mines and Low Carbon Innovation  
**Phone:** 778-974-2813

*Respectfully acknowledging that I currently work and reside in the traditional territories of the Lekwungen peoples and the Songhees, the Esquimalt, the Schian'exw, the Ts'ouke, the Elwa Klallam and the Makah Nations.*

---

**From:** Boivin, Arielle EMLI:EX  
**Sent:** November 22, 2021 11:27 AM  
**To:** Smook, Patrick <[Patrick.Smook@bcogc.ca](mailto:Patrick.Smook@bcogc.ca)>  
**Cc:** Spence, Karen EMLI:EX <[Karen.Spence@gov.bc.ca](mailto:Karen.Spence@gov.bc.ca)>  
**Subject:** PDF Maps

Hi Patrick,

As promised, please find attached the Overview map and Detailed maps the Secretariat created in collaboration with GeoBC, for the CGL pipeline.

There are a couple of caveats to note:

- 1) these were produced November 2<sup>nd</sup> and therefore will not include sites of interest following that date
- 2) due to the current state of affairs, especially as it relates to S.6 & 7, information related to sites of interest can change at any time

I will send you a couple of Google Earth maps later today/early tomorrow. Depending on the outcome of the discussion with your boss, we can work together to get you updated maps as we update on our end.



Thank you,

Arielle Boivin (she/her)

**Project Coordinator,**

**LNG Canada Implementation Secretariat**

Ministry of Energy, Mines and Low Carbon Innovation

**Phone:** 778-974-2813

*Respectfully acknowledging that I currently work and reside in the traditional territories of the Lekwungen peoples and the Songhees, the Esquimalt, the Schian'eww, the Ts'ouke, the Elwa Klallam and the Makah Nations.*



## Keough, Dana

---

**From:** Phillips, Lori L  
**Sent:** Wednesday, November 24, 2021 8:37 AM  
**To:** Anderson, Justin  
**Cc:** Friedrich, Hardy  
**Subject:** FW: CGL Section 7 ATWS Leave Request  
**Attachments:** CGL4703-CGP-REG-LEAVRQ-0119\_Morice River.pdf; OGC Leave Form\_Sec7\_Morice River\_East.pdf; CGL4703-CGP-IR-RP-0092\_Nee\_Tahi\_Buhn.pdf; CGL4703-CGP-IR-RP-0116\_OW.pdf; CGL4703-CGP-IR-RP-0118\_SkinTyee.pdf; CGL4703-CGP-IR-RP-0117\_Wetsuweten.pdf; CGL4703-CGP-IR-RP-0162\_Witset.pdf



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---

**From:** Tracy Young <[tracy\\_young@tcenergy.com](mailto:tracy_young@tcenergy.com)>  
**Sent:** Tuesday, November 23, 2021 5:26 PM  
**To:** Post Permit Requests <[postpermitrequests@bcogc.ca](mailto:postpermitrequests@bcogc.ca)>  
**Cc:** Phillips, Lori L <[Lori.Phillips@bcogc.ca](mailto:Lori.Phillips@bcogc.ca)>; Thoroughgood, Garth <[Garth.Thoroughgood@bcogc.ca](mailto:Garth.Thoroughgood@bcogc.ca)>; Dan Wyman <[dan\\_wyman@tcenergy.com](mailto:dan_wyman@tcenergy.com)>; Shelley McInnis <[shelley\\_mcinnis@tcenergy.com](mailto:shelley_mcinnis@tcenergy.com)>  
**Subject:** CGL Section 7 ATWS Leave Request

Good afternoon,

Please find attached a leave request for ATWS in Section 7 on the east side of the Morice River, at the drill entry pad.

Thank you,

**Tracy Young**  
Senior Regulatory Analyst  
Contractor representing TC Energy

Coastal GasLink Pipeline Project

tel: 403-920-7648 mobile  
[TCEnergy.com](http://TCEnergy.com)

s22

## Keough, Dana

---

**From:** Phillips, Lori L  
**Sent:** Wednesday, November 24, 2021 1:25 PM  
**To:** 'Trottier, Shawn FLNR:EX'; Smook, Patrick  
**Subject:** RE: CGL Road Permit

Hi Shawn, feel free to give me a call whenever you like.

The road permit for CGL would need to come from the Commission, as we are the responsible regulatory agency according to the legislation. CGL has discussed access control methodologies with Patrick pretty extensively and I think he is familiar with the issues at hand.

Generally with a road we would consider a transfer of jurisdiction, the Commission would provide notice to the applicable First Nations communities. The turnaround on that would largely depend on the application being submitted as in a timely manner as possible, but CGL is pretty familiar with our system so I anticipate that would not take that long.

Thank you,

Lori



---

**Lori Phillips**  
Authorizations Manager  
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**From:** Trottier, Shawn FLNR:EX <Shawn.Trottier@gov.bc.ca>  
**Sent:** Tuesday, November 23, 2021 4:55 PM  
**To:** Phillips, Lori L <Lori.Phillips@bcogc.ca>; Smook, Patrick <Patrick.Smook@bcogc.ca>  
**Subject:** RE: CGL Road Permit

Follow-up to the follow-up. If the CGL road permit comes from OGC, then the DM can't issue approval for the access control device since the OGC permitted road wouldn't fall under her jurisdiction.

If possible, FLNRORD DM issued road permit to CGL for the section Canfor retires might be the easiest/fastest path, but I don't know if that contradicts your policy/legislation.

Thanks

Shawn



Shawn Trottier  
Resource Manager, Nadina District  
Ministry of Forests, Lands, Natural Resource  
Operations & Rural Development

☎ (250) 692-1353

[Shawn.Trottier@Gov.BC.CA](mailto:Shawn.Trottier@Gov.BC.CA)



---

**From:** Trottier, Shawn FLNR:EX

**Sent:** November 23, 2021 3:15 PM

**To:** 'Phillips, Lori L' <[Lori.Phillips@bcogc.ca](mailto:Lori.Phillips@bcogc.ca)>; Smook, Patrick <[Patrick.Smook@bcogc.ca](mailto:Patrick.Smook@bcogc.ca)>

**Subject:** RE: CGL Road Permit

Follow up question. Understanding that CGL Road Permits are normally issued by OGC, is there anything preventing the District Manager from issuing a Road Use Permit specific to the section in question where CGL is proposing the access control?

Or, related question, if Canfor gives up the associated permit (as in Scenario 2 below), how long would it take OGC to issue the permit? Would a consultation be required?

If our DM is willing to risk manage and issue a permit this week, can it come from OGC, or would it need to come from FLNRORD in that circumstance?

Thanks!

Shawn



Shawn Trottier  
Resource Manager, Nadina District  
Ministry of Forests, Lands, Natural Resource  
Operations & Rural Development

☎ (250) 692-1353

[Shawn.Trottier@Gov.BC.CA](mailto:Shawn.Trottier@Gov.BC.CA)



**From:** Phillips, Lori L <[Lori.Phillips@bcogc.ca](mailto:Lori.Phillips@bcogc.ca)>

**Sent:** November 23, 2021 11:14 AM

**To:** Trottier, Shawn FLNR:EX <[Shawn.Trottier@gov.bc.ca](mailto:Shawn.Trottier@gov.bc.ca)>; Smook, Patrick <[Patrick.Smook@bcogc.ca](mailto:Patrick.Smook@bcogc.ca)>

**Subject:** RE: CGL Road Permit

**[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.**

Hi Shawn, I hope we can help a little.

I am not entirely sure of which road we are discussing, so I will outline two possible high level scenarios. When I think of RUPs, I think of FSRs, so my apologies if I am misinterpreting your inquiry below.

1. If the road in question is an FSR and Canfor is the primary maintainer, the Commission could issue an RUP to CGL (if they don't have one already) and then FLNRO could assign CGL primary maintainer status. My understanding is that obligations, etc associated with primary maintainers reside with FLNRO, but the initial RUP decision under s. 117 of the Forest Act rests with the Commission only.
2. If the road in question is a resource road held by Canfor under the Forest Act, what would generally happen would be akin to a "transfer of jurisdiction" – assuming CGL was looking to take on the road and Canfor was looking to relinquish it, Canfor would hold to the road until such time the Commission issued a permit for a road under the Oil and Gas Road Regulation under the Oil and Gas Activities Act.

Again, I am not sure about the specifics here, so this would be the general framework. Is this helpful?



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---

**From:** Trottier, Shawn FLNR:EX <[Shawn.Trottier@gov.bc.ca](mailto:Shawn.Trottier@gov.bc.ca)>  
**Sent:** Tuesday, November 23, 2021 11:39 AM  
**To:** Smook, Patrick <[Patrick.Smook@bcogc.ca](mailto:Patrick.Smook@bcogc.ca)>; Phillips, Lori L <[Lori.Phillips@bcogc.ca](mailto:Lori.Phillips@bcogc.ca)>  
**Subject:** CGL Road Permit

Good morning

s22

In regards to CGL application to install means of access control on resource roads associated with Morice River drill activity.

Currently, Canfor is the holder of the Road Use Permit, issued by FLNRORD. Canfor has up to know managed the relationship by entering into a Road Use Agreement with CGL.

Within our process, CGL can't apply for the access control measures, it has to come from the RUP holder.

s22

Canfor can surrender the RUPs for the sections in question, and we can then issue an RUP/RP to CGL to allow them to apply for the access restriction. Up to this point, seems simple enough.

Where it falls apart for me, is that OGC issues road permits to CGL under the Master License to Cut Agreement (I think?), and therefore I'm not sure if FLNRORD can issue them an RUP.

Can you offer some guidance? I have a call this afternoon at 1 PM with TC Energy and our Engineering team to try and figure out next steps.

Thanks!

Shawn



**Shawn Trottier**  
Resource Manager, Nadina District  
Ministry of Forests, Lands, Natural Resource  
Operations & Rural Development

☎ (250) 692-1353

[Shawn.Trottier@Gov.BC.CA](mailto:Shawn.Trottier@Gov.BC.CA)



November 23, 2021

Ms. Lori Phillips  
Authorizations Manager  
BC Oil and Gas Commission  
6534 Airport Road  
Fort St. John, B.C. V1J 4M6

Coastal GasLink  
450 – 1<sup>st</sup> Street SW  
Calgary, AB, Canada T2P 5H1

Tel: 403.920.7648  
Fax: 403.920.2443  
Email: [tracy\\_young@tcenergy.com](mailto:tracy_young@tcenergy.com)  
Web: [www.TCenergy.com](http://www.TCenergy.com)

CGL4703-CGP-REG-LEAVRQ-0119

Dear Ms. Phillips,

**Re: Coastal GasLink Pipeline Project (Project)  
Leave of the Commission Request  
Section 7 Pipeline Permit (AD # 100082423) Condition 17, 18, 19 and 23**

Please find enclosed a request for Leave of Commission for the noted conditions in BC Oil and Gas Commission (OGC) Section 7 permit, Condition 17 – incremental clearing in a riparian management area, Condition 18 – incremental clearing in wildlife tree retention area, Condition 19 – incremental clearing in an old growth management area, and Condition 23 – additional temporary workspace (ATWS).

In order to provide certainty to our construction contractors, Coastal GasLink is seeking a determination from the OGC on this request prior to January 4, 2021.

Should you have any questions do not hesitate to contact me at 403.920.7648 or [tracy\\_young@tcenergy.com](mailto:tracy_young@tcenergy.com).

Sincerely



Tracy Young  
Senior Regulatory Analyst  
Coastal GasLink

**Coastal GasLink**

## 1.0 PERMIT CONDITION – LEAVE REQUEST

Coastal GasLink Pipeline Ltd. (Coastal GasLink) requests leave of the Commission for the following condition in the British Columbia (BC) Oil and Gas Commission (OGC) permit for Section 7 (AD# 100082423):

- 17. Clearing and site preparation must not occur within a RMA except:*
- a) the pipeline right of way, temporary workspace and shooflies, as shown on the construction plans;*
  - b) to facilitate a stream or wetland crossing;*
  - c) where it does not involve new clearing and existing clearings do not have a reestablished vegetative cover; or*
  - d) with leave of the Commission.*
- 18. Clearing and site preparation, inclusive of work space, must not occur within a wildlife tree retention area except:*
- a) as shown on the construction plans; or*
  - b) with leave of the Commission.*
- 19. Except as shown on the construction plans or with leave of the Commission, incremental clearing for additional work space is not permitted within:*
- c) old growth management areas.*

And

- 23. Clearing and site preparation, other than those identified in the construction plans referenced in Permissions, must be located on any previously disturbed areas located within the construction corridor unless:*
- c) the permit holder is granted leave by the Commission to carry out such clearing and site preparation.*

## 1.1 REASON FOR REQUEST

The right of way (ROW) was assessed and locations have been identified where minor changes are necessary for the purpose of addressing site-specific construction issues due to engineering, terrain, safety or environmental constraints. The locations and reasoning for the change, including reference to the attached map, are indicated in Table 1. As the location of these incremental additional temporary workspace (ATWS) areas are outside of the existing OGC permitted footprint, Coastal GasLink requires leave of the Commission.

Coastal GasLink requires incremental ATWS of 0.11 ha outside of the current footprint, within the construction corridor. Across all of the Section 7 Pipeline Permit, through discussion with the contractor, Coastal GasLink has reduced the total size of disturbance on crown land by approximately 172.5 ha overall and this requested additional space will not cause an exceedance of the permitted limit of new cut on crown land.

The ATWS overlaps with old growth management area (OGMA) SKE\_MOR\_1542 established in 2016 as well as the riparian management area (RMA) for crossing ID J425.02, a watercourse classified as S6. In addition, the ATWS overlaps with wildlife tree retention area 1649082. Therefore, Coastal GasLink will also require leave of the Commission for Condition 17, Condition 18 and Condition 19 in addition to Condition 23 of the Section 7 Pipeline Permit.

## 2.0 JUSTIFICATION

### 2.1 CONSTRUCTION CONSIDERATION

Detailed justification for specific changes is identified in Table 1 and ATWS area depicted with orange shading in the attached mapsheet (CGW4703-MCSL-G-MP-2910) as referenced.

**Table 1 – New ATWS Outside OGC Footprint**

Area No.	KP (Rev G)	Area (ha)	Construction Consideration
ATWS - Morice R	KP 557+980	0.11	Clearing of trees adjacent to the proposed entry pad for the microtunnel crossing of the Morice River is required to ensure the safety of crews and equipment.
Total:		0.11	

### 2.2 ENVIRONMENTAL EFFECT

The OGC Pipeline and Facility Application (the Application) outlines the pipeline construction corridor approach to allow for flexibility during construction, which included contemplation for additional temporary workspace locations. The pipeline construction footprint and additional temporary workspace adjacent to the pipeline construction footprint will remain within the limits of the pipeline construction corridor.

The ATWS identified in Table 1 are within the pipeline construction corridor and captured by the assessment provided in the Application. Inclusion of the ATWS does



not change the environmental features traversed by the Project and does not result in any significant environmental effects.

Riparian management areas (RMAs), including RRZ, are transitional areas adjacent to a stream, wetland or lake where there is a distinct shift in vegetation from aquatic to upland communities. Special management is required in RMAs to conserve fish or wildlife habitat, biodiversity and water values in the area (BC OGC 2016).

Riparian areas contribute to fish habitat through provision of shade, overhead cover, undercut banks, woody debris, bank stability and filtration of sediments and contaminants. Riparian vegetation will be disturbed within the construction footprint, temporary workspace, watercourse crossings and where access roads are upgraded or where new roads are constructed.

Coastal GasLink's EAC Application considered the effects of clearing of riparian areas (Section 7 of the Application), and concluded that the effect, after implementation of mitigation, of pipeline construction on alteration or loss of riparian vegetation is considered to be within environmental and regulatory standards (BC MOE and BC MOF 1995, CAPP et al. 2005) and, consequently, of low magnitude. The residual effect is considered to be reversible in the medium to long-term. Application of appropriate mitigation will reduce the residual effects of construction within riparian areas.

### **3.0 MITIGATION AND COMMITMENTS**

Coastal GasLink has developed Project-specific environmental protection measures as outlined in the Environmental Management Plan (EMP) to avoid and reduce potential environmental adverse effects during construction of the Project. Mitigation measures identified in the EMP applicable to clearing and site preparation include, but not limited to:

#### **Clearing (Section 8.2 of the EMP)**

- During clearing, fell trees towards the ROW, wherever practical. Recover trees that inadvertently fall into adjacent undisturbed vegetation.
- Avoid disturbance to environmentally sensitive features during clearing as identified by the appropriate signage or fencing. The Environmental Inspector(s) and appropriate Resource Specialist will determine the size of avoidance buffer surrounding these features, if appropriate.
- Where practical, leave stumps in place, particularly on streambanks, to provide surface stability. Dispose of stumps removed from the required work areas by burning or chipping, or stockpile for use in access or line-of-sight control.

- Reduce grading throughout the ROW, especially at watercourses, wetlands, and rare plant sites and on moderately steep slopes, if practical. Reduce the width of grading in order to limit the potential for erosion and subsoil compaction, where practical.
- Where practical, avoid grading in riparian areas until installation of the vehicle crossing.

Surface Material Removal, Salvage, and Grading (Section 8.3 of the EMP)

- Develop and follow site-specific topsoil depth salvage requirements for each soil map unit.
- Use machinery appropriate to the season and conditions for all soil salvage operations.
- Plan construction operations to reduce the number of times and distances that salvaged soils are moved.
- Do not conduct surface material salvage except where grading is required (Appendix B, Dwg. STDS-03-ML-05-443, STDS-03-ML-05-410, STDS-03-ML-05-445, and STDS-03-ML-05-446). The area stripped is to correspond to the area to be graded.
- Salvage the organic layer (i.e., leaf litter layer) where surface material salvage is required.
- Stabilize exposed surface material and subsoil where the potential for erosion exists. Refer to the Soil Erosion Contingency Plan (Appendix C.7) for additional information.
- Ensure surface material storage areas are in approved ROW and temporary workspace.

Riparian buffers and management areas (Section 8.4.3 of the EMP)

- Prohibit clearing of extra temporary workspace within 10 m of a watercourse to protect riparian areas. This area shall be clearly marked prior to clearing operations. The Construction footprint will be narrowed through the riparian area, if practical.
- Fell trees away from watercourses. Immediately remove trees, debris or soil inadvertently deposited below the high watermark of a watercourse. When altering a tree that is located on the bank of a waterbody, where practical, ensure that the root structure and stability are maintained to help bind the soil and encourage rapid colonization of low-growing plant species.

Coastal GasLink has also developed specific mitigation for clearing and construction activities within WTRAs as indicated in Table 7-1 of the EMP. Coastal GasLink will implement, as applicable, the following mitigation measures as outlined in the EMP to avoid or reduce potential residual adverse effects on WTRAs during clearing activities:

- Avoid or reduce disturbance within OGMA's and Wildlife Tree Patches (WTPs), where practical (e.g., narrow the width of the ROW, avoid extra temporary workspace).
- In cases where WTPs cannot be avoided, develop an appropriate strategy to address disturbance of site-specific wildlife habitat values in the WTPs, in consultation with the relevant regulatory agencies.

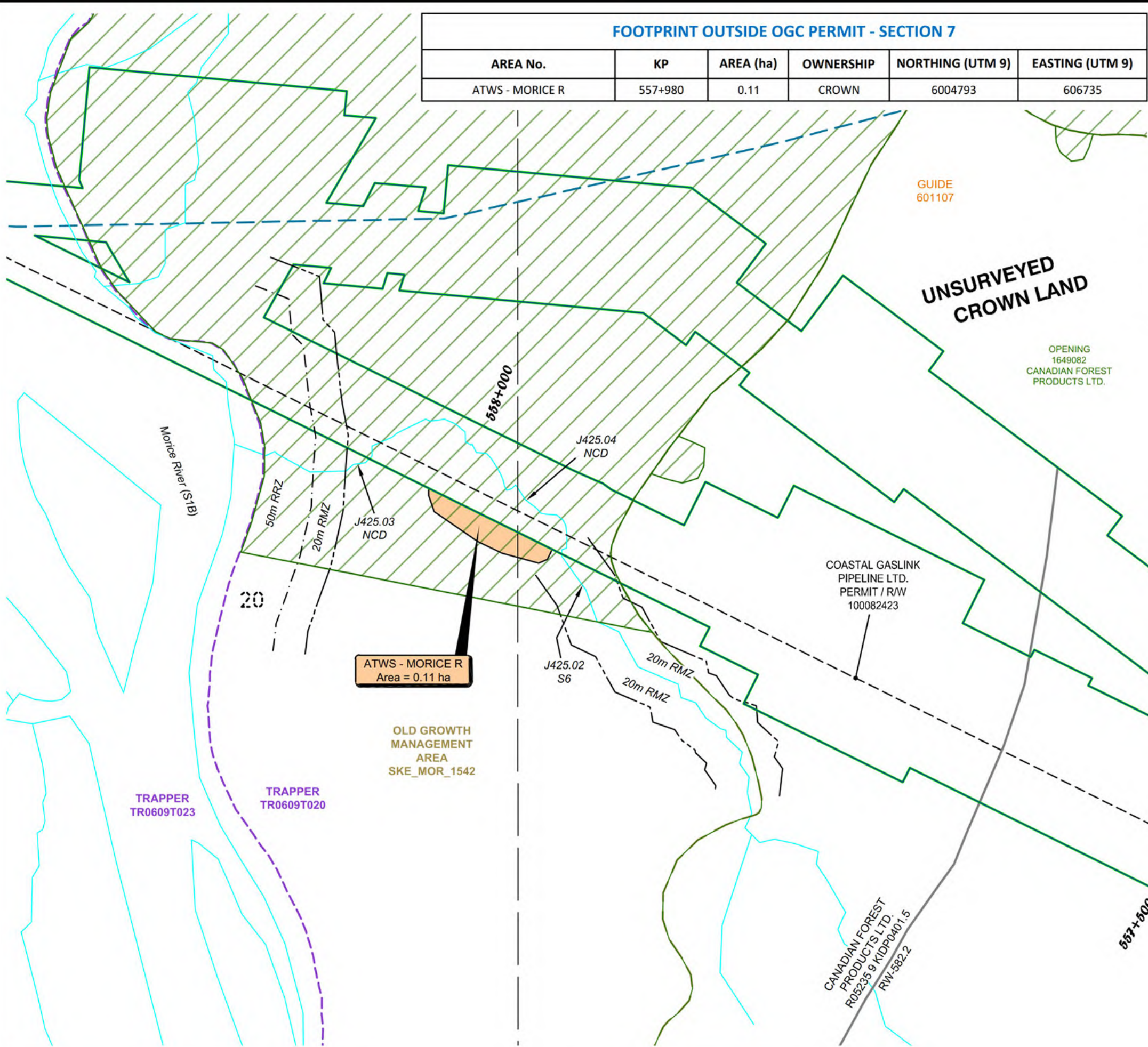
No new mitigation measures other than those outlined in the Project EMP are required as a result of the ATWS request. Coastal GasLink will implement mitigation measures developed in consultation with provincial and federal authorities and Indigenous groups which was approved by the EAO in early 2016.

In addition, Coastal GasLink has developed a Reclamation Program which will be used to promote the re-establishment of natural ecosystems that are compositionally and functionally similar to pre-disturbance conditions as well as the project-specific Post-Construction Monitoring Program which describes monitoring to review the effectiveness of mitigation and the approach to adaptive management.

### **3.1 CONCLUSION**

Coastal GasLink requires leave of the Commission for the incremental ATWS identified in this request to provide for safe and efficient construction in areas of challenging terrain and to accommodate minor changes in the location of footprint for pipeline location adjustment. All of the new ATWS are directly adjacent to the approved footprint. Granting the requested leave of the Commission will not change the conclusions of the environmental assessment conducted for the Project.





FOOTPRINT OUTSIDE OGC PERMIT - SECTION 7					
AREA No.	KP	AREA (ha)	OWNERSHIP	NORTHING (UTM 9)	EASTING (UTM 9)
ATWS - MORICE R	557+980	0.11	CROWN	6004793	606735

**LEGEND :**

- Section 7 Centreline Rev 1
- Area Outside OGC Permit
- Road / Trail
- Watercourse
- Wildlife Habitat Area
- Riparian Reserve Zone (RRZ)
- Riparian Management Zone (RMZ)
- OGC Permitted P/L R/W
- OGC P/L R/W Permit (2014)
- Wetlands
- Old Growth Management Area
- Trapper Boundary
- Wildlife Tree Retention
- Cutblock / Openings

**NOTES :**

- UTM Coordinates shown are NAD83 Zone 9 N.
- The proposed project is within the Southwest OGC Zone.
- Distances shown are in metres and decimals thereof.

**McELHANNEY**  
8808 - Northern Lights Drive  
Fort St. John, British Columbia  
Phone:(250)787-0356, Fax:(250)787-0310

BCGS 093L . 014

REVISION	DESCRIPTION
0	Issued for Use, October 5, 2021

SCALE 1:2500 METRES

DISTRICT  
BULKLEY-NECHAKO

FOREST DISTRICT  
Nadina Natural Resource District

BLOCK K GROUP 93-L-3

19

WET-557.5  
UN

**Coastal GasLink**

COASTAL GASLINK PIPELINE LTD.

SKETCH PLAN SHOWING  
PROPOSED ADDITIONAL  
TEMPORARY WORKSPACE  
MORICE R  
CONSTRUCTION SECTION 7

Route Reference: Section 7 Centreline Rev 1	October 5, 2021
Document No. CGW4703-MCSL-G-MP-2910	Rev 0





# LEAVE OF COMMISSION FORM

Physical Address: 6534 Airport Road,  
Fort St. John, B.C. V1J 4M6  
Mailing Address: OGC, Bag 2, Fort St. John,  
B.C. V1J 2B0  
Phone: (250) 794-5200

Date Received

THIS IS AN AUDITABLE DOCUMENT

COMMISSION USE ONLY		A
Commission File No. AD No.:		
ADMINISTRATION		B
Applicant Name: Coastal GasLink Pipeline Ltd.		
Address: 450 – 1 <sup>st</sup> Street SW		
City, Province, Postal Code: Calgary, Alberta, T2P 5H1		
Contact: Tracy Young	Email: tracy_young@tcenergy.com	Phone: 778-328-5327
Referral Company:	Email:	Phone:
Agent Name:	Internal File No.:	
APPLICATION INFORMATION		C
Surface Location: Section 7 – see attached map		<input type="checkbox"/> N/A
Permit Condition Request relates to (copy full text)	Permit application Determination number: 100082423 17. Clearing and site preparation must not occur within a RMA except: a) the pipeline right of way, temporary workspace and shooflies, as shown on the construction plans; b) to facilitate a stream or wetland crossing; c) where is does not involve new clearing and existing clearings do not have a reestablished vegetative cover; or d) with leave of the Commission. 18. Clearing and site preparation, inclusive of work space, must not occur within a wildlife tree retention area except: a) as shown on the construction plans; or b) with leave of the Commission. 19. Except as shown on the construction plans or with leave of the Commission, incremental clearing for additional work space is not permitted within: c) old growth management areas. 23. Clearing and site preparation, other than those identified in the construction plans referenced in Permissions, must be located on any previously disturbed areas located within the construction corridor unless: c) the permit holder is granted leave by the Commission to carry out such clearing and site preparation.	
Rationale for Request	Additional cleared space is required at the entry pad of the microtunnel drill for crossing the Morice River. The ATWS overlaps with old growth management area (OGMA) SKE_MOR_1542 established in 2016 as well as the riparian management area (RMA) for crossing ID J425.02, a watercourse classified as S6. In addition, the ATWS overlaps with wildlife tree retention area 1649082. Therefore, Coastal GasLink will also require leave of the Commission for Condition 17, Condition 18 and Condition 19 in addition to Condition 23 of the Section 7 Pipeline Permit.	
Desired Date of Request Completion	January 4, 2021 to provide project certainty to construction contractors	
Primary Activity: <input type="checkbox"/> Well <input type="checkbox"/> Facility <input type="checkbox"/> Geophysical <input checked="" type="checkbox"/> Pipeline <input type="checkbox"/> Road <input type="checkbox"/> NEB Pipeline		

FIRST NATIONS INFORMATION		D
Ensure the following are attached to the application for First Nations engagement purposes:		
First Nations	Attachments	
Carrier Sekani Tribal Council	<input type="checkbox"/> Cover letter (2 copies for each notification area affected)	
Nee Tahi Buhn Band – comments in attachment	<input checked="" type="checkbox"/> Leave of Commission Form	
Office of the Wet'suwet'en - comments in attachment	<input checked="" type="checkbox"/> Any documents provided to support Leave Request	
Skin Tyee Nation - comments in attachment		
Wet'suwet'en First Nation - comments in attachment		
Witset First Nation - comments in attachment		

Permit Holder Engagement: Coastal GasLink has provided notification to First Nations identified regarding its intent to file this request on October 4, 2021 and an update on November 22, 2021.

### WORKS IN AND ABOUT A STREAM

☒ N/A ☐ E

Information Attached: ☐ Yes ☐ No

Crossing Number	UTM Zone	UTM Location	Stream / Waterbody Name	Riparian Classification	Bank Full Stream Width	Stream Gradient (%)	FHA	Temporary or Permanent Crossing (T/P)	Stream Crossing Methods				Does the crossing type meet the peak flow requirements (Y/N) If no, provide justification.
									Bridge	Major	Ice Bridge	Other (please,)	
		N											
		E											
		N											
		E											
		N											
		E											
		N											
		E											

### ADDITIONAL INFORMATION REQUIREMENTS

F

Attach any documentation that will support a Commission Review:

### APPLICANT AUTHORIZATION

G

I Tracy Young hereby attest that the information contained herein is true and correct:  
(Print Name)



AUTHORIZED SIGNATORY OF APPLICANT COMPANY

2021/11/23

DATE (YYYY/MM/DD)

### COMMISSION CONSIDERATION

Leave Accepted: ☐ Yes ☐ No

Commission Comments:

AUTHORIZED COMMISSION SIGNATORY DATE (YYYY/MM/DD)

DISTRIBUTION:

ADDITIONAL ATTACHMENTS:

Pages: 73 - 97  
s18.1



## Keough, Dana

---

**From:** Phillips, Lori L  
**Sent:** Wednesday, November 24, 2021 8:37 AM  
**To:** Anderson, Justin  
**Cc:** Friedrich, Hardy  
**Subject:** FW: CGL Section 7 ATWS Morice River West Side  
**Attachments:** CGL4703-CGP-REG-LEAVRQ-0121\_Morice River West.pdf; OGC Leave Form\_Sec7\_Morice River\_West.pdf; CGL4703-CGP-IR-RP-0092\_Nee\_Tahi\_Buhn.pdf; CGL4703-CGP-IR-RP-0116\_OW.pdf; CGL4703-CGP-IR-RP-0118\_SkinTyee.pdf; CGL4703-CGP-IR-RP-0117\_Wetsuweten.pdf; CGL4703-CGP-IR-RP-0162\_Witset.pdf; CGL4703-CGP-IR-RP-0141\_Dark House.pdf



**Lori Phillips**  
Authorizations Manager  
[Lori.Phillips@BCOGC.ca](mailto:Lori.Phillips@BCOGC.ca)

Fort St John BC  
[Office Address Directory](#)  
[bcogc.ca](http://bcogc.ca)

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F. 250-794-5390



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---

**From:** Tracy Young <[tracy\\_young@tcenergy.com](mailto:tracy_young@tcenergy.com)>  
**Sent:** Tuesday, November 23, 2021 5:45 PM  
**To:** Post Permit Requests <[postpermitrequests@bcogc.ca](mailto:postpermitrequests@bcogc.ca)>  
**Cc:** Phillips, Lori L <[Lori.Phillips@bcogc.ca](mailto:Lori.Phillips@bcogc.ca)>; Thoroughgood, Garth <[Garth.Thoroughgood@bcogc.ca](mailto:Garth.Thoroughgood@bcogc.ca)>; Dan Wyman <[dan\\_wyman@tcenergy.com](mailto:dan_wyman@tcenergy.com)>; Shelley McInnis <[shelley\\_mcinis@tcenergy.com](mailto:shelley_mcinis@tcenergy.com)>  
**Subject:** CGL Section 7 ATWS Morice River West Side

Please find attached a leave request for ATWS in Section 7 on the west side of the Morice River.

Thank you,

**Tracy Young**  
Senior Regulatory Analyst  
Contractor representing TC Energy

Coastal GasLink Pipeline Project

tel: 403-920-7648 mobile  
[TCEnergy.com](http://TCEnergy.com)

s22



November 23, 2021

Ms. Lori Phillips  
Authorizations Manager  
BC Oil and Gas Commission  
6534 Airport Road  
Fort St. John, B.C. V1J 4M6

Coastal GasLink  
450 – 1<sup>st</sup> Street SW  
Calgary, AB, Canada T2P 5H1

Tel: 403.920.7648  
Fax: 403.920.2443  
Email: [tracy\\_young@tcenergy.com](mailto:tracy_young@tcenergy.com)  
Web: [www.TCenergy.com](http://www.TCenergy.com)

CGL4703-CGP-REG-LEAVRQ-0121

Dear Ms. Phillips,

**Re: Coastal GasLink Pipeline Project (Project)  
Leave of the Commission Request  
Section 7 Pipeline Permit (AD # 100082423) Condition 19, 23 and 34**

Please find enclosed a request for Leave of Commission for the noted conditions in BC Oil and Gas Commission (OGC) Section 7 permit, Condition 19 – incremental clearing in an old growth management area, Condition 23 – additional temporary workspace (ATWS) and Condition 34 – clearing in wildlife habitat area (WHA) between September 1 and June 15.

In order to provide certainty to our construction contractors, Coastal GasLink is seeking a determination from the OGC on this request prior to January 4, 2021.

Should you have any questions do not hesitate to contact me at 403.920.7648 or [tracy\\_young@tcenergy.com](mailto:tracy_young@tcenergy.com).

Sincerely



Tracy Young  
Senior Regulatory Analyst  
Coastal GasLink

**Coastal GasLink**

## 1.0 PERMIT CONDITION – LEAVE REQUEST

Coastal GasLink Pipeline Ltd. (Coastal GasLink) requests leave of the Commission for the following condition in the British Columbia (BC) Oil and Gas Commission (OGC) permit for Section 7 (AD# 100082423):

*19. Except as shown on the construction plans or with leave of the Commission, incremental clearing for additional work space is not permitted within:*

*c) old growth management areas.*

*23. Clearing and site preparation, other than those identified in the construction plans referenced in Permissions, must be located on any previously disturbed areas located within the construction corridor unless:*

*c) the permit holder is granted leave by the Commission to carry out such clearing and site preparation.*

And

*34. Except with leave of the Commission, the permit holder must not undertake clearing or significant maintenance activities within WHAs 6-283, 6-285 and 6-286 between September 1 and June 15.*

## 1.1 REASON FOR REQUEST

The right of way (ROW) was assessed and locations have been identified where minor changes are necessary for the purpose of addressing site-specific construction issues due to engineering, terrain, safety or environmental constraints. The locations and reasoning for the change, including reference to the attached map, are indicated in Table 1. As the location of these incremental additional temporary workspace (ATWS) areas are outside of the existing OGC permitted footprint, Coastal GasLink requires leave of the Commission.

Coastal GasLink requires incremental ATWS of 1.21 ha outside of the current footprint, within the construction corridor. Across all of the Section 7 Pipeline Permit, through discussion with the contractor, Coastal GasLink has reduced the total size of disturbance on crown land by approximately 172.4 ha overall and this requested additional space will not cause an exceedance of the permitted limit of new cut on crown land.

A portion of the ATWS overlaps with old growth management area (OGMA) SKE\_MOR\_1542 established in 2016 as well as wildlife habitat area (WHA) 6-285. Therefore, Coastal GasLink will also require leave of the Commission for Condition 19 and Condition 34 in addition to Condition 23 of the Section 7 Pipeline Permit.

The right of way (ROW) from approximately KP 558+550 to 558+850 and the ATWS described in Table 1, that intersects with WHA 6-285, will require clearing prior to June 15, 2022 to avoid impact to project delivery.

## 2.0 JUSTIFICATION

### 2.1 CONSTRUCTION CONSIDERATION

Detailed justification for specific changes is identified in Table 1 and ATWS area depicted with orange shading in the attached mapsheet (CGW4703-MCSL-G-MP-2910) as referenced.

**Table 1 – New ATWS Outside OGC Footprint**

Area No.	KP (Rev G)	Area (ha)	Construction Consideration
ATWS – RRF-0032-1	KP 558+700	0.77	There is steep terrain in this area and additional footprint is required to be able to complete the work safely and efficiently.
ATWS-RRF-0032-2	KP 558+700	0.10	There is steep terrain in this area and additional footprint may be required to be able to complete the work safely and efficiently.
ATWS-RRF-0032-3	KP 558+700	0.34	There is steep terrain in this area and additional footprint is required to be able to complete the work safely and efficiently.
Total:		1.21	

### 2.2 ENVIRONMENTAL EFFECT

The OGC Pipeline and Facility Application (the Application) outlines the pipeline construction corridor approach to allow for flexibility during construction, which included contemplation for additional temporary workspace locations. The pipeline construction footprint and additional temporary workspace adjacent to the pipeline construction footprint will remain within the limits of the pipeline construction corridor.

WHA 6-285 Gosnell/Thaudil Confluence Staging Area was established on July 30, 2009. These areas provide spawning and staging areas for data sensitive species. Incremental clearing is required within this WHA to facilitate construction of the Coastal GasLink Pipeline Project.

The ATWS identified in Table 1 are within the pipeline construction corridor and captured by the assessment provided in the Application. Inclusion of the ATWS does not change the environmental features traversed by the Project and does not result in any significant environmental effects.

### **3.0 MITIGATION AND COMMITMENTS**

Coastal GasLink has developed Project-specific environmental protection measures as outlined in the Environmental Management Plan (EMP) to avoid and reduce potential environmental adverse effects during construction of the Project. Mitigation measures identified in the EMP applicable to clearing and site preparation include, but not limited to:

#### Clearing (Section 8.2 of the EMP)

- During clearing, fell trees towards the ROW, wherever practical. Recover trees that inadvertently fall into adjacent undisturbed vegetation.
- Avoid disturbance to environmentally sensitive features during clearing as identified by the appropriate signage or fencing. The Environmental Inspector(s) and appropriate Resource Specialist will determine the size of avoidance buffer surrounding these features, if appropriate.
- Where practical, leave stumps in place, particularly on streambanks, to provide surface stability. Dispose of stumps removed from the required work areas by burning or chipping, or stockpile for use in access or line-of-sight control.
- Reduce grading throughout the ROW, especially at watercourses, wetlands, and rare plant sites and on moderately steep slopes, if practical. Reduce the width of grading in order to limit the potential for erosion and subsoil compaction, where practical.

#### Surface Material Removal, Salvage, and Grading (Section 8.3 of the EMP)

- Develop and follow site-specific topsoil depth salvage requirements for each soil map unit.
- Use machinery appropriate to the season and conditions for all soil salvage operations.
- Plan construction operations to reduce the number of times and distances that salvaged soils are moved.
- Do not conduct surface material salvage except where grading is required (Appendix B, Dwg. STDS-03-ML-05-443, STDS-03-ML-05-410, STDS-03-ML-05-445, and STDS-03-ML-05-446). The area stripped is to correspond to the area to be graded.
- Salvage the organic layer (i.e., leaf litter layer) where surface material salvage is required.

- Stabilize exposed surface material and subsoil where the potential for erosion exists. Refer to the Soil Erosion Contingency Plan (Appendix C.7) for additional information.
- Ensure surface material storage areas are in approved ROW and temporary workspace.

Coastal GasLink has also developed specific mitigation for clearing and construction activities within OGMAs as indicated in Table 7-1 of the EMP. Coastal GasLink will implement, as applicable, the following mitigation measures as outlined in the EMP to avoid or reduce potential residual adverse effects on WTRAs during clearing activities:

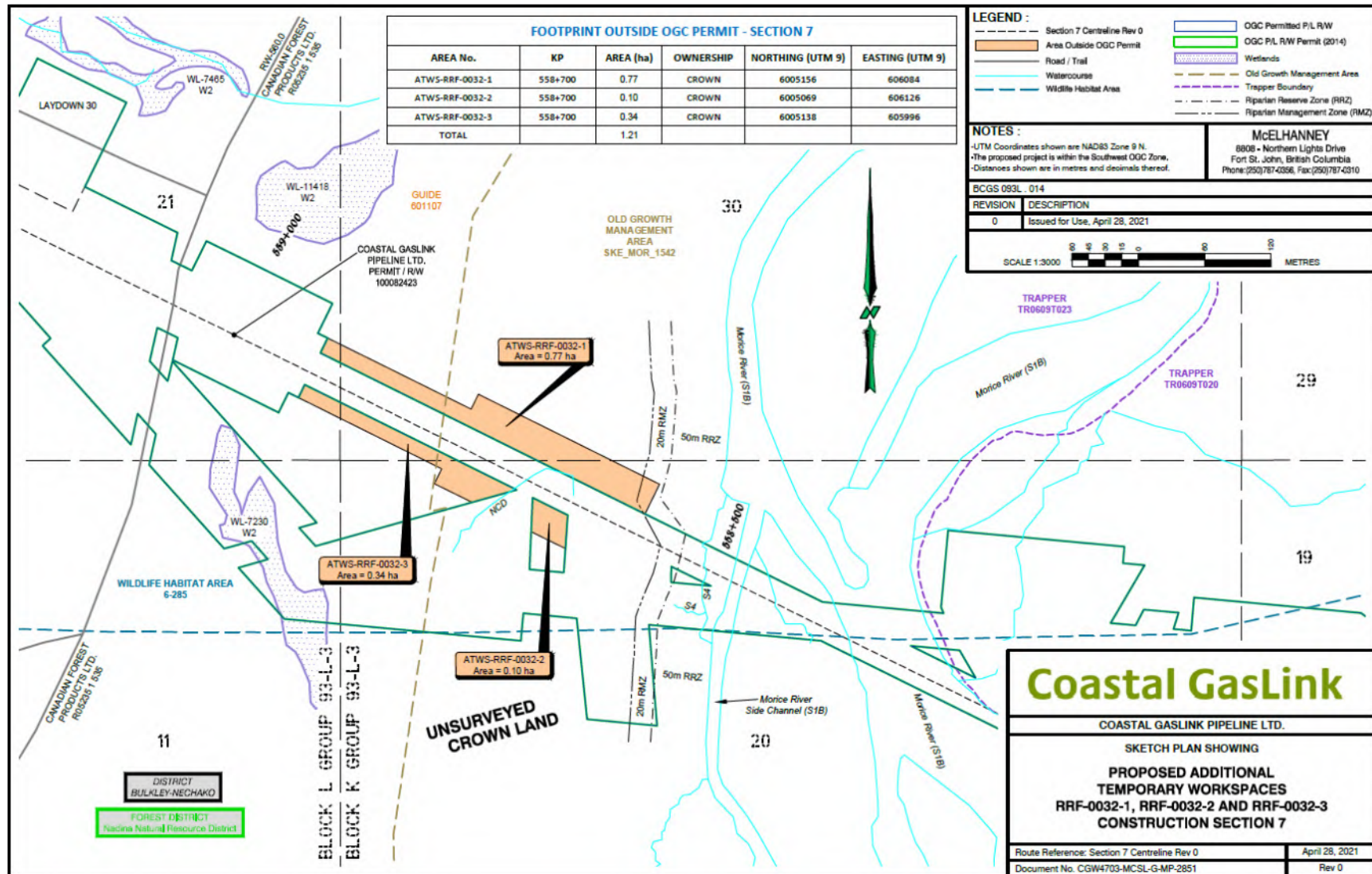
- Avoid or reduce disturbance within OGMAs and Wildlife Tree Patches (WTPs), where practical (e.g., narrow the width of the ROW, avoid extra temporary workspace).
- In cases where WTPs cannot be avoided, develop an appropriate strategy to address disturbance of site-specific wildlife habitat values in the WTPs, in consultation with the relevant regulatory agencies.

No new mitigation measures other than those outlined in the Project EMP are required as a result of the ATWS request. Coastal GasLink will implement mitigation measures developed in consultation with provincial and federal authorities and Indigenous groups which was approved by the EAO in early 2016.

In addition, Coastal GasLink has developed a Reclamation Program which will be used to promote the re-establishment of natural ecosystems that are compositionally and functionally similar to pre-disturbance conditions as well as the project-specific Post-Construction Monitoring Program which describes monitoring to review the effectiveness of mitigation and the approach to adaptive management.

### **3.1 CONCLUSION**

Coastal GasLink requires leave of the Commission for the incremental ATWS identified in this request to provide for safe and efficient construction in areas of challenging terrain and to accommodate minor changes in the location of footprint for pipeline location adjustment. All of the new ATWS are directly adjacent to the approved footprint. Granting the requested leave of the Commission will not change the conclusions of the environmental assessment conducted for the Project.







# LEAVE OF COMMISSION FORM

Physical Address: 6534 Airport Road,  
Fort St. John, B.C. V1J 4M6  
Mailing Address: OGC, Bag 2, Fort St. John,  
B.C. V1J 2B0  
Phone: (250) 794-5200

Date Received

THIS IS AN AUDITABLE DOCUMENT

COMMISSION USE ONLY		A
Commission File No. AD No.:		
ADMINISTRATION		B
Applicant Name: Coastal GasLink Pipeline Ltd.		
Address: 450 – 1 <sup>st</sup> Street SW		
City, Province, Postal Code: Calgary, Alberta, T2P 5H1		
Contact: Tracy Young	Email: tracy_young@tcenergy.com	Phone: 778-328-5327
Referral Company:	Email:	Phone:
Agent Name:	Internal File No.:	
APPLICATION INFORMATION		C
Surface Location: Section 7 – see attached map		<input type="checkbox"/> N/A
Permit Condition Request relates to (copy full text)	Permit application Determination number: 100082423 19. <i>Except as shown on the construction plans or with leave of the Commission, incremental clearing for additional work space is not permitted within:</i> c) old growth management areas.  23. <i>Clearing and site preparation, other than those identified in the construction plans referenced in Permissions, must be located on any previously disturbed areas located within the construction corridor unless:</i> c) the permit holder is granted leave by the Commission to carry out such clearing and site preparation.  34. <i>Except with leave of the Commission, the permit holder must not undertake clearing or significant maintenance activities within WHAs 6-283, 6-285 and 6-286 between September 1 and June 15.</i>	
Rationale for Request	Additional cleared space is required on the west side of the Morice River at approximately KP 558+700. A portion of the ATWS overlaps with old growth management area (OGMA) SKE_MOR_1542 established in 2016 as well as wildlife habitat area (WHA) 6-285. Therefore, Coastal GasLink will also require leave of the Commission for Condition 19 and Condition 34 in addition to Condition 23 of the Section 7 Pipeline Permit.	
Desired Date of Request Completion	January 4, 2021 to provide project certainty to construction contractors	
Primary Activity: <input type="checkbox"/> Well <input type="checkbox"/> Facility <input type="checkbox"/> Geophysical <input checked="" type="checkbox"/> Pipeline <input type="checkbox"/> Road <input type="checkbox"/> NEB Pipeline		

FIRST NATIONS INFORMATION		D
Ensure the following are attached to the application for First Nations engagement purposes:		
First Nations	Attachments	
Carrier Sekani Tribal Council	<input type="checkbox"/> Cover letter (2 copies for each notification area affected)	
Nee Tahi Buhn Band – comments in attachment	<input checked="" type="checkbox"/> Leave of Commission Form	
Office of the Wet'suwet'en - comments in attachment	<input checked="" type="checkbox"/> Any documents provided to support Leave Request	
Skin Tyee Nation - comments in attachment		
Wet'suwet'en First Nation - comments in attachment		
Witset First Nation - comments in attachment		
Dark House – comments in attachment		
Permit Holder Engagement: Coastal GasLink has provided notification to First Nations identified regarding its intent to file this request on November 22, 2021.		
WORKS IN AND ABOUT A STREAM		<input checked="" type="checkbox"/> N/A E
Information Attached: <input type="checkbox"/> Yes <input type="checkbox"/> No		

Crossing Number	UTM Zone	UTM Location		Stream / Waterbody Name	Riparian Classification	Bank Full Stream Width	Stream Gradient (%)	FHA	Temporary or Permanent Crossing (T/P)	Stream Crossing Methods				Does the crossing type meet the peak flow requirements (Y/N) If no, provide justification.
										Bridge	Major Culvert	Ice Bridge	Other (please,)	
		N												
		E												
		N												
		E												
		N												
		E												
		N												
		E												

<b>ADDITIONAL INFORMATION REQUIREMENTS</b>	<b>F</b>
--	----------

Attach any documentation that will support a Commission Review:

<b>APPLICANT AUTHORIZATION</b>	<b>G</b>
--------------------------------	----------

I Tracy Young hereby attest that the information contained herein is true and correct:  
(Print Name)



2021/11/23

AUTHORIZED SIGNATORY OF APPLICANT COMPANY

DATE (YYYY/MM/DD)

<b>COMMISSION CONSIDERATION</b>
---------------------------------

Leave Accepted: ☐ Yes ☐ No

Commission Comments:

AUTHORIZED COMMISSION SIGNATORY      DATE (YYYY/MM/DD)

DISTRIBUTION:

ADDITIONAL ATTACHMENTS:



Pages: 107 - 133  
s18.1

## Keough, Dana

---

**From:** Smook, Patrick  
**Sent:** Tuesday, November 23, 2021 2:15 PM  
**To:** Phillips, Lori L  
**Subject:** FW: Morice River Drill site map  
**Attachments:** IMG\_070862A17221-1.JPEG



**Patrick Smook** RPF, MBA  
Executive Director, Compliance &  
Enforcement  
[Patrick.Smook@BCOGC.ca](mailto:Patrick.Smook@BCOGC.ca)

Fort St John BC  
[Office Address Directory](#)  
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s17



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---

s19

**From**  
**Sent:** Friday, November 5, 2021 2:34 PM  
**To:** Smook, Patrick <[Patrick.Smook@bcogc.ca](mailto:Patrick.Smook@bcogc.ca)>  
**Subject:** Morice River Drill site map

Afternoon Patrick,

The construction plan map for the Morice River crossing is fairly large and hard to send via outlook (17MB) and it really does not show the access all that well, just concentrates on the pipeline corridor. I attached a snip from our Ipads that shows the location and fairly good quality snip if you need to zoom in on it. This should be more straightforward than the KML's of multiple pipelines if all they want to know is the access in this specific area.

Cheers,

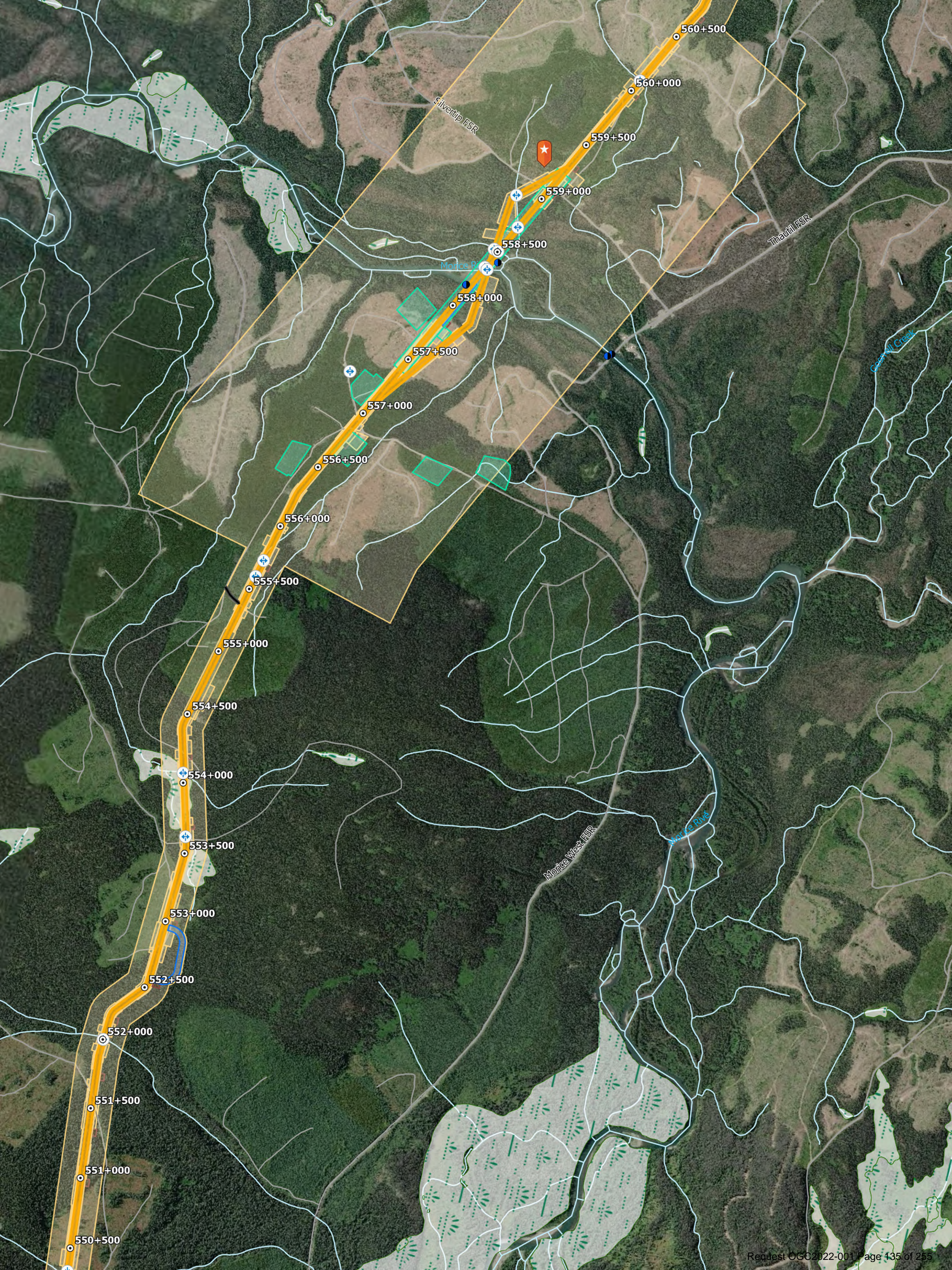


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s19









## Keough, Dana

---

**From:** Thoroughgood, Garth  
**Sent:** Tuesday, November 23, 2021 2:52 PM  
**To:** O'Hanley, James G; Gregory, Sara; Dickinson, Sara  
**Cc:** Stark, Ryan; Phillips, Lori L  
**Subject:** FW: Morice Sump location, AMS# 100113743  
**Attachments:** BC OGC letter Nov 2021.pdf  
  
**Importance:** High

James and Sara(s),

As we have been attempting to consult on CGL applications for a sump associated with their Morice River drill site we have received a few responses from Mike Ridsdale of the OW.

s14, s16

Once I have some input from you folks we should also consider a discussion with MIRR (and EMLI). Is it best to have a meeting through Teams to discuss the above?



---

**Garth Thoroughgood**  
Executive Director, Major Projects  
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s17



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---

**From:** Stark, Ryan <Ryan.Stark@bcogc.ca>  
**Sent:** Tuesday, November 23, 2021 1:08 PM  
**To:** Thoroughgood, Garth <Garth.Thoroughgood@bcogc.ca>; Howes, Ken <Ken.Howes@bcogc.ca>; Wintemute, Kelly <Kelly.Wintemute@bcogc.ca>; Zimmer, Dean E <Dean.Zimmer@bcogc.ca>  
**Cc:** Nielsen, Angela C <Angela.Nielsen@bcogc.ca>; Hicks, LeeAnn <LeeAnn.Hicks@bcogc.ca>; Erickson-Fearon, Candace <Candace.Erickson-Fearon@bcogc.ca>; Swan, Ian <Ian.Swan@bcogc.ca>  
**Subject:** FW: Morice Sump location, AMS# 100113743  
**Importance:** High

Hi Garth,

s16

I'm putting tools down on this one for now to allow for more internal discussion.

Cheers,  
Ryan



---

**Ryan Stark**  
Manager, Decision Support  
[Ryan.Stark@bcogc.ca](mailto:Ryan.Stark@bcogc.ca)

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---

**From:** Mike Ridsdale <[mike.ridsdale@wetsuweten.com](mailto:mike.ridsdale@wetsuweten.com)>  
**Sent:** Tuesday, November 23, 2021 1:11 PM  
**To:** Stark, Ryan <[Ryan.Stark@bcogc.ca](mailto:Ryan.Stark@bcogc.ca)>  
**Cc:** David de Wit <[david.dewit@wetsuweten.com](mailto:david.dewit@wetsuweten.com)>  
**Subject:** RE: Morice Sump location, AMS# 100113743

Hi Ryan,

s16

Sincerely,

Mike Ridsdale

---

**From:** Stark, Ryan <[Ryan.Stark@bcogc.ca](mailto:Ryan.Stark@bcogc.ca)>

**Sent:** November-23-21 10:11 AM

**To:** Mike Ridsdale <[mike.ridsdale@wetsuweten.com](mailto:mike.ridsdale@wetsuweten.com)>

**Cc:** David de Wit <[david.dewit@wetsuweten.com](mailto:david.dewit@wetsuweten.com)>; Nielsen, Angela C <[Angela.Nielsen@bcogc.ca](mailto:Angela.Nielsen@bcogc.ca)>

**Subject:** RE: Morice Sump location, AMS# 100113743

**Importance:** High

Good morning Mike,

s16

Sincerely,  
Ryan



**Ryan Stark**  
Manager, Decision Support  
[Ryan.Stark@bcogc.ca](mailto:Ryan.Stark@bcogc.ca)

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---

**From:** Stark, Ryan  
**Sent:** Thursday, October 28, 2021 4:39 PM  
**To:** 'Mike Ridsdale' <[mike.ridsdale@wetsuweten.com](mailto:mike.ridsdale@wetsuweten.com)>  
**Cc:** David de Wit <[david.dewit@wetsuweten.com](mailto:david.dewit@wetsuweten.com)>; Nielsen, Angela C <[Angela.Nielsen@bcogc.ca](mailto:Angela.Nielsen@bcogc.ca)>  
**Subject:** RE: Morice Sump location, AMS# 100113743  
**Importance:** High

Hi Mike,

s22

Thank you for responding back regarding CGL's sump application.

s16

Please contact me should you wish to discuss this request further.

Sincerely,  
Ryan



---

**Ryan Stark**  
Manager, Decision Support  
[Ryan.Stark@bcogc.ca](mailto:Ryan.Stark@bcogc.ca)

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---

**From:** Mike Ridsdale <[mike.ridsdale@wetsuweten.com](mailto:mike.ridsdale@wetsuweten.com)>  
**Sent:** Tuesday, October 12, 2021 3:55 PM  
**To:** Stark, Ryan <[Ryan.Stark@bcogc.ca](mailto:Ryan.Stark@bcogc.ca)>  
**Subject:** RE: Morice Sump location, AMS# 100113743

Hi Ryan,

s16

Sincerely,

Mike Ridsdale

---

**From:** Stark, Ryan <[Ryan.Stark@bcogc.ca](mailto:Ryan.Stark@bcogc.ca)>  
**Sent:** October-12-21 9:41 AM  
**To:** Mike Ridsdale <[mike.ridsdale@wetsuweten.com](mailto:mike.ridsdale@wetsuweten.com)>  
**Cc:** Nielsen, Angela C <[Angela.Nielsen@bcogc.ca](mailto:Angela.Nielsen@bcogc.ca)>  
**Subject:** RE: Morice Sump location, AMS# 100113743

Good morning Mike,

s22

s16

Sincerely,  
Ryan





**Ryan Stark**  
Manager, Decision Support  
[Ryan.Stark@bcogc.ca](mailto:Ryan.Stark@bcogc.ca)

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---

**From:** Stark, Ryan  
**Sent:** Thursday, September 2, 2021 3:08 PM  
**To:** 'Mike Ridsdale' <[mike.ridsdale@wetsuweten.com](mailto:mike.ridsdale@wetsuweten.com)>  
**Cc:** Nielsen, Angela C <[Angela.Nielsen@bcogc.ca](mailto:Angela.Nielsen@bcogc.ca)>  
**Subject:** RE: Morice Sump location, AMS# 100113743

Good afternoon Mike,

s22

s16

I look forward to your thoughts and suggestions.

Sincerely,  
Ryan



**Ryan Stark**  
Manager, Decision Support  
[Ryan.Stark@bcogc.ca](mailto:Ryan.Stark@bcogc.ca)

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---

**From:** Mike Ridsdale <[mike.ridsdale@wetsuweten.com](mailto:mike.ridsdale@wetsuweten.com)>  
**Sent:** Friday, August 13, 2021 4:32 PM  
**To:** Stark, Ryan <[Ryan.Stark@bcogc.ca](mailto:Ryan.Stark@bcogc.ca)>  
**Subject:** RE: Morice Sump location, AMS# 100113743

Hi.

s16

Mike

---

**From:** Stark, Ryan <[Ryan.Stark@bcogc.ca](mailto:Ryan.Stark@bcogc.ca)>  
**Sent:** August-13-21 4:05 PM  
**To:** Mike Ridsdale <[mike.ridsdale@wetsuweten.com](mailto:mike.ridsdale@wetsuweten.com)>  
**Cc:** Nielsen, Angela C <[Angela.Nielsen@bcogc.ca](mailto:Angela.Nielsen@bcogc.ca)>  
**Subject:** RE: Morice Sump location, AMS# 100113743

Hi Mike,

s22

s16

Sincerely,

Ryan



**Ryan Stark**  
Manager, Decision Support  
[Ryan.Stark@bcogc.ca](mailto:Ryan.Stark@bcogc.ca)

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**From:** Mike Ridsdale [mike.ridsdale@wetsuweten.com](mailto:mike.ridsdale@wetsuweten.com)  
**Sent:** Monday, August 9, 2021 3:07 PM  
**To:** Stark, Ryan [Ryan.Stark@bcogc.ca](mailto:Ryan.Stark@bcogc.ca)  
**Subject:** Morice Sump location

Hi Ryan,

s16

s16

## Keough, Dana

---

**From:** Phillips, Lori L  
**Sent:** Tuesday, Novem  
**To:** Anderson, Justin; s19 Lang, Randy  
**Cc:** Friedrich, Hardy  
**Subject:** FW: CGL OGC December 2021 Watercourse Crossing Report #20  
**Attachments:** CGL4703-CGP-BCOGC-REG-LTR-4957\_Dec WCC Report 20\_23-Nov-21.pdf



**Lori Phillips**  
Authorizations Manager  
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**From:** Shelley McInnis <shelley\_mcinnis@tcenergy.com>  
**Sent:** Tuesday, November 23, 2021 2:12 PM  
**To:** Post Permit Requests <postpermitrequests@bcogc.ca>  
**Cc:** Phillips, Lori L <Lori.Phillips@bcogc.ca>; Smook, Patrick <Patrick.Smook@bcogc.ca>; eao.compliance@gov.bc.ca; Smith, Clayton H EAO:EX <Clayton.H.Smith@gov.bc.ca>; Parks, Chris EAO:EX <Chris.Parks@gov.bc.ca>; Adair Rigney <adair\_rigney@tcenergy.com>; Dan Wyman <dan\_wyman@tcenergy.com>; Joseph Campbell <joseph\_campbell@tcenergy.com>; Tracy Young <tracy\_young@tcenergy.com>; Glenn Todd <glenn\_todd@tcenergy.com>; Autumn Cousins <autumn\_cousins@tcenergy.com>; Tom Hicks <thicks@ecofishresearch.com>; Lead IESCA <LeadIESCA@ecofishresearch.com>  
**Subject:** CGL OGC December 2021 Watercourse Crossing Report #20

Good morning,

Please find attached CGL's Scheduled Watercourse Crossings Report #19 for November. This report covers the planned construction of pipeline crossings of watercourses throughout the Project and is filed in response to the following conditions:

- Pipeline Section 1, AD 100082293, Condition 9
- Pipeline Section 2, AD 100082292, Condition 9
- Pipeline Section 3, AD 100082299, Condition 8
- Pipeline Section 4, AD 100082252, Condition 9
- Pipeline Section 5, AD 100082251, Condition 9
- Pipeline Section 6, AD 100082422, Condition 9

- Pipeline Section 7, AD 100082423, Condition 8
- Pipeline Section 8, AD 100084230, Condition 9

Please contact Dan Wyman if you have any questions regarding the contents of this report.

Thank you,

**Shelley McInnis**

**Regulatory Administrative Analyst**

Coastal GasLink

Contractor representing TC Energy

[shelley\\_mcinnis@tcenergy.com](mailto:shelley_mcinnis@tcenergy.com)

cell: s22 desk: 403-920-1370



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Thank you

November 23, 2021

Lori Phillips  
Applications Manager  
BC Oil and Gas Commission  
6534 Airport Road  
Fort St. John, B.C. V1J 4M6

Coastal GasLink LLP  
450 – 1st Street S.W.  
Calgary, AB, Canada T2P 5H1

Tel: 403.920.6296  
Fax: 403.920.5324  
Email: [dan\\_wyman@tcenergy.com](mailto:dan_wyman@tcenergy.com)  
Web: [www.TCenergy.com](http://www.TCenergy.com)

**CGL4703-CGP-BCOGC-REG-LTR-4957**

Dear Ms. Phillips,

**Re: Coastal GasLink Pipeline Project (Project)  
Scheduled Watercourse Crossings Report #20  
References: AD 100082293 Condition 9, AD 100082292 Condition 9, AD 100082299  
Condition 8, AD 100082252 Condition 9, AD 100082251 Condition 9, AD 100082422  
Condition 9, AD 100082423 Condition 8, and AD 100084230 Condition 9**

As cited in the above conditions Coastal GasLink is required to:

*At least one week prior to the beginning of each month, the permit holder must submit a schedule to the Commission indicating the location and timing of horizontal directional drilling, micro-tunneling or in-stream work planned to commence the following month.*

Coastal GasLink is submitting the following monthly Watercourse Crossing Schedules to the BC Oil and Gas Commission (OGC) for December 2021:

- Table 1: Horizontal Directional Drill (HDD) and Direct Pipe Installation (DPI) Status and Schedule
- Table 2: Section 2 (AD 100082292) Watercourse Crossings Status and Schedule
- Table 3: Section 3 (AD 100082299) Watercourse Crossings Status and Schedule
- Table 4: Section 4 (AD 100082252) Watercourse Crossings Status and Schedule
- Table 5: Section 8 (AD 100084230) Watercourse Crossings Status and Schedule

No other in-stream work associated with the construction of pipeline crossings is currently scheduled in the remaining pipeline sections for this month.

Coastal GasLink notes the timing of construction provided in the attached tables are based on the current Project schedule and the best information available to Coastal GasLink on the date of filing. These dates are, however, subject to change without notice due to changing site conditions, final execution plans, permitting and other external factors.

Should you have any questions do not hesitate to contact me at 403-920-6296 or [dan\\_wyman@tcenergy.com](mailto:dan_wyman@tcenergy.com).

Sincerely,



Adair Rigney for  
Daniel RK Wyman  
Team Lead, Regulatory  
Coastal GasLink

Table 1: HDD and DPI Schedule

Watercourse Name HDD/DPI	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	Easting	Northing	Work Scheduled to Start	Work Scheduled to End	Summary of Activities Planned for the month
Murray River	1	61.00-WC	10B1	S1A	HDD	25+217	617896.01 e	6172089.74 n	28-Sep-2020	10-Jul-2021	Complete
Sukunka River	1	186.00-WC	51B1	S1A	HDD	64+431	617896.01 e	6157225 n	15-Jun-2021	15-Nov-2021	Complete
Burnt River	2	270.00-WC	72	S1B	DPI	96+886	617896.01 e	6131508.33 n	3-Aug-2021	21-Sep-2021	Complete
Parsnip River	3	560.00-WC	205	S1A	DPI	189+659	617896.01 e	6069086 n	25-Oct-2021	15-Jan-2022	- Tunnelling and drilling waste disposal - Demobilization
Crooked River	3	654.00-WC	235	S1B	DPI	212+345	617896.01 e	6056162 n	13-Nov-2020	28-Nov-2020	Complete
Salmon River	4	781.00-WC	277	S1A	DPI	254+104	617896.01 e	6027443 n	23-Sep-2021	17-Nov-2021	Complete
Stuart River	4	880.00-WC	SRR9	S1A	DPI	298+052	617896.01 e	6004956.59 n	13-Oct-2020	11-Dec-2020	Complete
Morice River	7	1677.00-WC	558	S1A	Microtunnel	558+400	617896.01 e	6004956.59 n	1-Feb-2022	30-Aug-2022	Access and Pad Prep
Kitimat River	8	2098.00-WC	191C	S1A	DPI	667+162	617896.01 e	5989905.36 n	13-Jul-2020	31-Aug-2020	Complete



Table 2: Section 2 Watercourse Crossings Schedule

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Unnamed Tributary (Burnt River)	2	0278.0-WC	5D	S6	Isolate if flowing, Open Cut if dry or frozen	98+855	10	578703	6130089	November 29, 2021	December 4, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Burnt River)	2	0280.0-WC	75	S6	Isolate if flowing, Open Cut if dry or frozen	99+955	10	577772	6129592	December 5, 2021	December 10, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Burnt River)	2	0282.0-WC	6D	S6	Isolate if flowing, Open Cut if dry or frozen	100+535	10	577358	6129241	December 10, 2021	December 16, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0293.0-WC	77.1T	S6	Isolate if flowing, Open Cut if dry or frozen	103+702	10	575515	6127162	November 29, 2021	December 4, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0294.0-WC	77.2T	S6	Isolate if flowing, Open Cut if dry or frozen	103+857	10	575512	6126999	December 4, 2021	December 10, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0295.0-DR	J18.01	S6	Isolate if flowing, Open Cut if dry or frozen	104+159	10	575510	6126703	December 10, 2021	December 16, 2021	Dig, Install, Backfill and Reclaim
Hamilton Creek	2	0473.0-WC	159	S2	Bore	161+183	10	551420.1	6087051.41	November 25, 2021	December 5, 2021	Bore Watercourse

Table 3: Section 3 Watercourse Crossings Schedule

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Unnamed Tributary (Merton Creek)	3	0742.0-WC	269	S3	Isolate if flowing, Open Cut if dry or frozen	239+024	10	497811	6039141	17-Nov-2021	15-Dec-2021	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Unnamed Tributary (Merton Creek)	3	0743.0-WC	125C	S4	Isolate if flowing, Open Cut if dry or frozen	239+167	10	497772	6039016	7-Oct-2021	2-Dec-2021	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Unnamed Tributary (Muskeg River)	3	698.00-WC-R3	110C	S4	Isolate if flowing, Open Cut if dry or frozen	227+744	10	503439	6048058	2-Dec-2021	10-Feb-2022	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Unnamed Tributary (Merton Creek)	3	0749.0-WC-R3	270	S4	Isolate if flowing, Open Cut if dry or frozen	240+860	10	496715	6037744	18-Nov-2021	3-Feb-2022	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Redrocky Creek	3	0601.0-WC	11D	S2	Bore	201+142	10	523928	6062173	16-Nov-2021	7-Dec-2021	Bore Watercourse
Unnamed Tributary (Crooked River)	3	0678.0-WC-R3	104C	S4	Isolate if flowing, Open Cut if dry or frozen	219+711	10	510185	6051884	26-Nov-2021	3-Dec-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Redrocky Creek)	3	0604.0-WC	12D	S4	Isolate if flowing, Open Cut if dry or frozen	201+564	10	523711	6061826	12-Dec-2021	19-Dec-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Crooked River)	3	0661.0-WC	237	S3	Isolate if flowing, Open Cut if dry or frozen	213+950	10	514487	6055431	7-Dec-2021	5-Apr-2022	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Unnamed Tributary (Crooked River)	3	0664.0-WC	239	S3	Isolate if flowing, Open Cut if dry or frozen	214+797	10	513985	6054814	10-Dec-2021	8-Apr-2022	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Unnamed Tributary (Crooked River)	3	0667.0-WC	242	S2	Isolate if flowing, Open Cut if dry or frozen	215+646	10	513439	6054192	3-Dec-2021	1-Apr-2022	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim

**Table 4: Section 4 Watercourse Crossings Schedule**

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Unnamed Tributary (West Creek)	4	0837.0-WC_R1	132C	S3	Isolate if flowing, Open Cut if dry or frozen	278+354	10	471183.564	6012085.48	13-Oct-2021	8-Dec-2021	Dig, Install, Backfill and Reclaim
West Creek	4	819.00-WC	291	S3	Isolate if flowing, Open Cut if dry or frozen	272+157	10	474994.236	6016637.37	26-Nov-2021	24-Dec-2021	Install sheet piles, Dig, Install, Backfill, Reclaim, Remove Sheet piles

Table 5: Section 8 Watercourse Crossings Schedule

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Unnamed Tributary (Clare River)	8	1778.00-WC	148C	S2	Isolated Open Cut	597+936	9	574662	5997716	20-Nov-2021	5-Dec-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Gosnell Creek)	8	1743.00-WC	596	S6	Isolated Open Cut	585+506	9	583208	6003811	23-Nov-2021	14-Dec-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Gosnell Creek)	8	1744.00-WC	UN43-7	S6	Isolated Open Cut	585+951	9	582797	6003928	26-Nov-2021	14-Dec-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Gosnell Creek)	8	1745.00-WC	23D	S6	Isolated Open Cut	586+065	9	582688	6003946	27-Nov-2021	14-Dec-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Gosnell Creek)	8	1746.00-WC	597	S6	Isolated Open Cut	586+098	9	582647	6003950	28-Nov-2021	14-Dec-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Gosnell Creek)	8	1746.01-WC	S1041	S6	Isolated Open Cut	586+149	9	582603	6003954	28-Nov-2021	14-Dec-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Burnie River)	8	1748.00-WC	599	S6	Isolated Open Cut	587+285	9	581627	6003946	30-Nov-2021	21-Dec-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Burnie River)	8	1755.00-WC	25D	S2	Isolated Open Cut	592+645	9	578137	6001240	1-Dec-2021	27-Dec-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Clare River)	8	1823.00-WC	50C2A	S2	Isolated Open Cut	609+013	9	568263	5991058	6-Dec-2021	24-Jan-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Clare River)	8	1824.00-WC	51C2A	S2	Isolated Open Cut	609+109	9	568171	5991051	6-Dec-2021	24-Jan-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Clare River)	8	1825.00-WC	52C2A	S3	Isolated Open Cut	609+166	9	568117	5991046	6-Dec-2021	24-Jan-2022	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Pine Creek)	8	2077.00-WC	739.1T	S3	Open Cut	663+992	9	523575	5987651	3-Oct-2021	11-Dec-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Kitimat River)	8	2076.00-WC	UN22-17	S3	Open Cut	663+715	9	523585	5987927	12-Dec-2021	18-Dec-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Pine Creek)	8	2072.10-WC	UN22-15	S3	Open Cut	662+443	9	523882	5988970	18-Dec-2021	9-Jan-2022	Dig, Install, Backfill and Reclaim
Hirsch Creek	8	2020.00-WC	182C	S1B	Open Cut	650+855	9	533411	5993699	27-Nov-2021	21-Dec-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Hirsch Creek)	8	1970.00-WC	57C2A	S1B	Open Cut	637+434	9	544519	5992883	15-Nov-2021	7-Dec-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Hirsch Creek)	8	1977.00-WC	713	S5	Open Cut	639+682	9	542713	5991870	8-Dec-2021	21-Dec-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Hirsch Creek)	8	2017.10-WC	723F	S3	Open Cut	650+472	9	533769	5993831	8-Dec-2021	19-Dec-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Kitimat River)	8	2089.00-WC	741.1T	S2	Auger Bore	665+614	9	522139	5987442	10-Dec-2021	13-Jan-2022	Excavate Bore Bays and Set up, Install Casing, Pull Product
Unnamed Tributary (Kitimat River)	8	2096.00-WC	S1073	S2	Auger Bore	666+513	9	521244	5987405	28-Oct-2021	17-Dec-2021	Excavate Bore Bays and Set up, Install Casing, Pull Product

## Keough, Dana

---

**From:** Currie, Graham  
**Sent:** Friday, October 22, 2021 11:34 AM  
**To:** Kennedy, Mayka  
**Subject:** RE: BN - Watercourse Crossings 2021.10.06\_v3  
**Attachments:** BN - Watercourse Crossings 2021.10.22 Final\_v2.docx

See a few minor edits, and some changes near the end...

Thanks,  
Graham



**Graham Currie**  
Executive Director, Public & Corporate  
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---

**From:** Kennedy, Mayka <Mayka.Kennedy@bcogc.ca>  
**Sent:** Friday, October 22, 2021 9:16 AM  
**To:** Currie, Graham <Graham.Currie@bcogc.ca>  
**Subject:** FW: BN - Watercourse Crossings 2021.10.06\_v3

Can you have a final read of this?  
It is going to ministry – Rachel.



**Mayka Kennedy** (she/her) P.Eng., C.Dir.  
Executive Vice President, Chief Engineer  
[Mayka.Kennedy@BCOGC.ca](mailto:Mayka.Kennedy@BCOGC.ca)

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---

**From:** Thoroughgood, Garth <[Garth.Thoroughgood@bcogc.ca](mailto:Garth.Thoroughgood@bcogc.ca)>  
**Sent:** Friday, October 22, 2021 8:52 AM  
**To:** Kennedy, Mayka <[Mayka.Kennedy@bcogc.ca](mailto:Mayka.Kennedy@bcogc.ca)>  
**Subject:** FW: BN - Watercourse Crossings 2021.10.06\_v3



---

**Garth Thoroughgood**  
Executive Director, Major Projects  
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---

**From:** Koosmann, Nicole <[Nicole.Koosmann@bcogc.ca](mailto:Nicole.Koosmann@bcogc.ca)>  
**Sent:** Friday, October 22, 2021 8:31 AM  
**To:** Thoroughgood, Garth <[Garth.Thoroughgood@bcogc.ca](mailto:Garth.Thoroughgood@bcogc.ca)>  
**Subject:** RE: BN - Watercourse Crossings 2021.10.06\_v3

Thanks for the comments, I've accepted all changes, deleted the comments, and attached the word and pdf versions. Next step, I understand you are sending to the ministry.  
Thanks,



---

**Nicole Koosmann** P.Eng., P.M.P.  
Vice President, Engineering, Integrity &  
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**From:** Thoroughgood, Garth <[Garth.Thoroughgood@bcogc.ca](mailto:Garth.Thoroughgood@bcogc.ca)>  
**Sent:** Friday, October 22, 2021 7:24 AM  
**To:** Koosmann, Nicole <[Nicole.Koosmann@bcogc.ca](mailto:Nicole.Koosmann@bcogc.ca)>  
**Subject:** BN - Watercourse Crossings 2021.10.06\_v3

Some edits for your consideration.



Pages: 156 - 163  
s13

## Keough, Dana

---

**From:** Phillips, Lori L  
**Sent:** Friday, October 22, 2021 2:55 PM  
**To:** Lang, Randy; O'Neill, Sean; s19  
**Cc:** Anderson, Justin; Post Permit Requests  
**Subject:** FW: CGL OGC November 2021 Watercourse Crossing Report #19  
**Attachments:** CGL4703-CGP-BCOGC-REG-LTR-4899\_WCC Nov Report 19\_22-Oct-21.pdf



**Lori Phillips**  
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---

**From:** Shelley McInnis <shelley\_mcinnis@tcenergy.com>  
**Sent:** Friday, October 22, 2021 2:54 PM  
**To:** Post Permit Requests <postpermitrequests@bcogc.ca>  
**Cc:** Phillips, Lori L <Lori.Phillips@bcogc.ca>; Smook, Patrick <Patrick.Smook@bcogc.ca>; eao.compliance@gov.bc.ca; Smith, Clayton H EAO:EX <Clayton.H.Smith@gov.bc.ca>; Parks, Chris EAO:EX <Chris.Parks@gov.bc.ca>; Adair Rigney <adair\_rigney@tcenergy.com>; Dan Wyman <dan\_wyman@tcenergy.com>; Joseph Campbell <joseph\_campbell@tcenergy.com>; Tracy Young <tracy\_young@tcenergy.com>; Glenn Todd <glenn\_todd@tcenergy.com>; Autumn Cousins <autumn\_cousins@tcenergy.com>; Tom Hicks <thicks@ecofishresearch.com>; Lead IESCA <LeadIESCA@ecofishresearch.com>  
**Subject:** CGL OGC November 2021 Watercourse Crossing Report #19

Good afternoon,

Please find attached CGL's Scheduled Watercourse Crossings Report #19 for November. This report covers the planned construction of pipeline crossings of watercourses throughout the Project and is filed in response to the following conditions:

- Pipeline Section 1, AD 100082293, Condition 9
- Pipeline Section 2, AD 100082292, Condition 9
- Pipeline Section 3, AD 100082299, Condition 8
- Pipeline Section 4, AD 100082252, Condition 9
- Pipeline Section 5, AD 100082251, Condition 9
- Pipeline Section 6, AD 100082422, Condition 9

- Pipeline Section 7, AD 100082423, Condition 8
- Pipeline Section 8, AD 100084230, Condition 9

Please contact Dan Wyman if you have any questions regarding the contents of this report.

Thank you,

**Shelley McInnis**

**Regulatory Administrative Analyst**

Coastal GasLink

Contractor representing TC Energy

[shelley\\_mcinnis@tcenergy.com](mailto:shelley_mcinnis@tcenergy.com)

cell s22 desk: 403-920-1370



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Thank you

October 22, 2021

Lori Phillips  
Applications Manager  
BC Oil and Gas Commission  
6534 Airport Road  
Fort St. John, B.C. V1J 4M6

Coastal GasLink LLP  
450 – 1st Street S.W.  
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Fax: 403.920.5324  
Email: [dan\\_wyman@tcenergy.com](mailto:dan_wyman@tcenergy.com)  
Web: [www.TCenergy.com](http://www.TCenergy.com)

**CGL4703-CGP-BCOGC-REG-LTR-4899**

Dear Ms. Phillips,

**Re: Coastal GasLink Pipeline Project (Project)  
Scheduled Watercourse Crossings Report #19  
References: AD 100082293 Condition 9, AD 100082292 Condition 9, AD 100082299  
Condition 8, AD 100082252 Condition 9, AD 100082251 Condition 9, AD 100082422  
Condition 9, AD 100082423 Condition 8, and AD 100084230 Condition 9**

As cited in the above conditions Coastal GasLink is required to:

*At least one week prior to the beginning of each month, the permit holder must submit a schedule to the Commission indicating the location and timing of horizontal directional drilling, micro-tunneling or in-stream work planned to commence the following month.*

Coastal GasLink is submitting the following monthly Watercourse Crossing Schedules to the BC Oil and Gas Commission (OGC) for November 2021:

- Table 1: Horizontal Directional Drill (HDD) and Direct Pipe Installation (DPI) Status and Schedule
- Table 2: Section 1 (AD 100082293) Watercourse Crossings Status and Schedule
- Table 3: Section 2 (AD 100082292) Watercourse Crossings Status and Schedule
- Table 4: Section 3 (AD 100082299) Watercourse Crossings Status and Schedule
- Table 5: Section 4 (AD 100082252) Watercourse Crossings Status and Schedule
- Table 6: Section 6 (AD 100082422) Watercourse Crossings Status and Schedule
- Table 7: Section 8 (AD 100084230) Watercourse Crossings Status and Schedule

No other in-stream work associated with the construction of pipeline crossings is currently scheduled in the remaining pipeline sections for this month.

Coastal GasLink notes the timing of construction provided in the attached tables are based on the current Project schedule and the best information available to Coastal GasLink on the date of filing. These dates are, however, subject to change without notice due to changing site conditions, final execution plans, permitting and other external factors.

Should you have any questions do not hesitate to contact me at 403-920-6296 or [dan\\_wyman@tcenergy.com](mailto:dan_wyman@tcenergy.com).

Sincerely,



Daniel RK Wyman  
Team Lead, Regulatory  
Coastal GasLink

Table 1: HDD and DPI Schedule

Watercourse Name HDD/DPI	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	Easting	Northing	Work Scheduled to Start	Work Scheduled to End	Summary of Activities Planned for the month
Murray River	1	61.00-WC	10B1	S1A	HDD	25+217	617896.01 e	6172089.74 n	28-Sep-2020	10-Jul-2021	Complete
Sukunka River	1	186.00-WC	51B1	S1A	HDD	64+431	617896.01 e	6157225 n	15-Jun-2021	November 2021	- Post pipe-pull survey - Drilling waste disposal - Removal of casing/preparation for tie-in
Burnt River	2	270.00-WC	72	S1B	DPI	96+886	617896.01 e	6131508.33 n	3-Aug-2021	21-Sep-2021	Complete
Parsnip River	3	560.00-WC	205	S1A	DPI	189+659	617896.01 e	6069086 n	25-Oct-2021	17-Dec-2021	- Preparation of the entry pad - Equipment installation/testing - Begin tunnelling and drilling waste disposal
Crooked River	3	654.00-WC	235	S1B	DPI	212+345	617896.01 e	6056162 n	13-Nov-2020	28-Nov-2020	Complete
Salmon River	4	781.00-WC	277	S1A	DPI	254+104	617896.01 e	6027443 n	23-Sep-2021	17-Nov-2021	- Tunnelling until ~ Nov 8 - Drilling waste disposal - Site cleanup and demobilization
Stuart River	4	880.00-WC	SRR9	S1A	DPI	298+052	617896.01 e	6004956.59 n	13-Oct-2020	11-Dec-2020	Complete
Morice River	7	1677.00-WC	558	S1A	Microtunnel	558+400	617896.01 e	6004956.59 n	1-Feb-2022	29-Aug-2021	Access and Pad Prep
Kitimat River	8	2098.00-WC	191C	S1A	DPI	667+162	617896.01 e	5989905.36 n	13-Jul-2020	31-Aug-2020	Complete

**Table 2: Section 1 Watercourse Crossings Schedule**

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Unnamed Tributary (Sukunka River)	1	0253.0-WC	5C2A	S6	Isolate if flowing, Open Cut if dry or frozen	88+811	10	577529	6138635	October 28, 2021	November 3, 2021	Dig, Install, Backfill and Reclaim

Table 3: Section 2 Watercourse Crossings Schedule

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Unnamed Tributary (Burnt River)	2	0278.0-WC	5D	S6	Isolate if flowing, Open Cut if dry or frozen	98+855	10	578703	6130089	November 15, 2021	November 25, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Burnt River)	2	0280.0-WC	75	S6	Isolate if flowing, Open Cut if dry or frozen	99+955	10	577772	6129592	November 3, 2021	November 9, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Burnt River)	2	0282.0-WC	6D	S6	Isolate if flowing, Open Cut if dry or frozen	100+535	10	577358	6129241	November 9, 2021	November 15, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Burnt River)	2	0283.0-WC	7D	S6	Isolate if flowing, Open Cut if dry or frozen	100+752	10	577126	6129199	November 15, 2021	November 20, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0292.0-WC	77	S6	Isolate if flowing, Open Cut if dry or frozen	103+282	10	575577	6127550	November 20, 2021	November 26, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0293.0-WC	77.1T	S6	Isolate if flowing, Open Cut if dry or frozen	103+702	10	575515	6127162	November 26, 2021	December 2, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0294.0-WC	77.2T	S6	Isolate if flowing, Open Cut if dry or frozen	103+857	10	575512	6126999	November 3, 2021	November 9, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0295.0-DR	J18.01	S6	Isolate if flowing, Open Cut if dry or frozen	104+159	10	575510	6126703	November 9, 2021	November 15, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0296.2-WC	J18.07	S6	Isolate if flowing, Open Cut if dry or frozen	104+440	10	575537	6126428	November 15, 2021	November 20, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0296.3-WC	J18.09	S6	Isolate if flowing, Open Cut if dry or frozen	104+464	10	575549	6126410	November 15, 2021	November 20, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0297.1-WC	J18.08	S4	Isolate if flowing, Open Cut if dry or frozen	104+651	10	575629	6126240	November 20, 2021	November 26, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0297.3-WC	J19.97	S6	Isolate if flowing, Open Cut if dry or frozen	105+807	10	575209	6125206	November 26, 2021	December 2, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0298.0-WC	22C	S6	Isolate if flowing, Open Cut if dry or frozen	105+843	10	575182	6125176	November 26, 2021	December 2, 2021	Dig, Install, Backfill and Reclaim
Hamilton Creek	2	0473.0-WC	159	S2	Bore	161+183	10	551420.1	6087051.41	November 25, 2021	December 5, 2021	Bore Watercourse



Table 4: Section 3 Watercourse Crossings Schedule

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Unnamed Tributary (Crooked River)	3	0643.0-WC	233	S6	Isolate if flowing, Open Cut if dry or frozen	210+406	10	517617	6056732	17-Nov-2021	26-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Merton Creek)	3	0742.0-WC	269	S3	Isolate if flowing, Open Cut if dry or frozen	239+024	10	497811	6039141	17-Nov-2021	26-Nov-2021	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Unnamed Tributary (Merton Creek)	3	0743.0-WC	125C	S4	Isolate if flowing, Open Cut if dry or frozen	239+167	10	497772	6039016	7-Oct-2021	14-Oct-2021	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Unnamed Tributary (Muskeg River)	3	698.00-WC-R3	110C	S4	Isolate if flowing, Open Cut if dry or frozen	227+744	10	503439	6048058	4-Nov-2021	16-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Merton Creek)	3	0749.0-WC-R3	270	S4	Isolate if flowing, Open Cut if dry or frozen	240+860	10	496715	6037744	18-Nov-2021	25-Nov-2021	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Redrocky Creek	3	0601.0-WC	11D	S2	Bore	201+142	10	523928	6062173	16-Nov-2021	26-Nov-2021	Bore Watercourse
Unnamed Tributary (Crooked River)	3	0678.0-WC-R3	104C	S4	Isolate if flowing, Open Cut if dry or frozen	219+711	10	510185	6051884	26-Nov-2021	3-Dec-2021	Dig, Install, Backfill and Reclaim

**Table 5: Section 4 Watercourse Crossings Schedule**

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Unnamed Tributary (West Creek)	4	0837.0-WC_R1	132C	S3	Isolate if flowing, Open Cut if dry or frozen	278+354	10	471183.56	6012085.5	13-Oct-2021	10-Nov-2021	Dig, Install, Backfill and Reclaim
West Creek	4	819.00-WC	291	S3	Isolate if flowing, Open Cut if dry or frozen	272+157	10	474994.24	6016637.4	23-Nov-2021	30-Nov-2021	Dig, Install, Backfill and Reclaim

Table 6: Section 6 Watercourse Crossings Schedule

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Unnamed Tributary (Tchesinkut Creek)	6	1276.00-WC	83C1	S3	Open Cut	424+955	10	337024.6014	5996227.118	15-Nov-2021	5-Dec-2021	Isolation of creek, rock blasting, excavation of pipe centerline, pipe installation, pipe centerline backfilling, creek restoration.

Table 7: Section 8 Watercourse Crossings Schedule

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Unnamed Tributary (Clare River)	8	1777.00-WC	147C	S3	Isolated Open Cut	597+751	9	574829	5997796	21-Oct-2021	5-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Clare River)	8	1768.00-WC	615	S3	Isolated Open Cut	595+456	9	576514	5999105	1-Nov-2021	14-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Clare River)	8	1778.00-WC	148C	S2	Isolated Open Cut	597+936	9	574662	5997716	1-Nov-2021	15-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Gosnell Creek)	8	1743.00-WC	596	S6	Isolated Open Cut	585+506	9	583208	6003811	15-Nov-2021	20-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Gosnell Creek)	8	1744.00-WC	UN43-7	S6	Isolated Open Cut	585+951	9	582797	6003928	18-Nov-2021	23-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Gosnell Creek)	8	1745.00-WC	23D	S6	Isolated Open Cut	586+065	9	582688	6003946	20-Nov-2021	25-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Gosnell Creek)	8	1746.00-WC	597	S6	Isolated Open Cut	586+098	9	582647	6003950	20-Nov-2021	25-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Gosnell Creek)	8	1746.01-WC	S1041	S6	Isolated Open Cut	586+149	9	582603	6003954	21-Nov-2021	26-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Burnie River)	8	1748.00-WC	599	S6	Isolated Open Cut	587+285	9	581627	6003946	30-Nov-2021	5-Dec-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Pine Creek)	8	2077.00-WC	739.1T	S3	Open Cut	663+992	9	523575	5987651	3-Oct-2021	6-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Kitimat River)	8	2076.00-WC	UN22-17	S3	Open Cut	663+715	9	523585	5987927	31-Oct-2021	1-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Pine Creek)	8	2072.10-WC	UN22-15	S3	Open Cut	662+443	9	523882	5988970	2-Nov-2021	3-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Pine Creek)	8	2072.00-WC	3-E1	S3	Open Cut	662+351	9	523974	5988971	4-Nov-2021	5-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Hirsch Creek)	8	2051.00-WC	60C2A	S6	Open Cut	657+303	9	528309	5990260	25-Oct-2021	2-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Pine Creek)	8	2056.10-WC	UN12-71	S6	Open Cut	658+799	9	526939	5990155	3-Nov-2021	8-Nov-2021	Dig, Install, Backfill and Reclaim
Hirsch Creek	8	2020.00-WC	182C	S1B	Open Cut	650+855	9	533411	5993699	15-Nov-2021	12-Dec-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Hirsch Creek)	8	1906.00-WC	689	S6	Open Cut	628+727	9	552633	5991153	12-Sep-2021	8-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Hirsch Creek)	8	1905.00-WC	48D1	S6	Open Cut	628+641	9	552703	5991114	12-Sep-2021	8-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Hirsch Creek)	8	1908.00-WC	690	S6	Open Cut	628+951	9	552442	5991255	12-Sep-2021	8-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Hirsch Creek)	8	1970.00-WC	57C2A	S1B	Open Cut	637+434	9	544519	5992883	15-Nov-2021	7-Dec-2021	Dig, Install, Backfill and Reclaim
Unamed Tributary (Pine Creek)	8	2082.10-WC	740	S2	Auger Bore	664+623	9	523108	5987447	6-Nov-2021	30-Nov-2021	Excavate Bore Bays and Set up, Install Casing, Pull Product
Unamed Tributary (Pine Creek)	8	2083.00-WC	740.1T	S3	Auger Bore	664+623	9	521244	5987405	6-Nov-2021	30-Nov-2021	Excavate Bore Bays and Set up, Install Casing, Pull Product
Unnamed Tributary (Kitimat River)	8	2096.00-WC	S1073	S2	Auger Bore	666+513	9	521244	5987405	28-Oct-2021	10-Nov-2021	Excavate Bore Bays and Set up, Install Casing, Pull Product
Unnamed Tributary (Kitimat River)	8	2091.00-WC	UN22-20	S2	Auger Bore	666+055	9	521684	5987438	11-Nov-2021	1-Dec-2021	Excavate Bore Bays and Set up, Install Casing, Pull Product

## Keough, Dana

---

**From:** Koosmann, Nicole  
**Sent:** Tuesday, October 19, 2021 2:15 PM  
**To:** Kennedy, Mayka  
**Subject:** FW: River Crossings  
  
**Importance:** High



---

**Nicole Koosmann** P.Eng., P.M.P.  
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---

**From:** Kennedy, Mayka <Mayka.Kennedy@bcogc.ca>  
**Sent:** Wednesday, October 6, 2021 8:29 AM  
**To:** Koosmann, Nicole <Nicole.Koosmann@bcogc.ca>  
**Subject:** FW: River Crossings  
**Importance:** High

Fyi...  
Briefing note?



---

**Mayka Kennedy** (she/her) P.Eng., C.Dir.  
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**From:** Paulson, Ken <[Ken.Paulson@bcogc.ca](mailto:Ken.Paulson@bcogc.ca)>

**Sent:** Tuesday, October 5, 2021 6:21 PM

**To:** McCarthy, Tom IRR:EX <[Tom.McCarthy@gov.bc.ca](mailto:Tom.McCarthy@gov.bc.ca)>; Shaw, Rachel EMLI:EX <[Rachel.Shaw@gov.bc.ca](mailto:Rachel.Shaw@gov.bc.ca)>

**Cc:** Thoroughgood, Garth <[Garth.Thoroughgood@bcogc.ca](mailto:Garth.Thoroughgood@bcogc.ca)>; Kennedy, Mayka <[Mayka.Kennedy@bcogc.ca](mailto:Mayka.Kennedy@bcogc.ca)>; O'Hanley, James G <[James.O'Hanley@bcogc.ca](mailto:James.O'Hanley@bcogc.ca)>

**Subject:** River Crossings

**Importance:** High

I had a number of calls and texts today from folks ranging from the RCMP to Government around river crossing methods.

s16

Mayka and her team

are preparing a BN on this topic as I type.

So that folks know, there are THOUSANDS of natural gas pipelines crossing rivers and streams in Canada and globally. The best methods for these crossings are ones that avoid the stream channel entirely and are buried. This avoids erosion, flood events, willful damage, etc.

Over my career as a pipeline engineer s22 we have moved from overhead crossings to the much more environmentally sound and eco-friendly methods such as directional drilling and more recently micro-tunnelling.

So, as Mayka and her folks work up something we can share, please note that the methods chosen for crossing the Morice are proven and trusted as the least impact, least intrusive methods.

s16

The chosen method is the least intrusive and least likely to impact the river.



---

**Ken Paulson**, P.Eng  
Executive Vice President, Chief Operating  
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## Keough, Dana

---

**From:** Koosmann, Nicole  
**Sent:** Thursday, October 14, 2021 9:58 AM  
**To:** Kennedy, Mayka  
**Subject:** RE: Underground pipes  
**Attachments:** BN - Watercourse Crossings 2021.10.06\_v2.docx

Attached as requested.

Nicole Koosmann P.Eng., P.M.P.  
Vice President, Engineering, Integrity & Technical Compliance Oil And Gas Commission  
2950 Jutland Road  
Victoria BC V8T 5K2 s17  
T.250 419-4429 | F.250-419-4403 | Nicole.Koosmann@BCOGC.ca bcogc.ca

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-----Original Message-----

From: Kennedy, Mayka <Mayka.Kennedy@bcogc.ca>  
Sent: Thursday, October 14, 2021 8:57 AM  
To: Koosmann, Nicole <Nicole.Koosmann@bcogc.ca>  
Subject: FW: Underground pipes

Ken is asking for a word copy.

Mayka Kennedy (she/her) P.Eng., C.Dir.  
Executive Vice President, Chief Engineer Oil And Gas Commission  
#203 - 1500 Hardy St  
Kelowna BC V1Y 8H2 s17  
T.250 980-6069 | F.250 980-6053 | Mayka.Kennedy@BCOGC.ca bcogc.ca

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-----Original Message-----

From: Paulson, Ken <Ken.Paulson@bcogc.ca>  
Sent: Wednesday, October 13, 2021 4:14 PM  
To: Kennedy, Mayka <Mayka.Kennedy@bcogc.ca>  
Cc: Jeakins, Paul <Paul.Jeakins@bcogc.ca>  
Subject: RE: Underground pipes

Not sure we finalized this Mayka? Can we get a word copy for suggestions/edits?

Ken Paulson , P.Eng  
Executive Vice President, Chief Operating Officer Oil And Gas Commission  
2950 Jutland Road  
Victoria BC V8T 5K2



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Ken.Paulson@bcogc.ca bcogc.ca

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-----Original Message-----

From: Kennedy, Mayka <Mayka.Kennedy@bcogc.ca>  
 Sent: Thursday, October 7, 2021 8:32 AM  
 To: Jeakins, Paul <Paul.Jeakins@bcogc.ca>; Paulson, Ken <Ken.Paulson@bcogc.ca>  
 Subject: RE: Underground pipes

Good Morning,  
 Please find attached briefing note regarding watercourse crossings.  
 References to the videos embedded in the note.

Regards,

Mayka Kennedy (she/her) P.Eng.,C.Dir.  
 Executive Vice President, Chief Engineer Oil And Gas Commission  
 #203 - 1500 Hardy St  
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Mayka.Kennedy@BCOGC.ca bcogc.ca

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-----Original Message-----

From: Jeakins, Paul <Paul.Jeakins@bcogc.ca>  
 Sent: Wednesday, October 6, 2021 11:22 AM  
 To: Kennedy, Mayka <Mayka.Kennedy@bcogc.ca>; Paulson, Ken <Ken.Paulson@bcogc.ca>  
 Subject: RE: Underground pipes

s13

Paul

-----Original Message-----

From: Kennedy, Mayka <Mayka.Kennedy@bcogc.ca>  
 Sent: Wednesday, October 6, 2021 10:07 AM  
 To: Jeakins, Paul <Paul.Jeakins@bcogc.ca>; Paulson, Ken <Ken.Paulson@bcogc.ca>  
 Subject: RE: Underground pipes

Hello Paul

I've met with our team yesterday and we think the best way to get the proper information across to Mr. Miles Richardson is to have him meet with us.  
 We have a presentation on underwater crossings ready and will be happy to answer questions Mr. Richardson might have.

Let me know if it will be possible to arrange a meeting.  
 Thank you.

Mayka Kennedy (she/her) P.Eng.,C.Dir.  
Executive Vice President, Chief Engineer Oil And Gas Commission  
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Mayka.Kennedy@BCOGC.ca bcogc.ca

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-----Original Message-----

From: Jeakins, Paul <Paul.Jeakins@bcogc.ca>  
Sent: Tuesday, October 5, 2021 1:30 PM  
To: Paulson, Ken <Ken.Paulson@bcogc.ca>; Kennedy, Mayka <Mayka.Kennedy@bcogc.ca>  
Subject: FW: Underground pipes

Further to the previous email...

Paul

-----Original Message-----

From: McCarthy, Tom IRR:EX <Tom.McCarthy@gov.bc.ca>  
Sent: Tuesday, October 5, 2021 1:23 PM  
To: Jeakins, Paul <Paul.Jeakins@bcogc.ca>; Mihlar, Fazil <fazil.mihlar@gov.bc.ca>  
Cc: Shaw, Rachel EMLI:EX <Rachel.Shaw@gov.bc.ca>; Caul, Doug D IRR:EX <Doug.Caul@gov.bc.ca>  
Subject: RE: Underground pipes

Great idea. If possible, would be great to find examples roughly equivalent to the Morice - i.e. wild rivers with importance to indigenous people.

Tom

-----Original Message-----

From: Jeakins, Paul <Paul.Jeakins@bcogc.ca>  
Sent: October 5, 2021 1:20 PM  
To: Mihlar, Fazil EMLI:EX <Fazil.Mihlar@gov.bc.ca>  
Cc: Shaw, Rachel EMLI:EX <Rachel.Shaw@gov.bc.ca>; Caul, Doug D IRR:EX <Doug.Caul@gov.bc.ca>; McCarthy, Tom IRR:EX <Tom.McCarthy@gov.bc.ca>  
Subject: RE: Underground pipes

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

I will see what our specialists can pull together fairly quickly.

Paul

-----Original Message-----

From: Mihlar, Fazil EMLI:EX <Fazil.Mihlar@gov.bc.ca>  
Sent: Tuesday, October 5, 2021 1:17 PM  
To: Jeakins, Paul <Paul.Jeakins@bcogc.ca>  
Cc: Shaw, Rachel EMLI:EX <Rachel.Shaw@gov.bc.ca>; Caul, Doug D IRR:EX <Doug.Caul@gov.bc.ca>; McCarthy, Tom IRR:EX <Tom.McCarthy@gov.bc.ca>  
Subject: Underground pipes

Hi Paul: Can you put together a BN and some videos to brief Miles Richardson on underwater crossings? You will have others; False Creek sewer line and Victoria Harbour have been mentioned. Anything in Prince Rupert? Thx. Fazil

Sent from my iPhone

## Keough, Dana

---

**From:** Currie, Graham  
**Sent:** Wednesday, October 13, 2021 8:35 AM  
**To:** Thoroughgood, Garth; Charters, Megan; Koosmann, Nicole; O'Hanley, James G  
**Cc:** Rygg, Phil; Parfitt, Lannea  
**Subject:** For Review - Government Issue Note  
**Attachments:** IN\_CGL Section 7\_Oct 12 draft.docx

Good morning everyone – please see the attached Issue Note from the LNG Secretariat. They want a quick review – looks fine to me – but please see the last two bullets in the messaging, and the “Morice River Crossing” and “Site Alteration Permits” in the Key Facts section.

Thanks,  
Graham



**Graham Currie**  
Executive Director, Public & Corporate  
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Pages: 181 - 183  
s13, s17

## Keough, Dana

---

**From:** Kennedy, Mayka  
**Sent:** Friday, October 8, 2021 11:25 AM  
**To:** Koosmann, Nicole  
**Subject:** RE: Morice River Crossing information

Thanks for the update Nicole.  
Regards,



**Mayka Kennedy** (she/her) P.Eng., C.Dir.  
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---

**From:** Koosmann, Nicole <Nicole.Koosmann@bcogc.ca>  
**Sent:** Friday, October 8, 2021 11:16 AM  
**To:** Kennedy, Mayka <Mayka.Kennedy@bcogc.ca>  
**Subject:** FW: Morice River Crossing information

Hi Mayka,  
Please see the CGL response below. They have submitted drawings and geotechnical information for my review early next week.  
Regards,



**Nicole Koosmann** P.Eng., P.M.P.  
Vice President, Engineering, Integrity &  
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---

**From:** Dan Wyman <[dan\\_wyman@tcenergy.com](mailto:dan_wyman@tcenergy.com)>  
**Sent:** Friday, October 8, 2021 10:28 AM  
**To:** Koosmann, Nicole <[Nicole.Koosmann@bcogc.ca](mailto:Nicole.Koosmann@bcogc.ca)>  
**Cc:** Thoroughgood, Garth <[Garth.Thoroughgood@bcogc.ca](mailto:Garth.Thoroughgood@bcogc.ca)>; Joel Forrest <[joel\\_forrest@tcenergy.com](mailto:joel_forrest@tcenergy.com)>  
**Subject:** RE: Morice River Crossing information

Good morning Nicole, in response to your questions please find attached the following:

- Pipe crossing drawing and pipe installation drawing
- Coastal GasLink's site-specific drilling mud release and clean-up plan for this crossing
- Geotechnical and Geophysical assessment summary completed by Golder Associates (due to the side of the report I'll send it in a subsequent email)

We're still in the process of finalizing our risk assessment with the Microtunnel contractor so that's not yet in a state that can be shared.

In terms of our decision process to proceed with the Microtunnel, here are some initial points to help with your assessment:

- To start with, TC Energy in general does not consider aerial crossings as part of its typical construction toolbox. If we can't avoid a crossing location where the geography/geology best suits an aerial crossing, then it would be considered, however aerial crossings are not part of our crossing toolbox when trenchless or trenched crossings are considered feasible.
- When we decide to do a trenchless crossing, our contingency plan is almost always another trenchless crossing or a trenched crossing. Aerial crossings are not seen as viable contingency crossing methods as it's a method that meets the specific physical layout of a crossing rather than a method that can be used in any circumstance.
- TC Energy's typical routing criteria has a number of relevant provisions which result in us avoiding aerial crossings in almost all cases, these include:
  - Ensuring construction feasibility across watercourses
  - Avoiding sensitive environmental features
  - Avoiding terrain with potential geotechnical issues
- Engagement with landowners, stakeholders and Indigenous groups across TC's footprint have typically resulted in clear feedback from these groups that aerial crossings are not preferred by the communities in which we work. I'm working with our Indigenous relations team to pull some feedback, however I know that in several cases we've received clear direction from several Indigenous groups that trenchless crossings are always preferred for any watercourse.

As a result, an aerial crossing was never seriously considered for the Morice River. Additional concerns around aerial crossings include: the requirement for increased permanent footprint directly adjacent the watercourse, susceptibility to potential flood damage, requirements for additional monitoring and maintenance, and increased security risks.

I'm currently working with our team to pull some additional supporting info and should have another email for you midway through next week.

-Dan

---

Dan Wyman  
Regulatory -CGL  
O: 403.920.6296 | M  
[TCEnergy.com](http://TCEnergy.com)

s22



**From:** Koosmann, Nicole <[Nicole.Koosmann@bcogc.ca](mailto:Nicole.Koosmann@bcogc.ca)>  
**Sent:** Wednesday, October 6, 2021 10:54 AM  
**To:** Dan Wyman <[dan\\_wyman@tcenergy.com](mailto:dan_wyman@tcenergy.com)>  
**Cc:** Garth Thoroughgood <[Garth.Thoroughgood@BCOGC.ca](mailto:Garth.Thoroughgood@BCOGC.ca)>  
**Subject:** [EXTERNAL] Morice River Crossing information

**EXTERNAL EMAIL: PROCEED WITH CAUTION.**

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe. If this email looks suspicious, report it.

Hi Dan,

Could you please provide the following information for the Morice River Crossing:

1. Geotechnical investigation summary report (including soils and borehole summaries)
2. Geophysical investigation summary report
3. Crossing method selection and reasoning for selection (include reasoning for exclusion of other methods, ie. Aerial crossing, HDD, microtunneling)
4. Most recent construction drawings for the selected crossing method for this specific area
5. Risks and mitigations for planned crossing method (including environmental, engineering, construction)

Thanks,



**Nicole Koosmann** P.Eng., P.M.P.  
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## Keough, Dana

---

**From:** Kennedy, Mayka  
**Sent:** Wednesday, October 6, 2021 1:37 PM  
**To:** Jeakins, Paul; Paulson, Ken  
**Subject:** Water Crossing Methods  
**Attachments:** Water Crossing Methods V2.pptx

Paul, Ken,

Please find attached presentation on 3 crossings methods, Horizontal Directional Drilling, Microtunneling, and Aerial Crossings with advantages and disadvantages.

The best reference we would recommend for considering crossing methods, Pipeline Associated Watercourse Crossings 3<sup>rd</sup> Edition, is published by CEPA and the link is noted below.

<https://www.cepa.com/wp-content/uploads/2014/01/Pipelines-Associated-Watercourse-Crossings.pdf>

We also have reached out to CGL for the additional information on the Morice River crossing and will be reviewing once received.

BN to follow.

Regards,



---

**Mayka Kennedy** (she/her) P.Eng., C.Dir.  
Executive Vice President, Chief Engineer  
[Mayka.Kennedy@BCOGC.ca](mailto:Mayka.Kennedy@BCOGC.ca)

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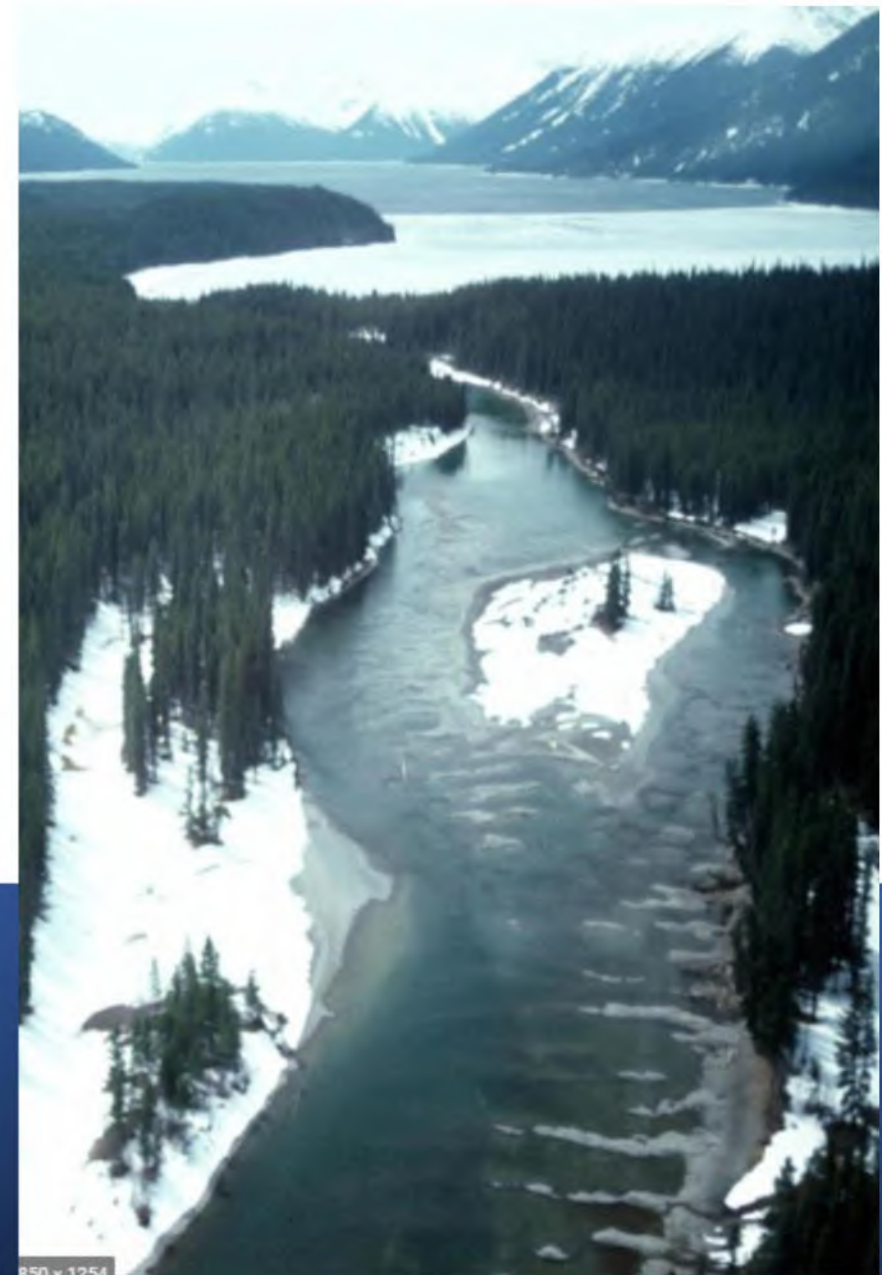
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# Water Crossing Methods

Nicole Koosmann, P.Eng.  
Vice President, Engineering, Integrity, and Technical Compliance  
BC Oil & Gas Commission





# Selection Crossing Considerations

- Geotechnical/hydraulic
- Soils
- Vegetation
- Fish and Wildlife
- Land uses (includes traditional land use, historical, paleontological, and archaeological resources)
- Downstream water users
- Cumulative effects

<https://www.cepa.com/wp-content/uploads/2014/01/Pipelines-Associated-Watercourse-Crossings.pdf>

Table 4.1 Environmental and Engineering Considerations for Pipeline Crossing Selection p. 71

# Pipeline Watercourse Crossing Construction Techniques Advantages/Disadvantages

- Guidelines prepared by CAPP and published by CEPA October 2005 in the Pipeline Associated Watercourse Crossings 3<sup>rd</sup> Edition

Trenchless Crossing Methods provided:

Horizontal Directional Drilling, Micro-tunneling, Aerial Crossing

1. Description of method
2. Environmental considerations
3. Construction/Engineering Considerations
4. Comments

<https://www.cepa.com/wp-content/uploads/2014/01/Pipelines-Associated-Watercourse-Crossings.pdf>



Horizontal Directional Drilling Service - Deep Hole Drilling Services Service Provider from Meerut

# Horizontal Directional Drilling





HDD –  
During  
Construction











# Horizontal Directional Drilling

Description	Environmental Considerations		Construction / Engineering Considerations		Comments
	Advantages	Disadvantages	Advantages	Disadvantages	
TRENCHLESS III) Horizontal Directional Drilling (see Dwg. 11)					
<ul style="list-style-type: none"><li>• slant drill used to drill under watercourse and, where practical, approach slopes</li></ul>	<ul style="list-style-type: none"><li>• no sediment release unless frac-out occurs</li><li>• no bank disturbance</li><li>• no streambed disturbance</li><li>• may avoid approach slope disturbance</li><li>• maintains normal streamflow</li><li>• maintains fish passage</li><li>• not likely to result in HADD</li><li>• maintains vegetation buffer on both sides of watercourse</li></ul>	<ul style="list-style-type: none"><li>• disturbance of drilling and target area</li><li>• disposal of drilling fluids</li><li>• fractures in substrate may release pressurized drilling fluids into watercourse</li><li>• circulating drilling fluid may wash out cavities under the watercourse and banks resulting in sinkholes</li><li>• possible spills from drilling sump(s) down towards watercourse</li><li>• large area may be required on floodplains</li></ul>	<ul style="list-style-type: none"><li>• eliminates clean-up and reclamation in between entry and exit points</li><li>• avoids work in repairing and restoring banks</li><li>• reduction in reclamation costs</li><li>• reduction of long-term maintenance</li><li>• may be able to construct during sensitive fisheries restricted activity windows</li><li>• small diameter pipelines successfully drilled across sensitive watercourses or up steep slopes can be cost effective by reducing habitat compensation and reclamation costs</li></ul>	<ul style="list-style-type: none"><li>• moderately to very expensive</li><li>• success depends on substrate</li><li>• specialized equipment</li><li>• slow construction / installation</li><li>• limited to arc that can be drilled for pilot hole (10-20° entry / exit angles)</li><li>• limited arc that pipe can "rope" through the hole, especially large diameter pipe</li><li>• may take several attempts</li><li>• drill stem may get "stuck in the hole" and tools can get lost, especially on large diameter reams</li><li>• no guarantees that drill will be successful</li><li>• may damage coating / pipe</li></ul>	<ul style="list-style-type: none"><li>• watercourse with sensitive habitat where no instream activity allowed</li><li>• watercourses where HADD may result from instream activity</li><li>• areas with very unstable approach slopes</li><li>• high aesthetic concerns (<i>i.e.</i>, parks)</li><li>• restrict HDD staging in the floodplain, where conditions allow.</li></ul>

Request OGC2022-001 Page 195 of 255

# Microtunneling



# Micro-tunneling

Description	Environmental Considerations		Construction / Engineering Considerations		Comments
	Advantages	Disadvantages	Advantages	Disadvantages	
TRENCHLESS iv) Micro-tunneling					
<ul style="list-style-type: none"><li>• use a small tunnel boring machine to create a tunnel for the pipe or casing</li></ul>	<ul style="list-style-type: none"><li>• no sediment release</li><li>• no bank disturbance</li><li>• no streambed disturbance</li><li>• no approach slope disturbance</li><li>• maintains normal streamflow</li><li>• maintains fish passage</li><li>• not likely to result in HADD</li></ul>	<ul style="list-style-type: none"><li>• tunnel spoil / slurry requires large areas</li><li>• disposal of tunnel spoil</li><li>• large space requirements on flood plains</li></ul>	<ul style="list-style-type: none"><li>• can be utilized in most substrates above or below the water table</li><li>• eliminates clean-up and reclamation in streambed and banks</li><li>• may be able to construct during sensitive fisheries restricted activity windows</li></ul>	<ul style="list-style-type: none"><li>• special equipment and crew are required</li><li>• limited by length of pipe to be pushed and the friction forces imposed</li><li>• high cost</li><li>• may require detailed engineering</li><li>• tunnel spoil / slurry may require removal or settling tanks and water treatment if chemical lubricants were used</li></ul>	<ul style="list-style-type: none"><li>• large diameter pipelines</li><li>• crossings with ample room for tunnel spoil storage and bellholes</li><li>• high aesthetic concerns (i.e., parks)</li></ul>



# Aerial Crossing

---





## Open Cut

**4' high X 200' long & upstream 3' high X 200' long downstream**

**Dam Pump Natural Gas Pipeline Crossing  
Beaton River, Fort St John, BC**

# Aerial Crossing

Description	Environmental Considerations		Construction / Engineering Considerations		Comments
	Advantages	Disadvantages	Advantages	Disadvantages	
<b>AERIAL ii) Self-Supporting Clear Span Bridge</b>					
<ul style="list-style-type: none"><li>construct bridge or abutments to carry pipeline</li></ul>	<ul style="list-style-type: none"><li>no sediment release</li><li>no streambed disturbance</li><li>no bank disturbance</li><li>maintains normal streamflow</li><li>maintains fish passage</li><li>not likely to result in HADD</li></ul>	<ul style="list-style-type: none"><li>visual impact</li><li>safety and introduction of product into watercourse due to third party damage</li><li>instream construction required for bridge abutments</li><li>may trigger additional regulatory review</li><li>may require removal of potential danger trees within riparian zone to maintain integrity</li></ul>	<ul style="list-style-type: none"><li>reduces clean-up and reclamation of streambed and banks</li></ul>	<ul style="list-style-type: none"><li>very expensive</li><li>specialized crew and equipment</li><li>slow construction / installation</li><li>potential for third party damage</li><li>regulatory approval may be delayed or denied</li><li>ongoing maintenance required</li><li>requires design to meet <i>Navigable Waters Protection Act</i> requirements</li></ul>	<ul style="list-style-type: none"><li>large watercourse with sensitive habitat where no instream activity is allowed</li><li>areas with very unstable approach slopes</li><li>deep gorges / canyons</li></ul>



# After Crossing Construction

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A photograph of a narrow dirt path winding through a dense forest. Sunlight filters through the green leaves, creating a dappled light effect on the path and the surrounding vegetation. The trees are tall and thin, with a thick canopy overhead. The path leads into the distance, disappearing into the woods.

# Pipeline Right of Way



## Keough, Dana

---

**From:** Kennedy, Mayka  
**Sent:** Wednesday, October 6, 2021 8:41 AM  
**To:** Paulson, Ken  
**Cc:** Thoroughgood, Garth; Koosmann, Nicole; Currie, Graham  
**Subject:** FW: River Crossings

**Importance:** High

s13

We are not working on Briefing Note – just on the presentation.

Ken, can you please ask Kary to book a meeting for us to discuss.  
Thanks.



**Mayka Kennedy** (she/her) P.Eng., C.Dir.  
Executive Vice President, Chief Engineer  
[Mayka.Kennedy@BCOGC.ca](mailto:Mayka.Kennedy@BCOGC.ca)

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---

**From:** Paulson, Ken <Ken.Paulson@bcogc.ca>  
**Sent:** Tuesday, October 5, 2021 6:21 PM  
**To:** McCarthy, Tom IRR:EX <Tom.McCarthy@gov.bc.ca>; Shaw, Rachel EMLI:EX <Rachel.Shaw@gov.bc.ca>  
**Cc:** Thoroughgood, Garth <Garth.Thoroughgood@bcogc.ca>; Kennedy, Mayka <Mayka.Kennedy@bcogc.ca>; O'Hanley, James G <James.O'Hanley@bcogc.ca>  
**Subject:** River Crossings  
**Importance:** High

I had a number of calls and texts today from folks ranging from the RCMP to Government around river crossing methods.

s16

Mayka and her team

are preparing a BN on this topic as I type.

So that folks know, there are THOUSANDS of natural gas pipelines crossing rivers and streams in Canada and globally. The best methods for these crossings are ones that avoid the stream channel entirely and are buried. This avoids erosion, flood events, willful damage, etc.

Over my career as a pipeline engineer s22 we have moved from overhead crossings to the much more environmentally sound and eco-friendly methods such as directional drilling and more recently micro-tunnelling.

So, as Mayka and her folks work up something we can share, please note that the methods chosen for crossing the Morice are proven and trusted as the least impact, least intrusive methods.

s19

The chosen method is the least intrusive and least likely to impact the river.



**Ken Paulson**, P.Eng  
Executive Vice President, Chief Operating  
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## Keough, Dana

---

**From:** Currie, Graham  
**Sent:** Wednesday, October 6, 2021 4:38 PM  
**To:** Kennedy, Mayka  
**Subject:** RE: BN - Watercourse Crossings 2021.10.06  
**Attachments:** BN - Watercourse Crossings 2021.10.06\_v2.docx

See some mostly minor edits (tracked) in this version Mayka. One comment, in case someone can address.  
Thanks,  
Graham



**Graham Currie**  
Executive Director, Public & Corporate  
Relations  
[Graham.Currie@bcogc.ca](mailto:Graham.Currie@bcogc.ca)

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---

**From:** Kennedy, Mayka <Mayka.Kennedy@bcogc.ca>  
**Sent:** Wednesday, October 6, 2021 4:20 PM  
**To:** Currie, Graham <Graham.Currie@bcogc.ca>  
**Subject:** FW: BN - Watercourse Crossings 2021.10.06

Sorry about the last minute – but if you have 5 min can you take a look at the BN for Fazil?



**Mayka Kennedy** (she/her) P.Eng., C.Dir.  
Executive Vice President, Chief Engineer  
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---

**From:** Koosmann, Nicole <[Nicole.Koosmann@bcogc.ca](mailto:Nicole.Koosmann@bcogc.ca)>  
**Sent:** Wednesday, October 6, 2021 3:21 PM  
**To:** Gregory, Sara <[Sara.Gregory@bcogc.ca](mailto:Sara.Gregory@bcogc.ca)>  
**Cc:** Kennedy, Mayka <[Mayka.Kennedy@bcogc.ca](mailto:Mayka.Kennedy@bcogc.ca)>  
**Subject:** BN - Watercourse Crossings 2021.10.06

Hi Sara,  
Could you please review this briefing note going to Fazil?  
Is it understandable for a non-technical person?  
Thanks,



---

**Nicole Koosmann** P.Eng., P.M.P.  
Vice President, Engineering, Integrity &  
Technical Compliance  
[Nicole.Koosmann@BCOGC.ca](mailto:Nicole.Koosmann@BCOGC.ca)

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Pages: 207 - 213  
s13



## Keough, Dana

---

**From:** Currie, Graham  
**Sent:** Tuesday, October 5, 2021 3:41 PM  
**To:** Kennedy, Mayka; Koosmann, Nicole  
**Subject:** RE: Underground pipes

Nicole - if you can get us some info and/or images, my group can help put together a bit of a fact sheet or two-pager that might help with this.

Thanks,  
Graham

Graham Currie  
Executive Director, Public & Corporate Relations Oil And Gas Commission  
2950 Jutland Road  
Victoria BC V8T 5K2 s17  
T.250 419-4420 | F.250-419-4403 | Graham.Currie@bcogc.ca bcogc.ca

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-----Original Message-----

From: Kennedy, Mayka <Mayka.Kennedy@bcogc.ca>  
Sent: Tuesday, October 5, 2021 3:39 PM  
To: Koosmann, Nicole <Nicole.Koosmann@bcogc.ca>; Currie, Graham <Graham.Currie@bcogc.ca>  
Subject: FW: Underground pipes

Please see request from Ken.

If its possible Mayka - can we develop a version we could share with the RCMP as well? A fact sheet on river crossing methods etc.

Maybe it should end up on our website as well.

Mayka Kennedy (she/her) P.Eng.,C.Dir.  
Executive Vice President, Chief Engineer Oil And Gas Commission  
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-----Original Message-----

From: Paulson, Ken <Ken.Paulson@bcogc.ca>  
Sent: Tuesday, October 5, 2021 3:33 PM  
To: Kennedy, Mayka <Mayka.Kennedy@bcogc.ca>; Jeakins, Paul <Paul.Jeakins@bcogc.ca>  
Subject: RE: Underground pipes

If its possible Mayka - can we develop a version we could share with the RCMP as well? A fact sheet on river crossing methods etc.

Maybe it should end up on our website as well.

Ken Paulson , P.Eng  
Executive Vice President, Chief Operating Officer Oil And Gas Commission  
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-----Original Message-----

From: Kennedy, Mayka <Mayka.Kennedy@bcogc.ca>  
Sent: Tuesday, October 5, 2021 1:33 PM  
To: Paulson, Ken <Ken.Paulson@bcogc.ca>; Jeakins, Paul <Paul.Jeakins@bcogc.ca>  
Subject: RE: Underground pipes

On it.

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-----Original Message-----

From: Paulson, Ken <Ken.Paulson@bcogc.ca>  
Sent: Tuesday, October 5, 2021 1:31 PM  
To: Jeakins, Paul <Paul.Jeakins@bcogc.ca>; Kennedy, Mayka <Mayka.Kennedy@bcogc.ca>  
Subject: RE: Underground pipes

Over to Mayka.

I would suggest we also do a bit of a factual backgrounder.

Whats being proposed for Morice is not new, unique, or anything special. Its by far the safest and least intrusive method for corssing the river .

There are thousands of river crossing of natural gas pipelines in Canada. Micro-tunneling is relatively new but the concepts have been used for years safely and effectively.

Ken Paulson , P.Eng  
Executive Vice President, Chief Operating Officer Oil And Gas Commission

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-----Original Message-----

From: Jeakins, Paul <Paul.Jeakins@bcogc.ca>  
Sent: Tuesday, October 5, 2021 1:20 PM  
To: Kennedy, Mayka <Mayka.Kennedy@bcogc.ca>; Paulson, Ken <Ken.Paulson@bcogc.ca>  
Subject: FW: Underground pipes

Do we have the contacts to get something like this together?

-----Original Message-----

From: Mihlar, Fazil EMLI:EX <Fazil.Mihlar@gov.bc.ca>  
Sent: Tuesday, October 5, 2021 1:17 PM  
To: Jeakins, Paul <Paul.Jeakins@bcogc.ca>  
Cc: Shaw, Rachel EMLI:EX <Rachel.Shaw@gov.bc.ca>; Caul, Doug D IRR:EX <Doug.Caul@gov.bc.ca>; McCarthy, Tom IRR:EX <Tom.McCarthy@gov.bc.ca>  
Subject: Underground pipes

Hi Paul: Can you put together a BN and some videos to brief Miles Richardson on underwater crossings? You will have others; False Creek sewer line and Victoria Harbour have been mentioned. Anything in Prince Rupert? Thx. Fazil

Sent from my iPhone

## Keough, Dana

---

**From:** Phillips, Lori L  
**Sent:** Monday, September 27, 2021 10:37 AM  
**To:** Lang, Randy s19  
**Cc:** Friedrich, Hardy; Anderson, Justin  
**Subject:** FW: CGL OGC October 2021 Watercourse Crossing Report #18  
**Attachments:** CGL4703-CGP-BCOGC-REG-LTR-4878\_WCC Oct Report 18\_27-Sept-21.pdf

Hi folks, I know Shelley's sentence below refers to July, but this is the current updated schedule.

Thank you,

Lori



**Lori Phillips**  
Authorizations Manager  
[Lori.Phillips@BCOGC.ca](mailto:Lori.Phillips@BCOGC.ca)

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---

**From:** Shelley McInnis <shelley\_mcinnis@tcenergy.com>  
**Sent:** Monday, September 27, 2021 9:28 AM  
**To:** Post Permit Requests <postpermitrequests@bcogc.ca>  
**Cc:** Phillips, Lori L <Lori.Phillips@bcogc.ca>; Smook, Patrick <Patrick.Smook@bcogc.ca>; eao.compliance@gov.bc.ca; Smith, Clayton H EAO:EX <Clayton.H.Smith@gov.bc.ca>; Parks, Chris EAO:EX <Chris.Parks@gov.bc.ca>; Adair Rigney <adair\_rigney@tcenergy.com>; Dan Wyman <dan\_wyman@tcenergy.com>; Joseph Campbell <joseph\_campbell@tcenergy.com>; Tracy Young <tracy\_young@tcenergy.com>; Glenn Todd <glenn\_todd@tcenergy.com>; Autumn Cousins <autumn\_cousins@tcenergy.com>; Tom Hicks <thicks@ecofishresearch.com>; Lead IESCA <LeadIESCA@ecofishresearch.com>  
**Subject:** CGL OGC October 2021 Watercourse Crossing Report #18

Good morning,

Please find attached CGL's Scheduled Watercourse Crossings Report #15 for July. This report covers the planned construction of pipeline crossings of watercourses throughout the Project and is filed in response to the following conditions:

- Pipeline Section 1, AD 100082293, Condition 9
- Pipeline Section 2, AD 100082292, Condition 9
- Pipeline Section 3, AD 100082299, Condition 8

- Pipeline Section 4, AD 100082252, Condition 9
- Pipeline Section 5, AD 100082251, Condition 9
- Pipeline Section 6, AD 100082422, Condition 9
- Pipeline Section 7, AD 100082423, Condition 8
- Pipeline Section 8, AD 100084230, Condition 9

Please contact Dan Wyman if you have any questions regarding the contents of this report.

Thank you,

**Shelley McInnis**

**Regulatory Administrative Analyst**

Coastal GasLink

Contractor representing TC Energy

[shelley\\_mcinnis@tcenergy.com](mailto:shelley_mcinnis@tcenergy.com)

cell: s22 desk: 403-920-1370



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Thank you



September 27, 2021

Lori Phillips  
Applications Manager  
BC Oil and Gas Commission  
6534 Airport Road  
Fort St. John, B.C. V1J 4M6

Coastal GasLink LLP  
450 – 1st Street S.W.  
Calgary, AB, Canada T2P 5H1

Tel: 403.920.6296  
Fax: 403.920.5324  
Email: [dan\\_wyman@tcenergy.com](mailto:dan_wyman@tcenergy.com)  
Web: [www.TCenergy.com](http://www.TCenergy.com)

**CGL4703-CGP-BCOGC-REG-LTR-4878**

Dear Ms. Phillips,

**Re: Coastal GasLink Pipeline Project (Project)  
Scheduled Watercourse Crossings Report #18  
References: AD 100082293 Condition 9, AD 100082292 Condition 9, AD 100082299  
Condition 8, AD 100082252 Condition 9, AD 100082251 Condition 9, AD 100082422  
Condition 9, AD 100082423 Condition 8, and AD 100084230 Condition 9**

As cited in the above conditions Coastal GasLink is required to:

*At least one week prior to the beginning of each month, the permit holder must submit a schedule to the Commission indicating the location and timing of horizontal directional drilling, micro-tunneling or in-stream work planned to commence the following month.*

Coastal GasLink is submitting the following monthly Watercourse Crossing Schedules to the BC Oil and Gas Commission (OGC) for October 2021:

- Table 1: Horizontal Directional Drill (HDD) and Direct Pipe Installation (DPI) Status and Schedule
- Table 2: Section 1 (AD 100082293) Watercourse Crossings Status and Schedule
- Table 3: Section 2 (AD 100082292) Watercourse Crossings Status and Schedule
- Table 4: Section 3 (AD 100082299) Watercourse Crossings Status and Schedule
- Table 5: Section 4 (AD 100082252) Watercourse Crossings Status and Schedule
- Table 6: Section 8 (AD 100084230) Watercourse Crossings Status and Schedule

No other in-stream work associated with the construction of pipeline crossings is currently scheduled in the remaining pipeline sections for this month.

Coastal GasLink notes the timing of construction provided in the attached tables are based on the current Project schedule and the best information available to Coastal GasLink on the date of filing. These dates are, however, subject to change without notice due to changing site conditions, final execution plans, permitting and other external factors.

Should you have any questions do not hesitate to contact me at 403-920-6296 or [dan\\_wyman@tcenergy.com](mailto:dan_wyman@tcenergy.com).

Sincerely,



Daniel RK Wyman  
Team Lead, Regulatory  
Coastal GasLink

Table 1: HDD and DPI Schedule

Watercourse Name HDD/DPI	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	Easting	Northing	Work Scheduled to Start	Work Scheduled to End	Summary of Activities Planned for the month
Murray River	1	61.00-WC	10B1	S1A	HDD	25+217	617896.01 e	6172089.74 n	28-Sep-2020	10-Jul-2021	Complete
Sukunka River	1	186.00-WC	51B1	S1A	HDD	64+431	617896.01 e	6157225 n	15-Jun-2021	November 2021	- Pipe Pullback - Demobilize from site
Burnt River	2	270.00-WC	72	S1B	DPI	96+886	617896.01 e	6131508.33 n	3-Aug-2021	21-Sep-2021	Complete
Parsnip River	3	560.00-WC	205	S1A	DPI	189+659	617896.01 e	6069086 n	21-Oct-2021	5-Dec-2021	- Mobilize to site - Begin site preparation and construction of the entry pit
Crooked River	3	654.00-WC	235	S1B	DPI	212+345	617896.01 e	6056162 n	13-Nov-2020	28-Nov-2020	Complete
Salmon River	4	781.00-WC	277	S1A	DPI	254+104	617896.01 e	6027443 n	23-Sep-2021	7-Nov-2021	- Equipment setup - Begin tunnelling - Begin drilling waste disposal
Stuart River	4	880.00-WC	SRR9	S1A	DPI	298+052	617896.01 e	6004956.59 n	13-Oct-2020	11-Dec-2020	Complete
Morice River	7	1677.00-WC	558	S1A	Microtunnel	558+400	617896.01 e	6004956.59 n	27-Jan-2022	15-Apr-2022	Access and Pad Prep
Kitimat River	8	2098.00-WC	191C	S1A	DPI	667+162	617896.01 e	5989905.36 n	13-Jul-2020	31-Aug-2020	Complete

Table 2: Section 1 Watercourse Crossings Schedule

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Unnamed Tributary (Bluff Creek)	1	0236.0-WC	CO28	S5	Isolate if flowing, Open Cut if dry or frozen	82+416	10	578084	6144269	September 27, 2021	October 1, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Bluff Creek)	1	0243.0-WC	1D	S6	Isolate if flowing, Open Cut if dry or frozen	85+844	10	577237	6141232	October 1, 2021	October 6, 2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Sukunka River)	1	0253.0-WC	5C2A	S6	Isolate if flowing, Open Cut if dry or frozen	88+811	10	577529	6138635	October 6, 2021	October 11, 2021	Dig, Install, Backfill and Reclaim

Table 3: Section 2 Watercourse Crossings Schedule

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Unnamed Tributary	2	0355.0-WC	95.1T	S6	Isolate if flowing, Open Cut if dry or frozen	118+145	10	569998	6115264	20-Aug-21	30-Sep-21	Isolate, Install vehicle crossing, Dig, Install Pipe, Backfill and Reclaim
Unnamed Tributary (Burnt River)	2	0277.0-WC	4D	S6	Isolate if flowing, Open Cut if dry or frozen	98+294	10	579171	6130358	1-Oct-21	15-Oct-21	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Burnt River)	2	0278.0-WC	5D	S6	Isolate if flowing, Open Cut if dry or frozen	98+855	10	578703	6130089	15-Oct-21	31-Oct-21	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Burnt River)	2	0280.0-WC	75	S6	Isolate if flowing, Open Cut if dry or frozen	99+955	10	577772	6129592	11-Oct-21	15-Oct-21	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Burnt River)	2	0282.0-WC	6D	S6	Isolate if flowing, Open Cut if dry or frozen	100+535	10	577358	6129241	15-Oct-21	20-Oct-21	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Burnt River)	2	0283.0-WC	7D	S6	Isolate if flowing, Open Cut if dry or frozen	100+752	10	577126	6129199	20-Oct-21	25-Oct-21	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0292.0-WC	77	S6	Isolate if flowing, Open Cut if dry or frozen	103+282	10	575577	6127550	25-Oct-21	29-Oct-21	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0293.0-WC	77.1T	S6	Isolate if flowing, Open Cut if dry or frozen	103+702	10	575515	6127162	11-Oct-21	15-Oct-21	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0294.0-WC	77.2T	S6	Isolate if flowing, Open Cut if dry or frozen	103+857	10	575512	6126999	15-Oct-21	20-Oct-21	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0295.0-DR	J18.01	S6	Isolate if flowing, Open Cut if dry or frozen	104+159	10	575510	6126703	20-Oct-21	25-Oct-21	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Rocky Creek)	2	0296.2-WC	J18.07	S6	Isolate if flowing, Open Cut if dry or frozen	104+440	10	575537	6126428	25-Oct-21	29-Oct-21	Dig, Install, Backfill and Reclaim

Table 4: Section 3 Watercourse Crossings Schedule

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Unnamed Tributary (Redrocky Creek)	3	0622.0-WC	97C	S4	Isolate if flowing, Open Cut if dry or frozen	206+782	10	520563	6058702	4-Oct-2021	11-Oct-2021	Begin Diversion in preparation for crossing
Peculiar Creek	3	0713.0-WC	118C	S2	Isolate if flowing, Open Cut if dry or frozen	229+910	10	502694	6046352	19-Sep-2021	10-Oct-2021	Install sheetpiling and sandpointing. Isolate watercourse, Dig, Install, Backfill and Reclaim
Unnamed Tributary (Merton Creek)	3	0732.0-WC	266	S4	Isolate if flowing, Open Cut if dry or frozen	235+638	10	499192	6042079	12-Oct-2021	19-Oct-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Crooked River)	3	0643.0-WC	233	S6	Isolate if flowing, Open Cut if dry or frozen	210+406	10	517617	6056732	1-Oct-2021	8-Oct-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Merton Creek)	3	0742.0-WC	269	S3	Isolate if flowing, Open Cut if dry or frozen	239+024	10	497811	6039141	4-Oct-2021	11-Oct-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Merton Creek)	3	0743.0-WC	125C	S4	Isolate if flowing, Open Cut if dry or frozen	239+167	10	497772	6039016	7-Oct-2021	14-Oct-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Merton Creek)	3	756.00-WC	272	S3	Isolate if flowing, Open Cut if dry or frozen	244+520	10	494868	6034635	30-Oct-2021	6-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Muskeg River)	3	698.00-WC-R3	110C	S4	Isolate if flowing, Open Cut if dry or frozen	227+744	10	503439	6048058	1-Oct-2021	11-Oct-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Merton Creek)	3	0749.0-WC-R3	270	S4	Isolate if flowing, Open Cut if dry or frozen	240+860	10	496715	6037744	30-Oct-2021	6-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Merton Creek)	3	757.00-WC	127C	S4	Isolate if flowing, Open Cut if dry or frozen	244+606	10	494842	6034550	29-Oct-2021	8-Nov-2021	Dig, Install, Backfill and Reclaim



**Table 5: Section 4 Watercourse Crossings Schedule**

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Unnamed Tributary (West Creek)	4	0837.0-WC_R1	132C	S3	Isolate if flowing, Open Cut if dry or frozen	278+354	10	471183.56	6012085.5	1-Oct-2021	8-Oct-2021	Dig, Install, Backfill and Reclaim
West Creek	4	819.00-WC	291	S3	Isolate if flowing, Open Cut if dry or frozen	272+157	10	474994.24	6016637.4	27-Sep-2021	4-Oct-2021	Dig, Install, Backfill and Reclaim

Table 6: Section 8 Watercourse Crossings Schedule

Watercourse Name	Section	CGL ID	Site ID	Watercourse Designation	Crossing Method	KP	UTM Zone	Easting	Northing	Work Scheduled Start Date	Work Scheduled End Date	Summary of Activities Planned for the month
Unnamed Tributary (Clore River)	8	1768.00-WC	615	S3	Isolated Open Cut	595+456	9	576514	5999105	8-Sep-2021	1-Oct-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Clore River)	8	TBD	RR010	S3	Isolated Open Cut	586+820	9	582008	6003832	9-Oct-2021	27-Oct-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Clore River)	8	1777.00-WC	147C	S3	Isolated Open Cut	597+751	9	574829	5997796	20-Oct-2021	12-Nov-2021	Dig, Install, Backfill and Reclaim
Unnamed Tributary (Pine Creek)	8	2072.10-WC	UN22-15	S3	Isolated Open Cut	662+453	9	523882	5988970	27-Sep-2021	2-Oct-2021	Site preparation and pipe installation via isolated open cut
Unnamed Tributary (Pine Creek)	8	2072.00-WC	3-E1	S3	Isolated Open Cut	662+355	9	523882	5988970	3-Oct-2021	8-Oct-2021	Site preparation and pipe installation via isolated open cut
Unnamed Tributary (Hirsch Creek)	8	2048.00-WC	731	S3	Isolated Open Cut	656+929	9	528644	5990543	30-Sep-2021	7-Oct-2021	Site preparation and pipe installation via isolated open cut
Unnamed Tributary (Pine Creek)	8	2059.00-WC	6E	S3	Isolated Open Cut	659+385	9	526446	5989892	7-Oct-2021	13-Oct-2021	Site preparation and pipe installation via isolated open cut
Unnamed Tributary (Hirsch Creek)	8	TBD	S1010.a	S4	Isolated Open Cut	640+336	9	542454	5991340	13-Oct-2021	21-Oct-2021	Site preparation and pipe installation via isolated open cut
Unnamed Tributary (Hirsch Creek)	8	1978.10-WC	UN11-94	S3	Isolated Open Cut	640+254	9	542499	5991383	21-Oct-2021	1-Nov-2021	Site preparation and pipe installation via isolated open cut
Unnamed Tributary (Hirsch Creek)	8	1920.00-WC	694	S5	Isolated Open Cut	630+830	9	550768	5991779	24-Sep-2021	5-Oct-2021	Site preparation and pipe installation via isolated open cut
Unnamed Tributary (Hirsch Creek)	8	1912.00-WC	692	S5	Isolated Open Cut	629+540	9	551961	5991515	11-Oct-2021	20-Oct-2021	Site preparation and pipe installation via isolated open cut
Unnamed Tributary (Hirsch Creek)	8	1924.00-WC	695	S5	Isolated Open Cut	631+367	9	550260	5991781	20-Oct-2021	29-Oct-2021	Site preparation and pipe installation via isolated open cut
Unnamed Tributary (Hirsch Creek)	8	1937.00-WC	697	S5	Isolated Open Cut	633+185	9	548503	5991729	29-Oct-2021	5-Nov-2021	Site preparation and pipe installation via isolated open cut
Unnamed Tributary (Pine Creek)	8	2082.10-WC	740	S2	Auger Bore	664+623	9	523128	5987447	23-Sep-2021	22-Oct-2021	Excavate Bore Bays and Set up, Install Casing, Pull Product
Unnamed Tributary (Pine Creek)	8	2083.00-WC	740.1T	S3	Auger Bore	664+623	9	523108	5987447	23-Sep-2021	22-Oct-2021	Excavate Bore Bays and Set up, Install Casing, Pull Product
Unnamed Tributary (Kitimat River)	8	2096.00-WC	S1073	S2	Auger Bore	666+513	9	521244	5987405	14-Aug-2021	3-Oct-2021	Excavate Bore Bays and Set up, Install Casing, Pull Product
Unnamed Tributary (Kitimat River)	8	2091.00-WC	UN22-20	S2	Auger Bore	666+055	9	521684	5987438	3-Oct-2021	18-Oct-2021	Excavate Bore Bays and Set up, Install Casing, Pull Product
Side Channel (Kitimat River)	8	2090.00-WC	UN22-19	S2	Auger Bore	665+925	9	521684	5987438	18-Oct-2021	2-Nov-2021	Excavate Bore Bays and Set up, Install Casing, Pull Product

## Keough, Dana

---

**From:** Kennedy, Mayka  
**Sent:** Monday, September 20, 2021 12:56 PM  
**To:** Thoroughgood, Garth; Koosmann, Nicole; Paulson, Ken  
**Subject:** RE: Lamprey and Morice Crossings

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

Thanks Garth.



**Mayka Kennedy** (she/her) P.Eng., C.Dir.  
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---

**From:** Thoroughgood, Garth <Garth.Thoroughgood@bcogc.ca>  
**Sent:** Monday, September 20, 2021 12:54 PM  
**To:** Koosmann, Nicole <Nicole.Koosmann@bcogc.ca>; Paulson, Ken <Ken.Paulson@bcogc.ca>; Kennedy, Mayka <Mayka.Kennedy@bcogc.ca>  
**Subject:** FW: Lamprey and Morice Crossings

FYI.



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---

**From:** Dan Wyman <[dan\\_wyman@tcenergy.com](mailto:dan_wyman@tcenergy.com)>  
**Sent:** Monday, September 20, 2021 12:53 PM  
**To:** Thoroughgood, Garth <[Garth.Thoroughgood@bcogc.ca](mailto:Garth.Thoroughgood@bcogc.ca)>  
**Cc:** Tracy Young <[tracy\\_young@tcenergy.com](mailto:tracy_young@tcenergy.com)>; Joel Forrest <[joel\\_forrest@tcenergy.com](mailto:joel_forrest@tcenergy.com)>  
**Subject:** RE: Lamprey and Morice Crossings

Hi Garth, Tracy is still looking to confirm the full rationale for the Lamprey Creek crossing, however we do have a response for the Morice River Crossing:

- Due to the size, sensitivity and importance as fish habitat, Coastal GasLink decided early that its preference was to conduct a trenchless crossing of the River.
- Trenchless crossing methods considered included HDD, a Micro-tunnel and a DPI
- To support the trenchless crossing, CGL conducted geotechnical testing around the crossing.
- CGL received the results of the geotech work in March of 2021, based on the results, CGL determined that three scenarios were feasible: a short DPI of ~690m, a longer DPI of ~910m and a Microtunnel of ~910m.
- These 3 options were considered with regard to constructability, cost, schedule, stakeholder and rights holder concerns and environmental risk.
- The final determination was that the 910m Microtunnel was considered the best option on all accounts.

Let me know if this helps. We'll try to pull similar info for Lamprey Creek.

---

Dan Wyman  
Regulatory -CGL  
O: 403.920.6296 | M  
[TCEnergy.com](http://TCEnergy.com)

s22

---

---

**From:** Thoroughgood, Garth <[Garth.Thoroughgood@bcogc.ca](mailto:Garth.Thoroughgood@bcogc.ca)>  
**Sent:** Monday, September 20, 2021 10:33 AM  
**To:** Joel Forrest <[joel\\_forrest@tcenergy.com](mailto:joel_forrest@tcenergy.com)>; Dan Wyman <[dan\\_wyman@tcenergy.com](mailto:dan_wyman@tcenergy.com)>  
**Subject:** [EXTERNAL] Lamprey and Morice Crossings

**EXTERNAL EMAIL: PROCEED WITH CAUTION.**

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe. If this email looks suspicious, report it.

---

Joel/Dan,  
Are you able to provide your rationale/justification on the methods selected for the Lamprey Creek and Morice River crossing?

We are preparing for a conversation with Chief Woos and our engineers are hoping that you can provide that information.

Thanks,  
Garth

## Keough, Dana

---

**From:** Thoroughgood, Garth  
**Sent:** Friday, September 17, 2021 10:59 AM  
**To:** Koosmann, Nicole  
**Subject:** RE: Pipe crossing pres - Part 2 of 2

Sorry, micro tunneling for Lamprey Creek?

They are mico-tunneling at the Morice.



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---

**From:** Koosmann, Nicole <Nicole.Koosmann@bcogc.ca>  
**Sent:** Friday, September 17, 2021 10:58 AM  
**To:** Thoroughgood, Garth <Garth.Thoroughgood@bcogc.ca>  
**Subject:** RE: Pipe crossing pres - Part 2 of 2

Hi Garth,  
Can CGL add micro-tunneling or an explanation why that wasn't considered?



**Nicole Koosmann** P.Eng., P.M.P.  
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---

**From:** Thoroughgood, Garth <[Garth.Thoroughgood@bcogc.ca](mailto:Garth.Thoroughgood@bcogc.ca)>  
**Sent:** Friday, September 17, 2021 7:13 AM  
**To:** Paulson, Ken <[Ken.Paulson@bcogc.ca](mailto:Ken.Paulson@bcogc.ca)>; Kennedy, Mayka <[Mayka.Kennedy@bcogc.ca](mailto:Mayka.Kennedy@bcogc.ca)>; Koosmann, Nicole <[Nicole.Koosmann@bcogc.ca](mailto:Nicole.Koosmann@bcogc.ca)>  
**Subject:** Pipe crossing pres - Part 2 of 2



---

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## Keough, Dana

---

**From:** Thoroughgood, Garth  
**Sent:** Friday, September 17, 2021 1:29 PM  
**To:** Currie, Graham  
**Cc:** Paulson, Ken; Kennedy, Mayka  
**Subject:** PowerPoint Slides  
**Attachments:** Construction Update\_DH\_Nov2020.pdf

Hi Graham,  
Any chance you or someone on your team can turn these PDF slides into PowerPoint slides?.....removing any Coastal Gaslink tags?

If you want to discuss let me know.

Thanks,  
Garth



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# Construction Update – Dark House Territory (Section 7)

November 10, 2020

**Coastal GasLink**  
Pipeline Project

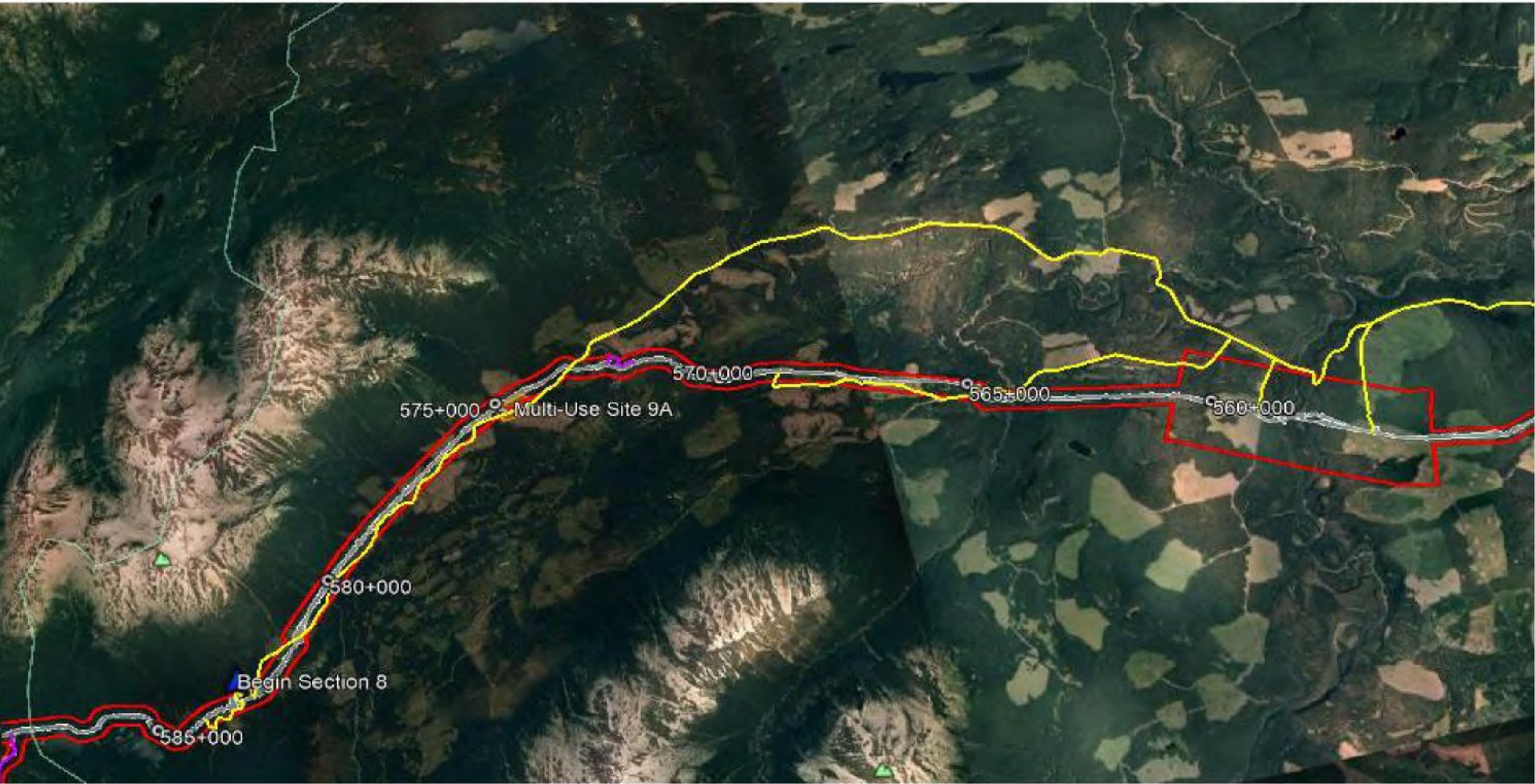


# Agenda

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1. Right-Of-Way Clearing
2. Morice River Geotechnical Investigation
3. Morice River Crossing Options
4. Crystal Creek Cabin
5. Workforce Accommodation 9A

# Area Overview



Section 8 Starts at  
~KP583

MU 9A (Section 8)

Red is Environment  
Assessment  
Corridor

Yellow is Access



## Clearing Update – Section 7

---

- Right-of-Way clearing to date has been ongoing east of Morice River (east of KP558) and for geotechnical work around Morice River on multiple work front's and will continue
- Clearing work west of Morice River (KP558 to KP583) is currently planned to start in early December, depending on final planning, permits and weather
- Multiple crews and work fronts are planned at:
  - KP558 heading west
  - KP571 heading west
  - KP573 heading west

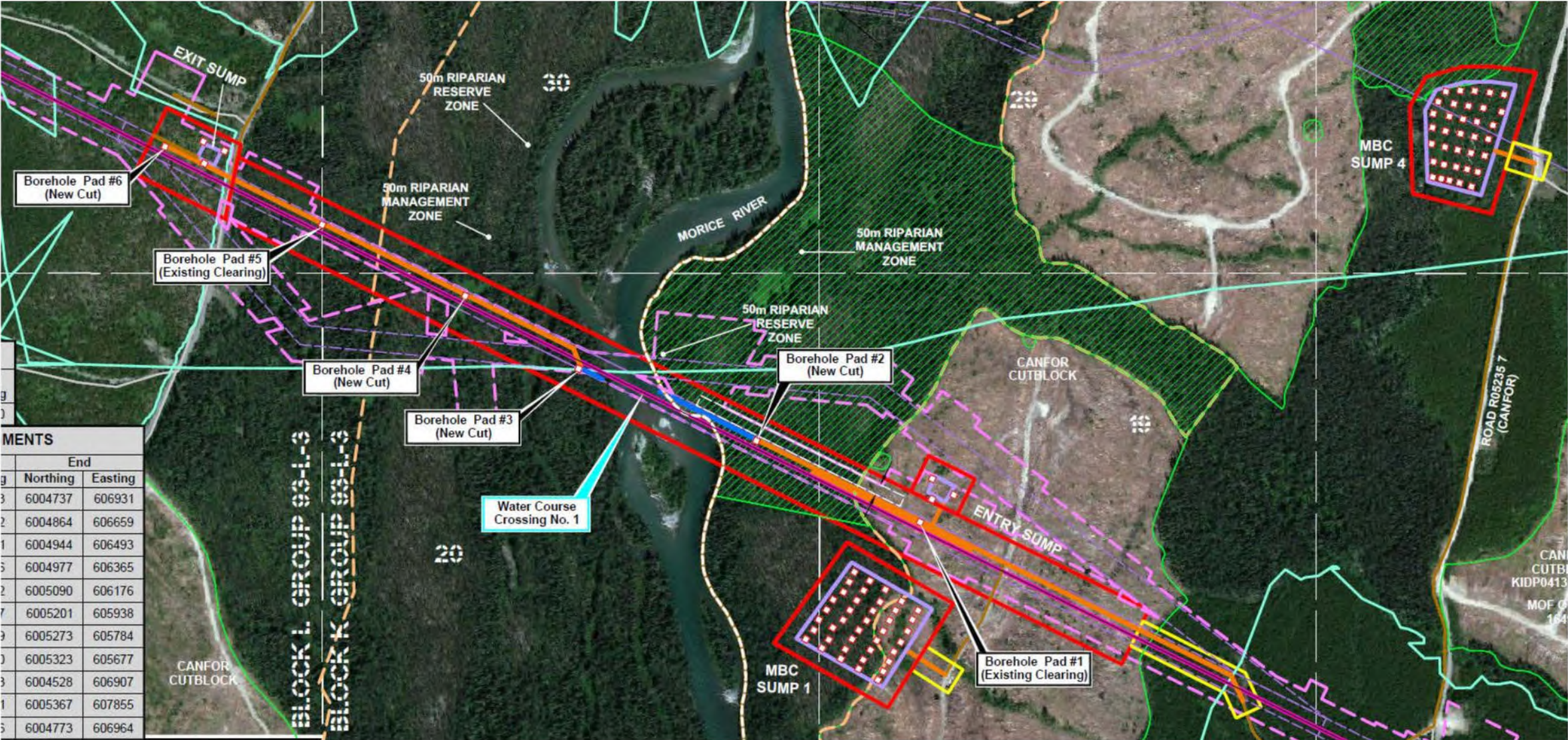
# Morice River Geotechnical / Geophysics Investigation

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- The geotechnical / geophysics investigations are required to define the subsurface conditions and associated depths (i.e. at what depth is hard rock, is there gravel) and then used to select crossing method and complete design
- Six Boreholes locations (4 on west side, 2 on east side) currently planned, some will be helicopter supported.
- Drilling 24 / 7 is still being investigated at the helicopter supported locations as a potential way to complete the work faster
- Narrow access paths have been cleared to helicopter supported locations, and wider trails to track rig locations
- Wooden Platforms will be constructed at helicopter supported locations to assist setting up drilling equipment
- Water quality monitoring will be done when work occurs either instream or within a defined area back from the stream
- Drilling fluids will be disposed based on site conditions and environmental input (i.e. hauled out, land spread in local area)
- Mix – Bury – Cover (MBC) Sump Sites, are required to dispose of the cuttings / drilling by products from the crossing process. The sites are tested for suitability and design to mix the cuttings with the local soil, then bury and cover returning the original status. Investigation of these sites is starting and expected to go until the end of the month.
- The overall schedule for the work is currently planned to complete in mid to late December, depending on weather and site conditions



# Investigative Area Sketch





# Morice River Geotechnical / Geophysical Investigation

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# Morice River Crossing Design

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- The boreholes will be ~150mm (6") in diameter and go to a depth of 30m (100ft) to 90m (300ft). Depth will depend on the types of subsurface conditions that are encountered, these conditions could include gravel, clay, sand / silt or hard rock.
- The data collected will be used to decide the crossing method for the Morice River. The data is used to determine specific design details such as depth / length of crossings, specific method, and cutting tool design. For example, if there is hard rock, then specific cutting tools are used.
- In some cases, additional geotechnical information may be required, but depends on the quality of data received and the method selected.
- The current preliminary design of the Morice River crossing is an HDD (Horizontal Directional Drill) at a length of ~1,200m (~4,000ft) and a depth of 80m (260ft) at the center of the river.



# Morice River Crossing Options

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## **Primary Trenchless Methods:**

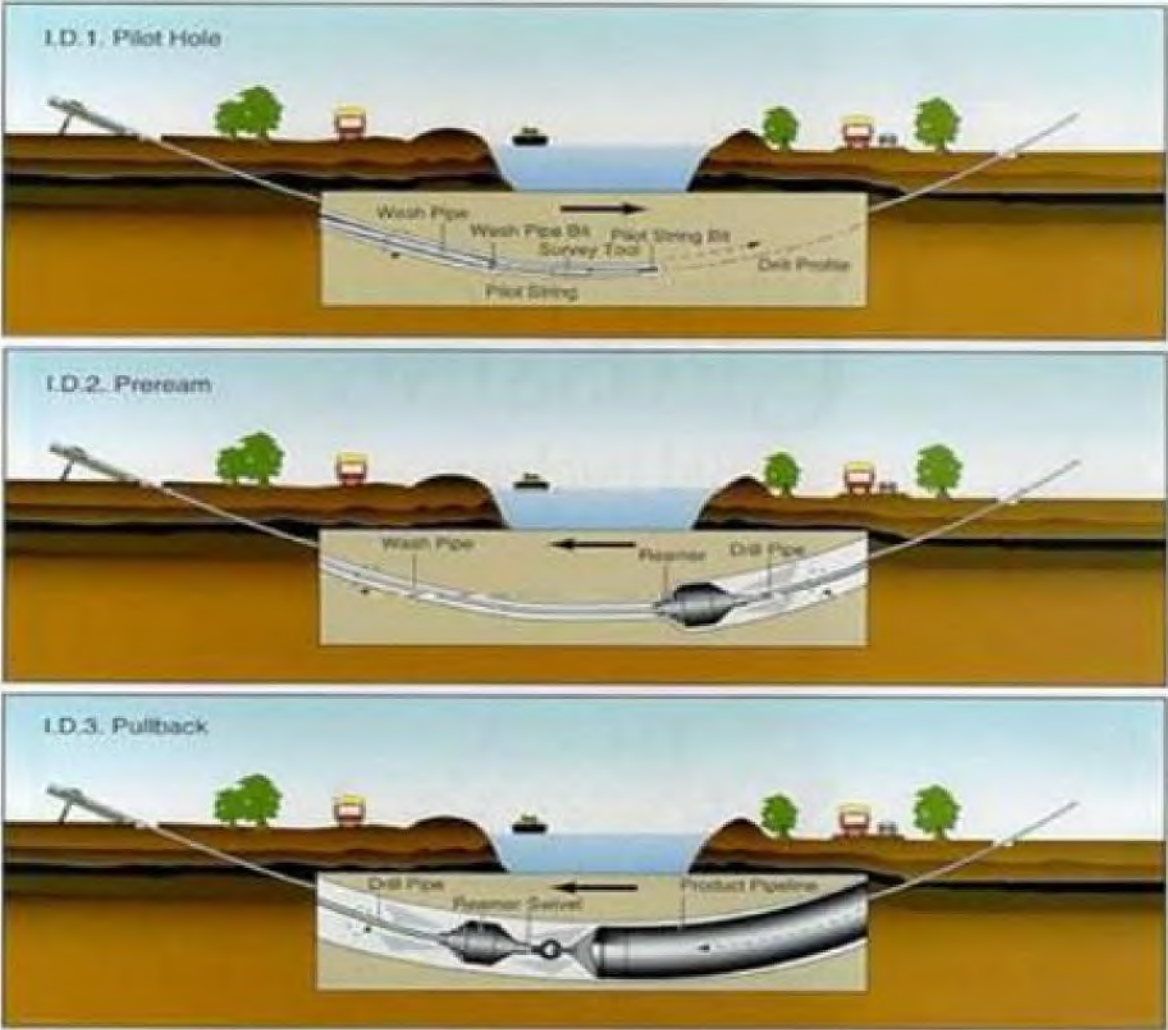
- Horizontal Directional Drill or HDD
- Directional Micro Tunnel or DMT
- Conventional Micro Tunnel

**All three methods achieve the same results, they are just slightly modified versions on how to execute the crossing. The subsurface data provides key data for selecting a method.**

**An Aerial Crossing is also a potential trenchless method used in industry but is not the current planned crossing method.**

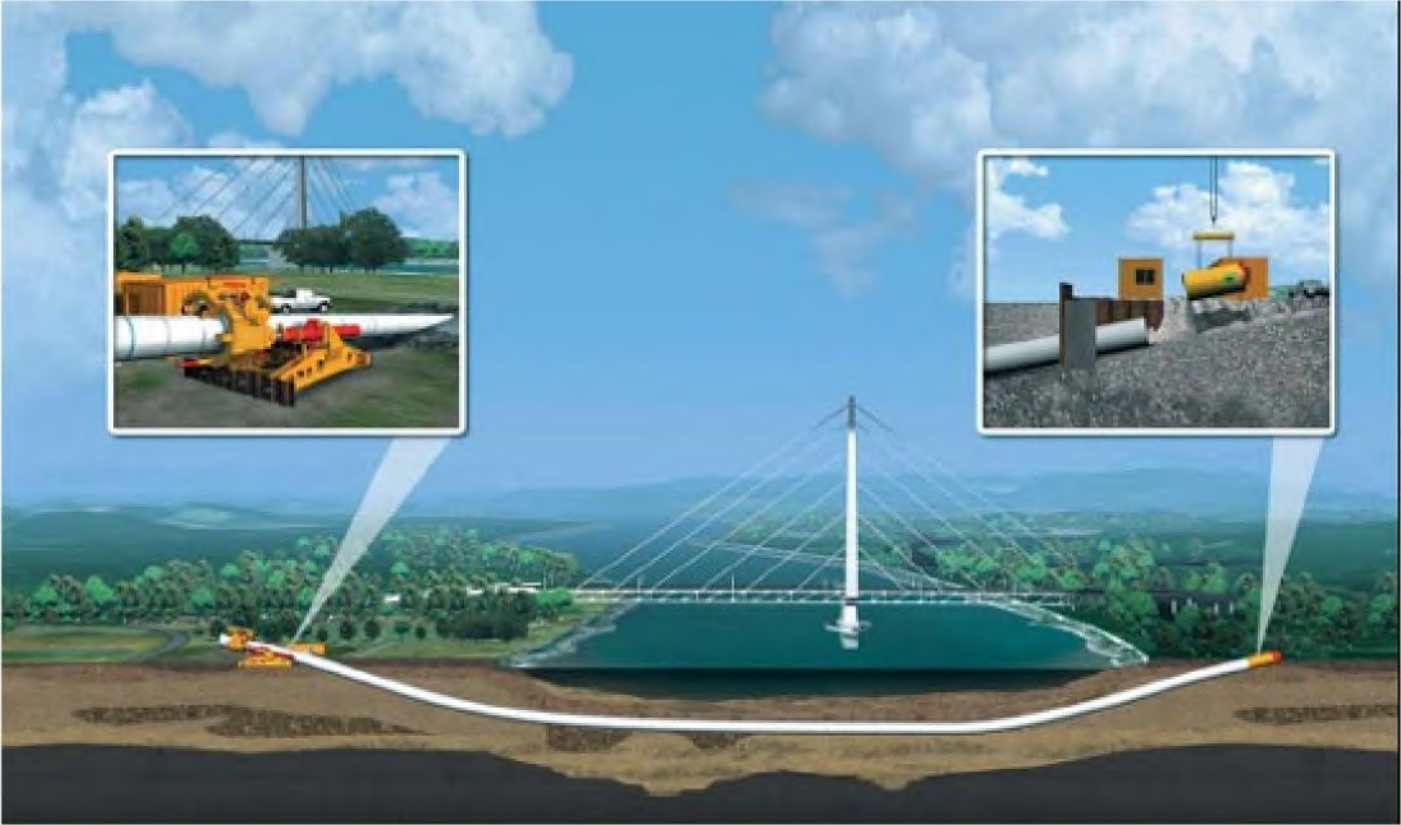
# HDD Trenchless

Figure 1. Technique





# Directional Micro-Tunnel





# Kitimat River DMT

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# Crystal Creek Cabin

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- The current alignment across Crystal Creek by the cabin is in final stages of review
- A proposed realignment has been investigated, that adjusts the current location to avoid the cabin. Final planning and additional permitting need to be put in place.
- The workspace would be ~8 meters from the current cabin location and the pipeline would be ~33 meters away
- The decision on the this proposed realignment needs to be made quickly in order to continue with next steps of implementing while maintaining construction schedule and managing all known constraints to the extent practical
- Potential realignment is shown on the next slide.

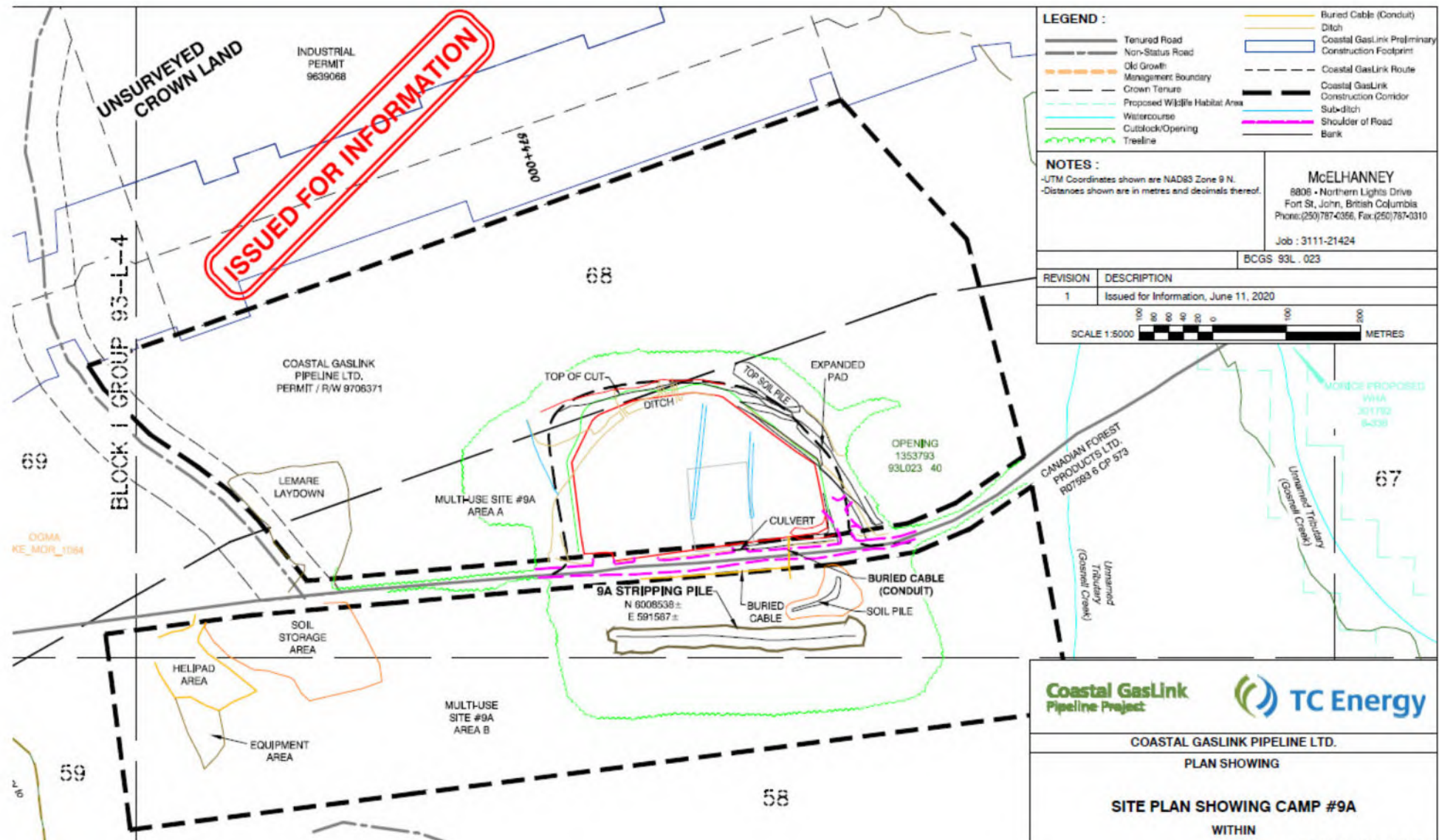


# Crystal Creek Cabin





# Workforce Accommodation 9A





# Workforce Accommodation 9A

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## Keough, Dana

---

**From:** Paulson, Ken  
**Sent:** Thursday, September 16, 2021 1:20 PM  
**To:** Koosmann, Nicole; Thoroughgood, Garth  
**Cc:** Kennedy, Mayka; O'Hanley, James G  
**Subject:** Request to Meet with Grizzly House - Chief Woos et al  
**Attachments:** 20210916\_125704.jpg

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

Further to a meeting between Fazil, Paul and Minister Cullen this morning, Chief Woos has asked that a technical presentation on the Morice river crossing be scheduled.

Mayka and I met with Paul at 12:45 to discuss.

The presentation should cover the various crossing methods that can be used (aerial, directional drill, open cut, micro-tunneling) and then walk through an assessment of why the chosen micro-tunneling is the logical choice for this location.

Garth, we'll need to follow up with Michelle but assume we will be organizing the session – likely directly with Chief Woos.

Paul's notes from the meeting attached to guide presentation.

It should be next week.



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## Tech Meeting

- Ken / Mayha to facilitate
  - in person best but ...
- go over our role
  - not advocates but assessors
  - Risk to enviro, cultural values, etc minimized over long term.
- what different options look like & how we would assess them
- example of a micro drill - same one Board reviewed?
  - video, before, after, current, future
- how to ensure any type of pipe is OK in 50 yrs.
- how to monitor creek health over 50 yrs.

## Keough, Dana

---

**From:** s19  
**Sent:** Friday, August 6, 2021 9:48 AM  
**To:** s19  
**Subject:** RE: NCS

100110975- CGL- Morice River IUP, just an amendment to remove some arch sites from the maps  
100109299- CGL- Morice River IUP, update of shapefiles



s19



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**From:** O'Neill, Sean <Sean.O'Neill@bcogc.ca>  
**Sent:** Tuesday, July 6, 2021 8:42 AM  
**To:** s19 Hartnell, Bruce  
<Bruce.Hartnell@bcogc.ca>  
**Subject:** NCS



---

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## Keough, Dana

---

**From:** s19  
**Sent:** Monday, July 12, 2021 9:11 AM  
**To:** s19  
**Subject:** FW: Morice River Micro tunnel - Mix-Bury-Cover Test Pits - Notice of Work Start

Just an FYI but I did request an update prior to works commencing at our last informal CGL meeting.



s19



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**From:** Tommy Adair <tommy.adair.enviro@gmail.com>  
**Sent:** Saturday, July 10, 2021 10:04 AM  
**To:** s19  
**Cc:** 'Robert Morin' <robert\_morin@tcenergy.com>; 'Tracy Young' <tracy\_young@tcenergy.com>  
**Subject:** Morice River Micro tunnel - Mix-Bury-Cover Test Pits - Notice of Work Start

Hi s19

s22 wanted to give you a notification that we are planning to conduct test pits at potential mix-bury-cover sites on the east side of the Morice River starting on July 16 next week. It's anticipated that it may take 5-7 days to complete.

This work is also pending the nest sweeps, and Fire Danger Rating. Currently this area is at 3 days in a row of Level 5, which restricts the work from taking place until the risk is lowered.

Rob Morin will be onsite next week if you have any questions or concerns.

Regards,

**Tommy Adair**  
**Lead Environmental Inspector (Contractor)**  
WP3, Coastal GasLink Pipeline Project  
s22

E | [tommy.adair.enviro@gmail.com](mailto:tommy.adair.enviro@gmail.com)

**Coastal GasLink**

## Keough, Dana

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**From:** Smook, Patrick  
**Sent:** Thursday, May 27, 2021 12:18 PM  
**To:** Johnson, Andy; Thoroughgood, Garth  
**Cc:** O'Neill, Sean s19  
**Subject:** FW: section 7 hand falling underway?

fyi



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**Patrick Smook** RPF, MBA  
Executive Director, Compliance &  
Enforcement  
[Patrick.Smook@BCOGC.ca](mailto:Patrick.Smook@BCOGC.ca)

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s17



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**From:** Tracy Young <tracy\_young@tcenergy.com>  
**Sent:** Thursday, May 27, 2021 11:36 AM  
**To:** Parks, Chris EAO:EX <Chris.Parks@gov.bc.ca>; Smook, Patrick <Patrick.Smook@bcogc.ca>  
**Cc:** Smith, Clayton H EAO:EX <Clayton.H.Smith@gov.bc.ca>; EAO Compliance EAO:EX <eao.compliance@gov.bc.ca>; Dan Wyman <dan\_wyman@tcenergy.com>  
**Subject:** RE: section 7 hand falling underway?

Hi Chris and Patrick,

I have confirmed that a small hand falling crew is working between KP 523+000 to 523+400 and on access road RW-1608.0 in Section 7.

In regards to the question on grubbing and grading, Section 7 is planning to have these activities occur from July 16<sup>th</sup> through to mid-December 2021. On Section 8 East, they are planning to start these activities in early June (anticipate June 2<sup>nd</sup>) and will continue through to mid-December 2021.

For the crossing of the Morice River, preparation activities e.g. grading of entry pit, etc. are planned to start in August and we anticipate that the crossing will be complete by January 2023. Coastal GasLink has not yet finalized the contract for this work so there may be some schedule adjustments as that is completed.

Please let me know if you have any other questions.

Thank you,



**Tracy Young**  
Senior Regulatory Analyst  
Coastal GasLink Pipeline Project

tel: 778-328-5327 mobile  
[TCEnergy.com](http://TCEnergy.com)

s22

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**From:** Parks, Chris EAO:EX <[Chris.Parks@gov.bc.ca](mailto:Chris.Parks@gov.bc.ca)>  
**Sent:** Thursday, May 27, 2021 10:04 AM  
**To:** Tracy Young <[tracy\\_young@tcenergy.com](mailto:tracy_young@tcenergy.com)>; Dan Wyman <[dan\\_wyman@tcenergy.com](mailto:dan_wyman@tcenergy.com)>  
**Cc:** Patrick Smook <[Patrick.smook@bcogc.ca](mailto:Patrick.smook@bcogc.ca)>; Smith, Clayton H EAO:EX <[Clayton.H.Smith@gov.bc.ca](mailto:Clayton.H.Smith@gov.bc.ca)>; EAO Compliance EAO:EX <[eao.compliance@gov.bc.ca](mailto:eao.compliance@gov.bc.ca)>  
**Subject:** [EXTERNAL] section 7 hand falling underway?

**EXTERNAL EMAIL: PROCEED WITH CAUTION.**

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Hi Tracy,

I understand that during todays CGL call you noted that there may be some hand falling planned or proceeding in Section 7 – once you have confirmed if this is the case, could you please let me know? I am also interested in the KP range where this may be occurring,

Thanks very much,

Chris

**Chris Parks** | Director, Compliance and Enforcement |  
BC Environmental Assessment Office | T 250.818-4538 | F 250.387-6448  
PO Box 9426 Stn. Prov. Gov't | Victoria BC, V8W 9V1

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## Keough, Dana

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**From:** Smook, Patrick  
**Sent:** s19  
**To:**  
**Cc:** O'Neill, Sean  
**Subject:** Heads-up CGL

Hi All,

Just heard from CGL that their clearing operations will be approaching the Morice River likely on Monday next week. This could well garner some reaction from the local stakeholders.

s19

Thanks,

Patrick



**Patrick Smook** RPF, MBA  
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## Keough, Dana

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**From:** s19  
**Sent:** Monday, January 11, 2021 4:56 PM  
**To:** O'Neill, Sean  
**Cc:** s19  
**Subject:** Site list

Off the top of my head going from West to East: Very broad overview...

### Section 8 West

- Active pipeline work in the Kitimat area (pine creek), South Hirsch and the crossing of the North Hirsch.
- Ongoing works, clearing, road building at the back end of the North Hirsch.
- Ongoing works, clearing, road building at the back end of the Upper Kitimat. Hunter Creek

### Section 8 East

Clore crossing, P2 camp construction, Camp 9A

### Section 7

- Morice River crossing and associated activities.
- Active clearing on various areas throughout section 7
- Huckleberry camp

### Section 6

- Active pipeline activities and recent installations between KP 442+700 and 439+500, recent incident site at stream 92C1.
- 7 mile camp.
- Ongoing grubbing/grading activities.
- Road construction, reactivation.

### Section 5

- Ongoing grubbing/grading activity
- Road construction, reactivation.

Let me know if further detail is required,



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s19



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---

**From:** O'Neill, Sean <[Sean.ONeill@bcogc.ca](mailto:Sean.ONeill@bcogc.ca)>

**Sent:** Monday, January 11, 2021 6:50 AM

**To:** s19

Lang, Randy

<[Randy.Lang@bcogc.ca](mailto:Randy.Lang@bcogc.ca)>

**Subject:** Site list

Hello,

Please start working on a list that will be forward to Patrick who will likely share with other agency's that lists sites you think will need to be monitored for issues while CGL/Trans mountain are on restricted workforce orders. Call me if you need clarification.



---

**Sean O'Neill**

Supervisor, Compliance & Enforcement

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