



**VILLAGE OF BELCARRA
REGULAR COUNCIL AGENDA
Village Hall
July 10, 2023
7:00 PM**



*This meeting is live streamed and recorded by the Village of Belcarra
To view the meeting click: [Village of Belcarra - YouTube](#)*

We wish to acknowledge that this meeting is taking place on the unceded territory of the Coast Salish Peoples. Tum-Tumay-Whueton, or Belcarra, is home to an ancestral village of the Tsleil-Waututh Nation. We are thankful to conduct our work within their territory.

COUNCIL

Mayor Jamie Ross
Councillor Carolina Clark
Councillor Joe Elworthy
Councillor Janet Ruzycki
Councillor Liisa Wilder

1. CALL TO ORDER

Mayor Ross will call the meeting to order.

2. APPROVAL OF THE AGENDA

2.1 Regular Council Meeting, July 10, 2023

Recommendation:

That the agenda for the Regular Council Meeting, July 10, 2023 be approved as circulated.

3. ADOPTION OF MINUTES

3.1 Special Council Meeting, June 19, 2023

Recommendation:

That the minutes from the Special Council Meeting held June 19, 2023 be adopted.

3.2 Regular Council Meeting, June 19, 2023

Recommendation:

That the minutes from the Regular Council Meeting held June 19, 2023 be adopted.

4. DELEGATIONS AND PRESENTATIONS

4.1 Urban Systems – Barry Fan, P. Eng

- Report and presentation on the Watson Trail Barrier Application Review

4.2 Ian Devlin, Belcarra Resident

- Presentation on the Tatlow Reservoir Water System

5. REPORTS**5.1 Paula Richardson, Chief Administrative Officer, report dated July 10, 2023 regarding an update on parking in the Village of Belcarra.****Recommendation:**

That the report dated July 10, 2023 regarding Parking Update be received into the record for information.

6. REPORTS FROM MAYOR AND PROJECT LEADS**6.1 Mayor's Report**

Mayor Ross attended the following:

- Joined Metro Vancouver Chair George Harvie and Vice Chair John McEwen at the Renaming of Colony Farm Regional Park – July 1, 2023
 - kwikwəłəm (Kwikwetlem) First Nation and Metro Vancouver announced that Colony Farm Regional Park has been renamed as ʔéxətəm Regional Park and Colony Farm Road has been renamed as ʔéxətəm Road. kwikwəłəm First Nation and their members selected the name ʔéxətəm (pronounced tla-hut-um) which means "to be invited" in hə́ŋqəmiŋə́m. The renaming is a positive step forward in a new relationship for kwikwəłəm First Nation and Metro Vancouver.
- Port Moody Canada Day Celebration – July 1, 2023
- Chaired the meeting of the TransLink Mayors' Council Small Communities Caucus: Anmore, Belcarra, Bowen Lions Bay, and Tsawwassen First Nation – June 29, 2023
- Interface Wildfire DPA Policy – B.A. Blackwell Open House – July 5, 2023
 - Bruce Blackwell of B.A. Blackwell & Associates provided a presentation on an Interface Wildfire DPA Policy for public consultation
- Port Coquitlam Community Foundation – Croquet for Community – July 6, 2023

7. REPORT FROM CHIEF ADMINISTRATIVE OFFICER

8. BYLAWS**8.1 Village of Belcarra Financial Plan Bylaw No. 606, 2023**

To amend the 5-Year Financial Plan for the years 2023 – 2027 in order to provide funding necessary to achieve Council's Strategic Plan and related Work Plan

Recommendation:

That the Village of Belcarra 5-Year (2023 – 2027) Financial Plan Bylaw No. 606, 2023, Amendment Bylaw No. 613, 2023 be adopted.

9. CORRESPONDENCE/PROCLAMATIONS**ACTION ITEMS**

- 9.1** Mayor D. Brodie, City of Richmond, letter dated May 25, 2023, regarding changes in provincial legislation need to address gas utilities in British Columbia and requesting that a letter be sent to the Province asking the government to reform the BC Utilities Commission (BCUC) and enact legislation to regulate greenhouse gas emissions from gas utilities in BC.

Recommendation:

That a letter in support of the City of Richmond's request regarding changes in Provincial legislation needed to address gas utilities in British Columbia be sent to the Province.

- 9.2** Randy Manhas, Secretary-Treasurer/CFO, School District No. 43 – Coquitlam, letter dated June 22, 2023 regarding the resolution passed by the Board of Education pertaining to the District's 2023 Eligible Schools Sites Proposal.

Recommendation:

That the School District No. 43 (Coquitlam) Board resolution for proposed eligible school site requirements be accepted.

INFORMATION ITEMS**Recommendation:**

That correspondence items 9.3 to 9.13 be received into the record for information.

- 9.3** Ingrid Taylor, Executive Medical Director, Population and Public Health, Fraser Health, letter dated June 8, 2023 regarding community preparedness for hot and smoky periods during summer 2023.
- 9.4** Klaus Bever, Belcarra resident, email dated June 8, 2023 regarding a follow up to a Council motion made in 2022 on a response to a ICBC Safety Review presentation.
- 9.5** Christine Trefanenko, Manager, Project Emergency Management, email dated June 14, 2023 regarding the Trans Mountain Expansion Project Report titled "Fate & Behaviour Bitumen Research (BC EAO Condition 35) – Local Coastal Governments."
- 9.6** Trans Mountain Construction Notice, notice for the month of June 2023, regarding an update on the Westridge Marine Terminal Construction as part of the Trans Mountain Expansion Project.

- 9.7** Paul Horn, Mayor, City of Mission, letter dated June 16, 2023, regarding a recent decision made by the RCMP to reduce the role of Highway Patrol in responding to traffic collisions on numbered Provincial highways.
- 9.8** Joel Johnston, Belcarra resident, email dated June 19, 2023, regarding requests to trim and potentially remove tress along the waterfront on Marine Avenue directly.
- 9.9** Ian Devlin, Belcarra resident, email dated June 20, 2023, regarding a Council discussion on a financial plan amendment relating to the Village of Belcarra water system.
- 9.10** Ralph Drew, Belcarra resident, email dated June 23, 2023 regarding statements made on the Village of Belcarra's water main flushing program.
- 9.11** Gwen Chute, Belcarra resident, letter dated June 26, 2023, expressing support for a neighbouring property owner's concern with the impact of water run-off on their property as well as adjacent properties.
- 9.12** George V. Harvie, Chair, Metro Vancouver Board, letter dated June 27, 2023 regarding a proposed land use designation amendment to *Metro 2050* for the Township of Langley for property at 23699 and 23737 Fraser Highway. *(The full report is available for viewing at the Village office).*
- 9.13** Leslie Kellett, Deputy Corporate Officer, City of Prince George, email dated June 28, 2023 regarding a resolution to be submitted to the 2023 UBCM Convention and shared with UBCM member municipalities titled "Reimbursing Local Governments for Medical Services Provided by Local Government Fire and Rescue Services".

10. NEW BUSINESS

11. PUBLIC QUESTION PERIOD

12. ADJOURNMENT

Recommendation:

That the July 10, 2023 Regular Meeting be adjourned.



**VILLAGE OF BELCARRA
SPECIAL COUNCIL MEETING MINUTES
June 19, 2023**



This meeting was held in Council Chambers

Council in Attendance

Mayor Jamie Ross
Councillor Carolina Clark
Councillor Joe Elworthy
Councillor Janet Ruzyski
Councillor Liisa Wilder

Staff in Attendance

Paula Richardson, Chief Administrative Officer
Amanda Seibert, Corporate Officer/Recording Secretary

We wish to acknowledge that this meeting took place on the unceded territory of the Coast Salish peoples. Tum-Tumay-Whueton, or Belcarra, is home to an ancestral village of the Tsleil-Waututh Nation. We are thankful to conduct our work within their territory.

1. CALL TO ORDER

Mayor Ross called the meeting to order at 5:01 pm

2. APPROVAL OF THE AGENDA

2.1 Special Council Meeting, June 19, 2023

Moved by: Councillor Wilder
Seconded by: Councillor Elworthy

That the agenda for the Special Council Meeting of June 19, 2023 be approved.

CARRIED

3. RESOLUTION TO MOVE INTO CLOSED COUNCIL MEETING

Moved by: Councillor Clark
Seconded by: Councillor Wilder

That the June 19, 2023 special meeting of Council be closed pursuant to:
***Community Charter* Section 90 (1) "A part of a Council meeting may be closed to the public if the subject matter being considered relates to or is one or more of the following:**

90 (1) "A part of a Council meeting may be closed to the public if the subject matter being considered relates to or is one or more of the following:

- (e) **The acquisition, disposition or expropriation of land or improvements, if the council considers that disclosure could reasonably be expected to harm the interests of the municipality.**

- (i) **The receipt of advice that is subject to solicitor-client privilege, including communications necessary for that purpose.”**

And

Chapter 90(2) “A part of a Council meeting must be closed to the public if the subject matter being considered relates to or is one or more of the following:

- (b) **The consideration of information received and held in confidence relating to negotiations between the municipality and a provincial government.”**

CARRIED

4. ADJOURNMENT

Moved by: Councillor Ruzycki

Seconded by: Councillor Clark

That the June 19, 2023 Special Council Meeting be adjourned at 5:02 pm

CARRIED

Certified Correct:

Jamie Ross
Mayor

Paula Richardson
Chief Administrative Officer



**VILLAGE OF BELCARRA
REGULAR COUNCIL MEETING MINUTES
June 19, 2023**



This meeting was held in Council Chambers and live streamed at
[Village of Belcarra - YouTube](https://www.youtube.com/watch?v=...)

Council in Attendance

Mayor Jamie Ross
Councillor Carolina Clark
Councillor Joe Elworthy
Councillor Janet Ruzycki
Councillor Liisa Wilder

Staff in Attendance

Paula Richardson, Chief Administrative Officer
Stewart Novak, Public Works & Emergency Preparedness Coordinator
Connie Esposito, Accounting Clerk
Amanda Seibert, Corporate Officer/Recording Secretary

Others in Attendance

Ken Bjorgaard, Financial Consultant

We wish to acknowledge that this meeting took place on the unceded territory of the Coast Salish peoples. Tum-Tumay-Whueton, or Belcarra, is home to an ancestral village of the Tsleil-Waututh Nation. We are thankful to conduct our work within their territory.

Note: Councillor Wilder was not in attendance at the start of the meeting.

1. CALL TO ORDER

Mayor Ross called the meeting to order at 7:00 pm

2. APPROVAL OF THE AGENDA

2.1 Regular Council Meeting, June 19, 2023

Moved by: Councillor Clark
Seconded by: Councillor Ruzycki

That the agenda for the Regular Council Meeting of June 19, 2023 be approved as circulated.

CARRIED

3. ADOPTION OF MINUTES

3.1 Regular Council Meeting, June 5, 2023

Moved by: Councillor Ruzycki

Seconded by: Councillor Clark

That Section 5.3 in the minutes from the Regular Council Meeting be amended to include a question from Jim Chisholm, Belcarra resident, asking how much water the Village was dumping; and

That the minutes from the Regular Council Meeting held on June 5, 2023 be adopted as amended.

CARRIED

4. DELEGATIONS AND PRESENTATIONS

Mayor Ross introduced and congratulated Capriella Pelliccia, a young Belcarra resident whose lacrosse team won a gold medal. Capriella's team will also be competing in the Provincials.

5. REPORTS

5.1 Ken Bjorgaard, Financial Consultant, report dated June 19, 2023 regarding amendments to Financial Plan Bylaw No. 606, 2023 to provide funding necessary to achieve Council's Strategic Plan and related Work Plan.

The Financial Consultant reviewed the report. He explained that the bylaw will provide additional funding to allow for the completion of items on the strategic plan and the related work plan.

Note: Councillor Wilder joined the meeting at 7:11 pm during the review of the report.

The Financial Consultant highlighted projects which require funding to allow staff to begin work in 2023.

Moved by: Councillor Elworthy

Seconded by: Councillor Clark

That the Village of Belcarra 5-Year (2023 – 2027) Financial Plan Bylaw No. 606, 2023, Amendment Bylaw No. 613, 2023 be read a first, second and third time.

Don Babineau, Belcarra resident, queried what the \$30,000 for the water system pertained to.

Staff clarified that the funding is meant to fund a study for design options based on deficiencies cited in the 2020 model study.

The Mayor called the question on the motion.

CARRIED

- 5.2** Paula Richardson, Chief Administrative Officer, report dated June 19, 2023 regarding the Village of Belcarra 2022 Annual Report.

The Chief Administrative Officer reviewed the report. She advised that no public input was received resulting from the required public postings.

Moved by: Councillor Wilder
Seconded by: Councillor Ruzycki

That the Village of Belcarra 2022 Annual Report be received as required by the Community Charter.

CARRIED

- 5.3** Paula Richardson, Chief Administrative Officer, report dated June 19, 2023 regarding a proposed new Noise Control Bylaw for the Village of Belcarra and an accompanying amendment to the Bylaw Notice Enforcement Bylaw.

The Chief Administrative Officer reviewed the report. She advised that the draft bylaw included feedback from Council and was reviewed by legal counsel.

Moved by: Councillor Clark
Seconded by: Councillor Ruzycki

That Village of Belcarra Noise Control Bylaw No. 605, 2023 be read a first and second time; and

That Village of Belcarra Bylaw Notice Enforcement Bylaw No. 520, 2018, Amendment Bylaw No. 614, 2023 (Bylaw Notice Dispute Adjudication Registry) be read a first and second time.

Council discussion ensued on the draft bylaw. Councillors spoke on amendments they would like to see made to the bylaw as presented.

The Mayor called for comments from the public.

Penny Moen, Belcarra resident, observed that in the draft bylaw only commercial work was limited on the weekends and that residents can continue to do private work. She suggested a change in hours to construction work being done by residents as an option.

Martin Greig, Belcarra resident, queried if the bylaw deals with noise emanating from the water. He stated that in discussions with RCMP, Rural Division, he was advised that having noise from the water addressed by a Village bylaw would be helpful.

The Chief Administrative Officer advised that noise from the water is dealt with by the Port of Vancouver. She will have a discussion with the RCMP and legal counsel pertaining to dealing with noise on the water through a Village bylaw.

Jim Chisholm, Belcarra resident, stated that the proposed noise control bylaw is too complicated and suggested it be shelved for two years. He was not in agreement with the use of decibels to measure sound levels.

Don Babineau, Belcarra resident, suggested that the bylaw should focus on construction as he could not recall any residential issues pertaining to noise. He also suggested that blasting be addressed through bylaw.

Martin Grieg, Belcarra resident, advised on a West Vancouver bylaw dealing with blasting.

Penny Moen, Belcarra resident, commented on the section related to time limits on alarms and dogs barking in that this section seemed to be meant for repeat offenders. She felt that the allotted time limit should be raised to half an hour.

The Chief Administrative Officer advised that this type of bylaw will be complaint driven and that sections can be rephrased to provide clarification.

Due to the number of proposed amendments and feedback, staff requested that the motion to give the proposed Noise Control Bylaw and the Bylaw Notice Enforcement Bylaw first and second readings be withdrawn, that further amendments to the Noise Control Bylaw be made, and that the bylaws be brought back to a future Council meeting.

The motion was withdrawn through unanimous consent.

6. REPORTS FROM MAYOR AND PROJECT LEADS

6.1 Mayor's Report

- Metro Vancouver Meetings:
 - Regional Parks Committee – June 7, 2023
 - Metro Vancouver Mayors' Committee – June 7, 2023
 - Metro Vancouver Climate Action Committee Meeting – June 8, 2023
- Council of Councils Meeting – June 10, 2023
- Meeting with Mayor Nathan Pachal, City of Langley – Mayor Pachal is a full time transit user who visited Belcarra via the Skytrain and bus – June 12, 2023
- TransLink Mayors' Council Public Affairs and Governance Committee Meeting - June 14, 2023
- 2023 Regional Gathering: Metro Vancouver Regional District and 10 Local First Nations – June 16, 2023
 - This event is taking place in a traditional longhouse, where disagreements and disputes are left outside, this informal and interactive event will enable mutual learning and reflection for First Nations and Metro Vancouver. It will also include cultural activities and opportunities to strengthen First Nation-local government connections. Through conversation and cultural experience, we seek to build relationships and commitments to a collaborative future.
- National Indigenous Peoples Day – June 21, 2023
- Belcarra Day Event – June 11, 2023
 - Mayor Ross reported that he totally enjoyed Belcarra Day and that the community had responded very positively
- Mayor Ross acknowledged all Belcarra grads

6.2 Councillors' Reports

Councillor Clark thanked all volunteers and staff for helping to make Belcarra Day a success.

7. REPORT FROM CHIEF ADMINISTRATIVE OFFICER

The Chief Administrative Officer reported on the events held during Belcarra Day and thanked participants, volunteers and guests.

8. BYLAWS

No items.

9. CORRESPONDENCE/PROCLAMATIONS

9.1 June is Pride Month and across the world there are celebrations and commemorations to recognize all who identify as LGBTQ and their community.

Moved by: Councillor Elworthy

Seconded by: Councillor Ruzycki

That June 2023 be declared as Pride Month in the Village of Belcarra.

CARRIED

9.2 Sharon Gregson, Coalition of Child Care Advocates of BC, email dated June 3, 2023 requesting that Council adopt a resolution urging the Ministry of Education and Child Care to provide multi-year funding to local and Indigenous governments and non-profit organizations to enhance their organizational capacity to coordinate the current grant applications process.

The Chief Administrative Officer outlined the request by the Coalition of Child Care Advocates of BC. She advised on the recommended options put forward by staff.

Moved by: Councillor Clark

Seconded by: Councillor Ruzycki

That the email dated June 3, 2023 from Sharon Gregson, Coalition of Child Care Advocates of BC be received into the record for information.

CARRIED

INFORMATION ITEMS

No items.

10. NEW BUSINESS

11. PUBLIC QUESTION PERIOD

Dave Lee, former Belcarra resident, residing in Port Moody, introduced himself and outlined his history with the Village of Belcarra. He advised that he wished to speak on licencing for wharfs on waterfront property.

Mayor Ross declared a Conflict of Interest as follows:

"I am declaring a Conflict of Interest and am recusing myself from this Council meeting noting that I am not entitled to participate in the discussion of the matter, or to vote on the matter, because of a direct pecuniary interest in the matter. I am a director and a member of a Group Wharf Association and one that is the subject of legal action.

I am now recusing myself."

Mayor Ross left the meeting at 8:26 pm

Deputy Mayor Ruzycki assumed the Chair.

Mr. Reed read a statement on the Port's proposed license changes and expressed his concerns with the impacts of the changes on property owners with waterfront properties and wharfs. A copy of the statement was provided to Council.

Mayor Ross returned to the meeting at 8:34 pm and assumed the Chair.

Don Babineau, Belcarra resident, referred to an email sent to Council pertaining to the water supply required for firefighting in the Village. He suggested that a decision was needed from Council as to how much water is required to fight a fire in the Village and for how long. He expressed that when this decision is made, the community can move forward with a solution.

Jim Chisholm, Belcarra resident, suggested that the Fire Underwriters Report be reviewed to ascertain past and future water needs and that the Underwriters be consulted due to changing times.

Don Babineau, Belcarra resident, referred to the Provincial Government's 'naughty list' and put forward that the following could help remove Belcarra from that list: 1) a road to Farrer Cove; 2) an aging-in-place facility on the municipal hall site; and 3) use of road ends. He queried whether any of the items were part of the strategic plan.

Mayor Ross provided clarification on the term 'naughty list' and advised that Council was working on items to bring forward to the Provincial Government and will provide a report in the future.

The Chief Administrative Officer advised that the items suggested by Mr. Babineau are not currently on the Strategic Plan.

Martin Grieg, Belcarra resident, provided information on an approved subdivision proposal for homes on IOCO lands and on water being supplied to that property that would come from Metro Vancouver rather than the District of North Vancouver.

Jim Chisholm, Belcarra resident, asked Mr. Grieg whether he had a timeline on the schedule of water coming to Crystal Creek. Mr. Grieg responded to Mr. Chisholm's question.

Don Babineau, Belcarra resident, queried whether Council will have a discussion on the question of how much water for how long. He requested more reporting and clarification on what the Village was intending to do.

12. ADJOURNMENT

Moved by: Councillor Wilder

Seconded by: Councillor Clark

That the June 19, 2023 Regular Council Meeting be adjourned at 8:46 pm

CARRIED

Certified Correct:

Jamie Ross
Mayor

Paula Richardson
Chief Administrative Officer

MEMORANDUM



DATE	July 5, 2023	FROM	Barry Fan, P.Eng.
TO	Paula Richardson Steward Novak	FILE	4204.0006.01
CC	Sarah Freigang	SUBJECT	Watson Trail Barrier Application Review

1.0 INTRODUCTION

The Village of Belcarra has retained Urban Systems to conduct a review of the Watson Trail and determine the appropriateness of widening the opening or removing the existing trail baffle at Watson Road. The Village has received a request to widen the opening of the existing wooden baffle to ensure that a variety of bicycles and users can access the trail. The concern, identified by staff, is that the trail may not be appropriate and safe for all types of bicycles and users. By opening the trail for these users, the Village is concerned they may be encouraging the use of a trail that is not designed for people of all ages and abilities (AAA) and create increased safety concerns.

The review process included the following key tasks:

- Project kick-off meeting with the Village to discuss project understanding, key outcomes, and review process;
- Site visit with Village staff to review the site conditions;
- Internal review of the design guidance and best practices, including the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads 2017 (TAC Geometric Design Guide) and the Ministry of Transportation & Infrastructure (MOTI) British Columbia Active Transportation Design Guide 2019 (BCAT Design Guide)

This memo provides a summary of the existing conditions, a comparison to best practice design guidance, and potential upgrade options for the Watson Trail.

The safety improvement opportunities identified in this memo are based on limited information and data that was available to the project team at the time of the study and is based on the project team's observations during the site visit on June 5th 2023.

In addition, the suggested mitigation measures in this memo reflect the general nature of a solution which may or may not be adopted by the Village of Belcarra. It should be the responsibility of the Village of Belcarra to respond to the review findings in a way that the Village deems appropriate.

Finally, the suggested mitigation measures in this memo do not include any design effort and are conceptual in nature. Further work would be required in the future to develop conceptual and detailed designs to any mitigation measures that the Village choose to advance in the future.

2.0 EXISTING CONDITIONS AND DESIGN CRITERIA

The Watson Trail is a trail connection between Watson Road and Marine Avenue that is built on existing Village of Belcarra right-of-way. The trail is intended to provide a connection for residents walking and cycling within the Village. The existing facility includes a set of wooden baffles to slow down people cycling as they enter and exit the trail, indicating that the trail is designed for slower speeds.

The following section discusses the existing conditions and issues identified for the study area as they relate to best practices and recommended design criteria for a multi-use pathway. The issues presented are based on on-site observations and discussions with Village staff on June 5th 2023. The team conducted the site review alongside Village staff and also independently.

WIDTH OF FACILITY

The existing trail is approximately 1.5 metre wide, including approximately 0.5 to 0.8 metre wide gravel surface at the centreline of the trail. Although the existing right-of-way is about 20 metres wide, the available space between the existing residential property and ravine is approximately 4 to 5 metres wide. At the bottom of the trail, the width is constrained as a culvert crossing, restricted by a wooden panel fence and wooden post fence on either side (Figure 1).

Recommended Design Criteria: The general desirable width of a multi-use pathway is between 3.0 to 4.0 metres, with an additional 0.6 metres provided on both sides for clear width. When steep side slopes or large drops are present, the shoulder width should be increased to 1.5 metres. The minimum width of a multi-use pathway is 2.7 metres, based on the operating envelope of a single bicycle user (1.2 metres) and the operating envelope of two people walking abreast (1.5 metres).



Figure 1: Watson Trail lower section – culvert crossing

STEEP SLOPE

The existing trail has an approximate average slope of 11% between the entry point at Watson Road and the bottom of the hill at Tatlow Trail. Figure 2 shows a perspective of the steepness of the trail looking uphill.

Recommended Design Criteria: In the context of cycling, steep grades will reduce uphill velocities to a minimum, while downhill coasting speeds can reach 50 km/h. The practical maximum slope for a paved bike path is 1:12 or 8.3%. Beyond this grade, many people cycling will have to dismount and walk.¹ Facilities on slopes greater than 8.3% are not considered AAA. To be universally accessible, grades as steep as 8.3% are acceptable if intermittent landings are provided at intervals of no more than 9.0 metres.

Where a pathway has grades steeper than 8.3%, alternative treatments should be explored, such as switchbacks or locating the AAA route to an alternate route with more favourable grades even if more circuitous. Despite the strategies listed above, not all connections will be accessible for people of all ages and abilities. Wherever feasible, design professionals should ensure that where an inaccessible route exists, alternative routes or transportation modes are provided and made apparent through signage and wayfinding.

When compared to standards from trail guidelines, such as the [Trail Development Guidelines and Standards \(City of Coquitlam\)](#), Watson Trail currently can be considered a “trail connector”, which has a preferred maximum of 8% or 10% slope for short distances.



Figure 2: Watson Trail upper section - looking uphill

¹ Transportation Association of Canada (TAC), 'Geometric Design Guide for Canadian Roads' (2017)

PROXIMITY TO RAVINE

The existing trail runs adjacent to and between a residential property and a ravine with a steep slope, as illustrated in Figure 3. Low-height wooden fencing has been installed adjacent to the path where the slope is steepest near the top of the trail and along the curve at the bottom.

Recommended Design Criteria: The side slope that is located alongside a pathway can present a hazard to pathway users if a user were to veer off the pathway into the ravine. At side slopes steeper than 1:1 or with drops greater than or equal to 0.3 metres, the clear space to the path to the top of slope should be at least 1.5 metres. If 1.5 metres cannot be provided, a railing or barrier should be installed to help mitigate potential hazards, at a minimum of 0.6 metres from the edge of pathway.

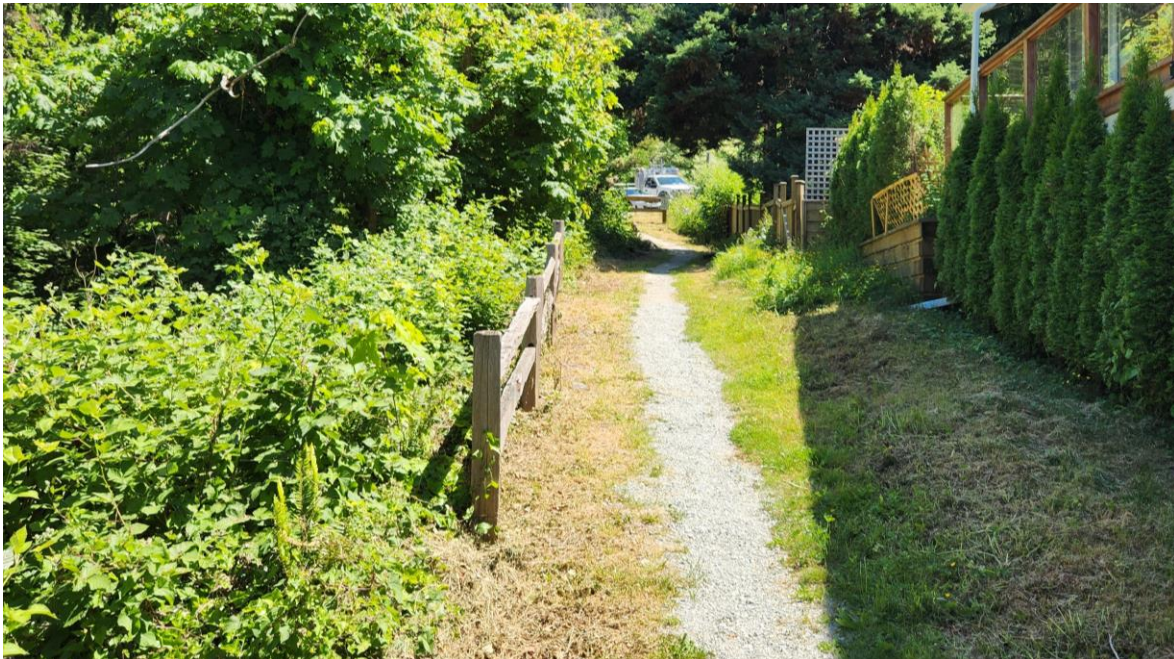


Figure 3: Existing wooden fence and condition adjacent to ravine

SURFACE MATERIAL

The existing trail surface is approximately 1.5 metre wide, with a strip ranging between 0.5 to 0.8 metre wide of gravel surface at the centreline of the trail. Village staff also noted that during the rainy season, surface runoff along the trail would lead to erosion of the ground and maintenance challenges to maintain an even surface.

Recommended Design Criteria: As multi-use pathways are intended to be accessible and accommodate a wide range of users and trip purposes, asphalt is the preferred surface type. This would mitigate erosion issues, and overland flow should be reviewed to determine appropriate treatment for conveying drainage through a swale or alternative drainage feature to a suitable outlet.

TIGHT HORIZONTAL CURVE AT BOTTOM OF TRAIL

At the bottom of the trail is a horizontal curve connecting the trail alignment towards the Tatlow Trail street, with an approximate radius of 9.5 metres. The steep downhill grades on the approach combined with this tight horizontal curve pose potential risks to bicycle users. Given the minimal turning radius and obstructed sightlines with the existing vegetation on either side, minimum stopping sight distance for bicycle users are not met to provide sufficient sight distance to people cycling who notice an obstacle on their intended path of travel and need to stop.

Recommended Design Criteria: Based on typical downhill design speeds of 30 to 50 km/h, the minimal radius recommended should be 24 to 73 metres. Where space is restricted, a lower turning radius may be used. A reduction to a design speed of 20 km/h, assuming downhill users are braking to slow down to negotiate the turn, a minimum radius of 9 metres can be used. In these situations, warning signage and trail widening is required. Vegetation can also be removed or trimmed back to provide sufficient line of sight for pathway users approaching Tatlow Trail.



Figure 4: Horizontal curve at bottom of trail - looking downhill

WOODEN BAFFLES

The existing wooden baffle at the top of the trail (Figure 5) serves as an access restriction feature to provide indication to users that this connection is a natural trail and would require bicycle users to dismount to navigate the connection safely. The baffle gates are staggered with an opening width of approximately 780mm.

Recommended Design Criteria: Best practice guidance for AAA facilities generally notes the recommendation to avoid the use of rigid bollards, maze gates, or other solid impediments in the point of entry unless there is a demonstrated history of motor vehicle encroachment, and/or a collision history.²

However, given the context of the Watson Trail facility and as summarized above, the existing conditions do not satisfy AAA design standards, and it may be appropriate to retain the wooden baffles to indicate to users that people cycling would need to dismount to navigate the trail connection safely. Use of baffles on nature trails where bicycle use is not permitted or at locations where cyclists are encouraged to dismount is suitable at trailheads for trail type facilities.³

Removal of the wooden baffles can be considered if additional improvements can be made to the trail to provide a AAA connection. Alternatively, if such upgrades are not practical or is cost prohibitive, providing an alternate route, even if more circuitous would be appropriate.



Figure 5: Wooden baffle gates at the top of trail

² BC MOTI, 'BC Active Transportation Design Guide' (2019)

³ City of Coquitlam, Trail Development Guidelines and Standards (2013)

3.0 POTENTIAL OPTIONS

Based on the assessment of existing conditions and review of best practice guidelines, the following key takeaways are noted:

- Given the slope of Watson Trail being greater than 8.3%, this connection is not considered all ages and abilities or universally accessible, and an alternate route with more favourable grades should be considered to provide universal access, even if more circuitous.
- Use of baffle gates where cyclists are encouraged to dismount is an appropriate trailhead entry feature.
- As the current conditions stand, Watson Trail can be considered a “trail connector”, which may not be universally accessible, but can be suitable for types of use including walking, jogging, stroller use, and mountain biking.

Several potential treatment options for improving the trail are outlined below.

- **Option 1: Minimal Changes:** This option consists of increasing the opening width of wooden baffles to physically accommodate access for larger types of bicycles. The existing trail conditions would largely remain as is and this connection would not be considered AAA. The types of users accommodated would generally be for people walking or mountain biking. Those who are cycling are encouraged to dismount and walk. While this option does not improve the comfort and safety of the trail, the widening of the baffle entry point allows access for larger bicycle types.
- **Option 2: Moderate Changes:** This option consists of increasing the opening width of wooden baffles to physically accommodate access for larger types of bicycles, widening the existing trail where feasible, regrading to provide meandering curves as feasible, and paving with an asphalt surface with drainage improvements. While the grade of the connection would still limit the trail from being considered AAA, these upgrades can provide a more comfortable and safe connection than what is existing today.
- **Option 3: Significant Changes:** To meet AAA design standards, the connection would have to be increased to provide a minimum 4.0 metre wide paved pathway and introduce the use of switchbacks to reduce the grades to 8.3% or less. Given that the existing available space is constrained and a switchback configuration being space intensive, this option would be considerably higher in cost and could also have further environmental and geotechnical requirements to accommodate the space requirements into the ravine. If this configuration is implemented to create a safe and comfortable connections for AAA, then the removal of the baffle gates may be appropriate. Two examples of a switchback configuration can be found here for reference: [Spirit Trail, City of North Vancouver](#) and [Cochrane, Alberta](#).

Based on discussions with Village staff, considerations for Option 2 with moderate changes appears to be the appropriate option to be explored further. Additional considerations are summarized below.

Key Changes:

1. **Widening Baffle Gates** – By widening the baffle gate opening to a width of 1.5 to 2.0 metres, the entry can accommodate larger bicycle types such as standard cargo bikes (up to 0.9 metres wide) and bicycles with child trailers (up to 0.75 metre wide).
2. **Widen and Pave Pathway** – To provide improved comfort and accessibility to a wider range of users, asphalt is the preferred surface type to provide a smooth continuous rolling surface. A path surface width of 3.0 to 4.0 metre at a maximum cross slope of 2% should be provided by regrading the available area. At the bottom of the trail, widening would also require lengthening the existing culvert next to Tatlow Trail and some replacement of existing fences. If feasible, introducing a meandering alignment to the pathway can be considered to reduce grades in steeper sections.

A drainage swale or ditch on the uphill side of the pathway running parallel to the path is recommended to convey drainage, along with drainage culvert underneath the path as required to direct the runoff into an appropriate inlet. Figure 6 below illustrates an example section of an upgraded urban trail configuration.

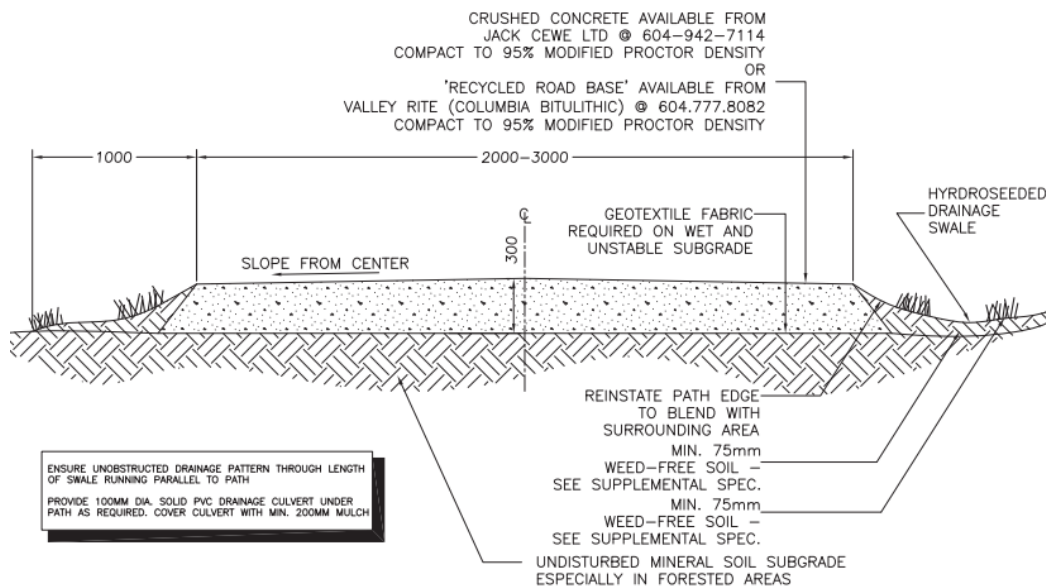


Figure 6: Urban Nature Trail example section - Trail Development Guidelines and Standards 2013 (City of Coquitlam)

3. **Upgraded Railing** – Adjacent to the ravine, if a 1.5 metre offset from the top of bank to the edge of trail cannot be provided, an upgrade of the existing railing to a preferred height of 1.2m high is recommended to prevent people cycling from falling over the railing.
4. **Signage** – Signage to clarify that the connection is not universally accessible and wayfinding to direct users to an alternate route can be considered at the entry points to Watson Trail. As the existing grade of the slope exceeds 8.3%, the connection is not considered AAA. Retaining the existing 'Dismount and Walk' signage is recommended to indicate to people cycling that they are encouraged to dismount and walk their bicycle on this connection. Additional warning signage can be considered to indicate in advance conditions on the pathway, such as the Hill Sign for Bicycles (WA-41), which is used for downgrades of 8% or more where the length of the downgrade is 50 m or more, and where the facility is located on a horizontal curve that makes higher speeds dangerous.



Figure 7: Example of WA-41 sign on a multi-use pathway

Depending on the facility type and types of users desired for this connection, and funding available, the Village may consider implementing variations of the recommended upgrades described above. If an alternate route can be provided, and the focus of the Watson Trail connection is desired to remain a natural trail connection, improvements such as paving and railing upgrades may not be as applicable.

DATE July 5, 2023
FILE 4204.0006.01
SUBJECT Watson Trail Barrier Application Review
PAGE 10 of 10



Sincerely,

URBAN SYSTEMS LTD.

A blue ink handwritten signature, appearing to be "Barry Fan", written over a light blue circular scribble.

Barry Fan, P.Eng.
Transportation Engineer

cc: Sarah Freigang

/bf
Enclosure

\\usl.urban-systems.com\projects\Projects_VAN\4204\0006\01\R-Reports-Studies-Documents\R1-Reports\2023-06-12 Watson Trail Review Memo.docx

Class D Cost Estimate**Project** Watson Trail Review**Project Number** 4204.0006.01**Client** Village of Belcarra**Date** 6/30/2023**Completed By** C.WAN**Reviewed By** B.FAN**Summary**

Description	Subtotal	Contingency (30%)	Engineering	Total Corridor Cost
Watson Trail Improvements - Paved Pathway	\$ 83,900	25,170	20,000	\$ 130,000
Watson Trail Improvements - Unpaved Pathway	\$ 57,500	17,250	20,000	\$ 95,000

ESTIMATE NOTES, ASSUMPTIONS AND LIMITATIONS**Estimate Description**

The following estimate is for the Watson Trail Review Project. This preliminary estimate is a 'Class D' type estimate (order of magnitude) which uses simplified methods of estimate preparation based on a number of assumptions and limitations provided below.

Geotechnical, environmental and other investigations and analysis were not completed nor available as part of this study. Detailed project investigations and studies are required for the project to complete detailed design and implementation. The following cost estimate should not be used for budgeting or for the design and construction of any works.

Cost items, quantities and unit prices in the estimates are based on historical cost data from recent tenders for similar projects and general assumptions. This preliminary estimate uses 2023 unit rates in CDN dollars. Construction traffic control, mobilization/demobilization costs are assumed to be incidental to the rates used. A 30% contingency and allowance for engineering fees has been included.

Pathway and Site Preparation

Site Preparation is assumed to include Stripping (200mm), Clearing and Grubbing. A geotechnical investigation is required to confirm these general assumptions.

Pathway Structure is assumed to include base gravels (100mm), surface asphalt (50mm). A geotechnical assessment is recommended to confirm an appropriate pathway structure based on project requirements and site conditions. We have assumed the pathway will be constructed at or near the existing surface grades.

Drainage and Utilities

We have assumed that limited runoff near the path will typically be conveyed through an uphill swale with a culvert crossing to facilitate the crossing of the path. A drainage analysis is required to confirm culvert and swale sizing requirements, as well as any erosion and sediment control measures.

Electrical and Lighting

Estimate does not include lighting, electrical connections and/or upgrades to existing utility infrastructure.

Estimate does not include:

Lighting, municipal and utility type charges, legal and topographic surveys, GST/PST, permit charges, sub-consultant design & reporting, inspection and certification fees (electrical, geotechnical, environmental, landscape architect) as well as any legal fees.

Watson Trail Review Project - Cost Estimate Build-up (Option 2)

Location Description Watson Road to Tatlow Trail
Project Length (m) 80
Feature Width (m) 3

PAVED PATHWAY BUILD-UP

Description of Work	Unit	Unit Price	Quantity	Extended Amount
New signage	ea	\$ 500	4	\$ 2,000
Clearing and Grubbing	sq.m	\$ 25	320	\$ 8,000
Preparatory Work (Includes Common Excavation & Subbase Prep)	sq.m	\$ 40	360	\$ 14,400
New Asphalt Pavement	sq.m	\$ 150	240	\$ 36,000
Drainage Allowance	l.m	\$ 200	80	\$ 16,000
Railing Replacement Allowance	LS	\$ 5,000	1	\$ 5,000
Baffle Gates Modification Allowance	LS	\$ 2,500	1	\$ 2,500
SUBTOTAL COST ESTIMATE				\$ 83,900
Contingency	30%			\$ 25,170
Engineering Allowance	LS			\$ 20,000
Total Corridor Estimate				\$ 130,000

UNPAVED PATHWAY BUILD-UP

Description of Work	Unit	Unit Price	Quantity	Extended Amount
New signage	ea	\$ 500	4	\$ 2,000
Clearing and Grubbing	sq.m	\$ 25	320	\$ 8,000
Preparatory Work (Includes Common Excavation & Subbase Prep)	sq.m	\$ 40	360	\$ 14,400
75mm Granular Topping - Compacted	sq.m	\$ 40	240	\$ 9,600
Drainage Allowance	l.m	\$ 200	80	\$ 16,000
Railing Replacement Allowance	LS	\$ 5,000	1	\$ 5,000
Baffle Gates Modification Allowance	LS	\$ 2,500	1	\$ 2,500
SUBTOTAL COST ESTIMATE				\$ 57,500
Contingency	30%			\$ 17,250
Engineering Allowance	LS			\$ 20,000
Total Corridor Estimate				\$ 95,000



COUNCIL REPORT

File: 5460-01

Date: July 10, 2023
From: Paula Richardson, Chief Administrative Officer
Subject: Parking Update

Recommendation

That the report dated July 10, 2023, regarding Parking Update be received into the record for information.

Purpose

The purpose of this report is to provide an update on parking in the Village and to remind residents of the requirement to display permits on their vehicles and vehicles of guests.

Background

In May of 2018, a consultant was hired to introduce various legislative requirements to authorize the introduction of a Bylaw Notice Dispute Adjudication Program for the Village. The consultant worked with staff, outside agencies and providers to develop the program tailored to the specific needs of the community. Village of Belcarra Traffic and Parking Regulation Bylaw No. 518, 2018 was adopted on May 22, 2018. (Appendix A)

Residents were notified when the parking regulations came into effect and were encouraged to apply for resident parking permits as well as guest permits. In 2020, window-cling decals, as opposed to the laminated permits for the dash of the vehicle, were produced and residents were again reminded to apply for permits or trade their old permits for the new decals and to obtain guest permits as required.

The management of parking tickets creates a noteworthy amount of work for staff. The bylaw officer issues a ticket and takes multiple photos of the vehicle in question. The photos are downloaded into a Village computer folder with the license plate referencing each photo.

Many of the ticket holders contact Village staff to inquire about why they received the ticket, to dispute the ticket, or to ask how to pay their ticket even though the information is included on the back of the ticket. When payments are made the Accounting Clerk receives payment into the bank and makes the necessary entries. When tickets are not paid, license plates are run through the ICBC online system, follow up notice letters are mailed and the item is then forwarded on to collections. If a ticket is disputed, an independent adjudicator is arranged to hear the dispute.

Recently, there has been increased ticketing due to the hiring of a new Bylaw Enforcement Officer. Numerous resident complaints have been received in the office daily as a result of residents who have not applied for parking permits and/or have parked in “permit only” parking spaces. Parking anywhere in the Village is restricted to residents or guests with permits. There is signage at the entrance to the Village indicating no public parking, that violators will be ticketed and towed and that resident parking is allowed only with a permit.

Residents are encouraged to visit the Village office to obtain parking permits as the bylaw is being strictly enforced and tickets for parking infractions will be upheld.

Attachment:

- Appendix A – Traffic and Parking Regulation Bylaw No. 518, 2018
- Appendix B - Bylaw Notice Enforcement Bylaw No. 520, 2018 (Bylaw Notice Dispute Adjudication Registry)



VILLAGE OF BELCARRA
Traffic and Parking Regulation
Bylaw No. 518, 2018



A Bylaw to Regulate Traffic and Parking on Highways within the Village of Belcarra.

WHEREAS the Council of the Village of Belcarra deems it expedient to provide for the regulation of traffic and parking on highways within the Village of Belcarra;

NOW THEREFORE, the Council of the Village of Belcarra enacts as follows:

PART 1 - INTRODUCTION

The Council of the Village of Belcarra, in open meeting assembled, enacts as follows:

1. This Bylaw may be cited as "Village of Belcarra Traffic and Parking Regulation Bylaw No.518, 2018".
2. If a portion of this bylaw is held invalid by a Court of competent jurisdiction, then the invalid portion must be severed and the remainder of this bylaw is deemed to have been adopted without the severed section, subsection, paragraph, subparagraph, clause or phrase.
3. Village of Belcarra Parking Regulation and Enforcement Bylaw No. 350, 2003 and all amendments thereto are hereby repealed in their entirety.
4. Words in this Bylaw have the same meaning as words defined in the *Motor Vehicle Act*, R.S.B.C., 1996, or regulations under that *Act*, unless otherwise defined in this Bylaw.
5. Metric units are used for all measurements in this Bylaw.
6. The provisions of this bylaw do not apply except where the provisions are consistent with the applicable Provincial Acts and Regulations.
7. Any Act referred to in this bylaw is a reference to the Province of British Columbia, or an Act of Canada as the case may be, and the applicable regulations, as amended, revised, consolidated or replace from time to time.

PART 2 – DEFINITIONS

In this bylaw, unless the context otherwise requires, the expressions and definitions contained within the *Motor Vehicle Act*, the *Passenger Transportation Act* and the *Commercial Transportation Act*, shall be applicable and these additional interpretations shall prevail throughout:

"ACCESS" means a driveway intended for ingress or egress to abutting property from a highway.

"ACCESS / ROAD USE PERMIT" means a permit which authorizes provision of access to an abutting property from an adjacent highway.

"BOULEVARD" means the area between the curb lines of a highway or the lateral lines of a highway or the shoulder thereof and the adjacent property line.

"BYLAW NOTICE" means a ticket issued in respect of this Bylaw.

"CHIEF FINANCIAL OFFICER" means the person appointed by Council to the position of Chief Financial Officer and includes any person appointed or designated by the Chief Financial Officer to act on their behalf.

"COUNCIL" means the Council of the Village of Belcarra.

"CYCLE" means a device having any number of wheels that is primarily propelled by human power, may be electrically power assisted, does not contain any internal combustion engine and on which a person may ride.

"PERSON WITH DISABILITIES (PWD)" means a person whose mobility is limited as a result of a permanent or temporary disability that makes it impossible or difficult to walk.

"EMERGENCY TURNAROUND" means that portion of any highway, lane, access gate or fire access route that is designated by this bylaw to facilitate turning of emergency or non-emergency vehicles.

"ENFORCEMENT OFFICER" means:

- a) every person designated by Council by name of office or otherwise, as an Enforcement Officer for the purposes of administering and enforcing this Bylaw;
- b) a Peace Officer, including every officer of the Royal Canadian Mounted Police;
- c) every Bylaw Enforcement Officer of the Village appointed under the Police Act;
- d) every officer and employee of the Sasamat Volunteer Fire Department who attends to a fire or emergency while acting in the scope of their authority.

"FEES AND CHARGES BYLAW" means the Village Fees and Charges Bylaw, including all amendments and replacements thereto.

"FIRE CHIEF" means the person appointed as such by Council or contracted through a local service and any person appointed or designated by the Fire Chief to act on their behalf.

"HAZARDOUS MATERIALS" means any explosive, flammable, toxic, noxious or other harmful or hazardous materials, including dynamite, concentrated chemicals in either solid, liquid or gaseous form, pressurized gases, gasoline and diesel fuel.

"HIGHWAY" includes every highway within the meaning of the *Transportation Act* excluding highways classified as arterials pursuant to the *Transportation Act* designed or intended for or used by the general public for the passage of persons and vehicles, and every private place or passageway to which the public, for the purpose of the parking or servicing of vehicles, has access or is invited.

"OPERATOR" means any person who drives, operates, propels, or is in physical control of a vehicle, and shall be deemed to include the person in whose name the vehicle is registered.

"OVERPARKED" means a space where the standing of a vehicle, whether occupied or not, when contrary to any traffic control device.

"OWNER" means a) the person who holds the legal title to the vehicle or b) the person who is entitled to be and is in possession of the vehicle or c) the person in whose name the vehicle is registered.

"PARK" means the stopping or standing of a vehicle, whether occupied or not.

"PARKING SPACE" means a space of a section of a highway marked by painted lines or other device or sign that is intended for the parking of a vehicle.

"PERSONS" means 1) human beings, male or female or 2) a company or corporation.

"PUBLIC AREA" means a parking lot, fire access route on open area located on Public Lands that is not defined as a highway.

"PUBLIC TRANSIT BUS" means any vehicle operated under the auspices of TransLink for use by the general public.

"RECREATIONAL APPARATUS" means cycles, skateboards, roller skates, games and devices, sleighs, toboggans, bobsleds and similar apparatus.

"RECREATION VEHICLE" means a chassis mounted camper, motor home, holiday trailer, boat, skidoo, or RTV, trailer intended exclusively for recreational use.

"RESERVED PARKING" means a parking space reserved for a special use as indicated by a traffic control device.

"RESIDENTIAL AREA" means any area zoned for residential land use in the Zoning Bylaw.

"RESIDENT" means a member of the immediate family of the owner, renter or lessee of a property located within the Village.

"RESIDENT PARKING PERMIT" means a special parking permit issued, for the purpose of authorizing vehicles, permission to park at designated Residential Parking Zones, Water Access Resident Parking Permit Zones or Temporary Parking Areas.

"RESIDENT PARKING ZONE DECALS" means a Village approved decal, to identify residents who are authorized to park at designated Resident Parking Zones, Water Access Resident Parking Zones or Temporary Parking Areas.

"RESIDENTIAL DWELLING UNIT" means one or more habitable rooms constituting a self-contained unit with separate entrances and used or intended to be used for living and sleeping purposes for not more than one family, which dwelling unit contains not more than one set of cooking facilities;

"ROAD CLOSURE PERMIT" means a permit which authorizes the closure of a highway or portion of a highway.

"SHOULDER" means the portion of the highway between the travelled portion of an uncurbed highway and the ditch; or if there is no ditch, the area between the travelled portion of the highway and the boulevard.

"SUPERINTENDENT OF PUBLIC WORKS" means the person appointed as such and any person appointed or designated by the Superintendent of Public Works to act on their behalf.

"TIME" means either Pacific Standard Time, or Pacific Daylight-Saving Time, whichever is proclaimed to be in effect by the Province of British Columbia.

"TRAFFIC CONTROL DEVICE" means a sign, signal, line, meter, marking, space, or device, not inconsistent with this bylaw, placed or erected by authority of the Minister of Transportation or designate or of Council or person duly authorized by the Minister of Transportation or designate or Council to exercise such authority.

"TRAILER" means a vehicle, including a recreation vehicle that is at any time drawn upon a highway by a motor vehicle.

"VEHICLE" includes any means of conveyance in, upon, or by which any person or property is or may be transported or drawn upon a highway irrespective of the motive of power.

"VILLAGE" means Village of Belcarra.

PART 3 – AUTHORITIES

8. CHIEF ADMINISTRATIVE OFFICER AND SUPERINTENDENT OF PUBLIC WORKS

The Chief Administrative Officer and Superintendent of Public Works may:

- (a) authorize and issue 1) guest parking permits: 2) special use parking permits and 3) residential parking permits;
- (b) issue or cause to be issued Bylaw Notices for violations of this bylaw;
- (c) impound or detain or cause to be impounded or detained, any vehicle, trailer or cycle in violation of this bylaw;
- (d) issue, or cause to be issued, orders to revoke, rescind, amend or vary any permit, notice, traffic notice, order or directive issued pursuant to the provisions of this Bylaw.

9. SUPERINTENDENT OF PUBLIC WORKS – The Superintendent of Public Works may:

- (a) on any highway, place or erect, or cause to be placed or erected, traffic control devices to regulate or prohibit traffic where deemed necessary to ensure the orderly movement of traffic, or to prevent injury or damage to persons or property, or to prevent injury or damage to the highway and where such traffic control devices are so placed or erected, they shall have the same force and effect as if placed or erected by resolution of Council;
- (b) prohibit the use of vehicles not equipped with chains, snow tires, or sanding devices;
- (c) authorize and empower by order to place, replace, or alter traffic control devices at any location determined to give effect to the provisions of the *Motor Vehicle Act* and this bylaw;
- (d) issue, or cause to be issued, bylaw notices for violations of this bylaw;
- (e) impound, or detain if necessary for the purpose of carrying out required duties, any vehicle or trailer;
- (f) issue, or cause to be issued, orders to revoke, rescind, amend or vary any permit, notice, traffic notice, order or directive issued pursuant to the provisions of this Bylaw.

10. PEACE OFFICER – The Peace Officer may:

- (a) issue Bylaw Notices for violations of this bylaw;
- (b) direct and regulate traffic in any manner deemed necessary and in doing so, may disregard any traffic control devices;
- (c) impound or detain any vehicle, trailer or cycle that is in violation of this bylaw;
- (d) require the driver of any vehicle to weigh same at any weigh scale forthwith.

11. FIRE CHIEF – The Fire Chief may:

- (a) direct and regulate traffic in any manner deemed necessary and in doing so, may disregard any traffic control device;
- (b) impound or detain if necessary, for the purpose of carrying out required duties, any vehicle or trailer;
- (c) designate in any manner, a line or lines near the location of a fire or other emergency, beyond which the public shall not pass;
- (d) issue or cause to be issued Bylaw Notices for violations of this bylaw.

12. ENFORCEMENT OFFICER – An Enforcement Officer may:

- (a) issue Bylaw Notices for violations of this bylaw;
- (b) place temporary "No Parking" signs and barricades or other applicable traffic control devices;
- (c) impound or detain any vehicle, trailer or cycle in violation of this bylaw;
- (d) issue, or cause to be issued, orders to revoke, rescind, amend or vary any permit, notice, traffic notice, order or directive issued pursuant to the provisions of this Bylaw;

PART 4 - GENERAL TRAFFIC REGULATIONS

13. APPLICATION – Unless the context otherwise requires:

- (a) The provisions of this bylaw do not apply to persons, vehicles and to other equipment while actually engaged in highway construction or maintenance work upon, under or over the surface of a highway while at this site of the work, but do apply to them when travelling to or from the site of the work;
- (b) A person riding an animal or driving an animal drawn vehicle upon a highway has all the rights and is subject to all the provisions of this Bylaw.

14. CONFORMANCE

No person shall park, drive or operate a vehicle or cycle in contravention of a traffic control device.

15. DAMAGE TO DEVICES

No person shall drive or walk on or over a newly painted line or marking, nor remove or alter any traffic control device.

16. OBEY COMMANDS

Every person shall, at all times, comply with any lawful order, direction, signal or command made or given by a peace officer, enforcement officer, fireperson, ambulance attendant, traffic control person or school patrol.

17. SPEED LIMITS HIGHWAY

The maximum speed on any highway in the Village shall be fifty (50) kilometers per hour unless otherwise posted with the following exceptions:

- (a) Playground Zones which will be thirty (30) kilometers per hour from sunrise to sunset daily.

18. SPEED LIMITS – LANEWAY

No person shall operate a vehicle on a laneway at a greater rate of speed than twenty (20) kilometers per hour.

19. SPEED LIMITS - CONSTRUCTION

No person shall operate a vehicle within a construction zone at a speed greater than twenty (20) kilometers per hour unless otherwise posted.

20. BLOCKING INTERSECTIONS

No person operating a vehicle shall block an intersection or a marked crosswalk, notwithstanding any traffic control device.

21. VEHICLE WHEELS

- (a) No person shall drive any vehicle of any kind having wheels, tires or tracks constructed or equipped with projecting spikes, cleats, ribs, clamps, flanges, lugs or other attachments or projections engaging the highway along, on or across any bridge or hard surface highway within the Village, without first obtaining the written permission of the Superintendent of Public Works who shall determine which bridges and highways may be used and the conditions of such use. Nothing herein contained shall be construed as prohibiting the use of tire chains or studded winter tires.
- (b) The Superintendent of Public Works, by public notice or by the placing of signs on highways, prohibit the operation of vehicles which are not equipped with chains or winter tires or sanding devices or any combination of these which they may consider adequate and necessary in view of the prevailing highway conditions and no person shall drive any vehicle in contravention of such notice or signs.

22. TRUCK ROUTES

- (a) Every person operating a truck exceeding the GVW of 10,900 kilograms upon a highway shall travel by the closest and most direct route to the destination of the trip upon entering or leaving the Village.
- (b) No person shall be permitted to operate a vehicle exceeding the GVW of 30,000 kilograms on any residential street within the municipal boundaries of the Village, without the prior written approval of the Superintendent of Public Works.
- (c) Any applications or requests under this section for an exemption of these provisions shall be dealt with as follows:
 - i) Requests to operate a vehicle exceeding a GVW of 30,000 kilograms on any residential street shall require the written approval of the Superintendent of Public Works.

23. LOAD LIMITS

No person shall, without a permit issued under the authority of this bylaw and subject to the provisions of this bylaw, operate on a highway a vehicle or combination of vehicles and trailers having a weight not conforming to the requirements of the *Commercial Transport Act*.

24. VEHICLE SIZE

No person shall, without a permit, and subject to the provisions of this bylaw, operate on a highway a vehicle or combination of vehicles and trailers having a size not conforming to the requirements of the *Motor Vehicle Act* and the *Transportation Act*.

25. TRAFFIC AND LOAD RESTRICTIONS

Where, in the opinion of the Superintendent of Public Works, any highway is liable to damage through extraordinary traffic, he may regulate, limit, or prohibit the use of the highway to any person operating or in charge of the extraordinary traffic, owning the goods carried therein, or owning the vehicles used therein.

26. OVERLOAD OVERSIZE PERMIT

- (a) Overload and / or Oversize Permits may be issued to persons transporting extraordinary commodities.
- (b) Applications are processed through the Superintendent of Public Works and Public Works Department.
- (c) Permit cost – No charge, except for any direct costs incurred due to utility relocation.

27. HIGHWAY CLOSURE/USE PERMIT

- (a) Temporary Highway Closure / Road Use Permits may be issued to persons requiring partial or complete closure of a highway for the purpose of construction on or adjacent to a highway.
- (b) Applications are processed through the Superintendent of Public Works and Public Works Department.

28. RECREATIONAL APPARATUS INCLUDING GAME DEVICES

- (a) No person shall ride or operate any recreational apparatus upon or across any highway; or any other public place where traffic control signs or markings are displayed stating that the highway or other public place is for pedestrian traffic only.
- (b) Where any person rides or operates any recreational apparatus on any highway or designated public space they shall be deemed to be unlawfully occupying the highway or public space and the apparatus may be removed, detained or impounded by any Peace Officer or Enforcement Officer.
- (c) A Peace Officer or Enforcement Officer may remove, detain, or impound, or cause the removal, detention, or impound of any recreational apparatus which is in contravention of the bylaw. After such removal, the person entitled to the possession of the recreational apparatus shall be entitled to its release upon payment to the Village of the specified fee, including fee, fine and costs of detainment.
- (d) If the person entitled to the possession of any recreational apparatus impounded does not, within Thirty (30) Days of its impoundment or detainment, pay the fees, fines and costs required under subsection (c) of this Section, the Village shall, as soon as possible thereafter, cause it to be sold by public auction to the highest bidder, or shall otherwise cause it to be disposed of and placed in the Revenue Fund of the Village.
- (e) No person shall play or participate in any game or related activity on any highway or public amenity area without written approval of the Village.
- (f) A person operating a cycle must:
 - i) Ride as near as practicable to the right side of the highway;
 - ii) Keep at least one hand on the handlebars;
 - iii) Not ride other than on or astride a regular seat of the cycle; and

- iv) Not use the cycle to carry more persons at one time than the number for which the cycle was designed and equipped.
- (g) A person must not operate a cycle on a highway without due care and attention or without reasonable consideration for other persons using the highway.

29. EXEMPTIONS

- (a) The operator of any of the following classes of vehicles shall be exempt from the provisions of this bylaw;
 - i) Vehicles identified by the sign or insignia as belonging to the Village;
 - ii) Emergency vehicles, as defined by the *Motor Vehicle Act*;
 - iii) Vehicles operated by Peace Officer or Enforcement Officers engaged in the lawful execution of their duty;
- (b) It shall be unlawful for any person to display on any vehicle any permit, card, sticker, or certificate purporting to provide for any exemption from the provisions of this bylaw that is not authorized by this bylaw.

30. PARKING PERMITS

- (a) The Chief Administrative Officer and Superintendent of Public Works are hereby authorized and empowered to issue parking permits in accordance with the provisions of this section.
- (b) Upon receipt of payment of the required fee, the designated Officers in section 30 (a) may issue a parking permit or permits to any person or agency providing the person or agency is:
 - i) the owner of one or more vehicles used by such person or agency; or
 - ii) the lessor of one or more vehicles used by such person or agency, providing documentation is submitted to the designated Officers in section 30 (a) outlining contractual arrangements for such leased vehicles and is engaged in a repair or maintenance business and regularly must carry out this business to premises located in areas which have parking restrictions.
- (c) Where, in the opinion of the Chief Administrative Officer, a parking permit issued under this section should be suspended or cancelled, the Council may, by resolution, suspend such permit and all rights of any person thereunder for such period of time as the Council may see fit, or the Council may, by resolution, cancel such permit. Upon notice of suspension or cancellation of a parking permit, the person to whom the permit was issued shall forthwith deliver up the permit to the Chief Administrative Officer and no refund shall be allowed for the remaining period of time of such permit.
- (d) The expiry date of a parking permit issued under the provisions of this section shall be at midnight on the last day of December in the year of issuance of the permit.
- (e) A parking permit shall not be valid until such permit has been placed on the inside, left-hand side of the dashboard clearly visible through the windshield of the vehicle in respect of which such permit is issued.

(f) The Chief Administrative Officer and Superintendent of Public Works are hereby authorized and empowered to issue parking permits as follows:

- i) **Guest Permit** - A Complimentary parking permit may be issued if application is made for:
 - 1) an event,
 - 2) a sports activity,
 - 3) other meeting or function

Where persons residing outside the Village will be in attendance. The authorization shall not be valid for a period longer than seven (7) days without a resolution of Council.

- ii) **Special Use Permit** - A Special Use permit may be issued if application is made by:

- 1) an Individual,
- 2) a Government Agency; or
- 3) an organization outlining the necessary use and need for such a permit.

If the permit is deemed necessary, a charge for such permit may be levied by Council policy.

- iii) **Complimentary Residential Permit** - Providing application is made by the resident of a residential dwelling unit which:

- 1) has no off-highway parking; and
- 2) abuts on a highway with time restricted parking.

A maximum of two complimentary parking permits per residential dwelling unit may be issued for the designated block at or near where the resident in question resides.

31. REMOVAL OF BYLAW NOTICE

No person, other than the owner or operator of a vehicle, shall remove from a vehicle any bylaw notice issued under the authority of this bylaw.

32. IMPOUNDMENT OF VEHICLES

(a) The Chief Administrative Officer, Superintendent of Public Works, Fire Chief, Peace Officer or Enforcement Officer may remove, detain, or impound a vehicle, and subsequently cause it to be taken to a place of storage; or take the vehicle into custody and cause it to be detained after finding a vehicle standing or parked in any of the following manners:

- i) In violation of any provision of this bylaw;
- ii) In a position that causes it to interfere with removal of snow, ice or sand from a highway or boulevard;
- iii) In a position that causes it to interfere with firefighting;
- iv) In a position that causes it to interfere with the normal flow of traffic on a highway;
- v) With a tire parked on any paved portion of any municipal road, street, lane or highway. If the road shoulder is paved, the white painted line separating the municipal road, street, lane or highway from the road shoulder shall be considered the paved portion of a road.
- vi) In a position that causes it to interfere with the construction, improvement, alteration, extension, widening, marking repair or maintenance of a highway;

- vii) In a position that causes it to interfere with a bona fide General Special Event authorized by the Village;
 - viii) Apparently abandoned on a highway;
 - ix) Without valid permit where a permit is required; or
 - x) Without proper or valid license plates displayed as required by the *Motor Vehicle Act*.
- (b) All costs and charges for the removal, care, or storage of a motor vehicle removed under this bylaw shall be paid by the owner of the motor vehicle, and shall be a lien thereon in favour of the keeper of any repair shop, garage or storage place in which that motor vehicle is stored, and the same may be enforced in the manner provided by the *Repairers Lien Act* or the *Warehouse Lien Act*.
- (c) Notwithstanding the costs outlined in Section 32 (b), the owner of the impounded vehicle shall pay an administration fee.
 - (i) Subject to the *Community Charter*, if a chattel, obstruction or vehicle is removed, detained or impounded, and not claimed by its owner within one (1) month from date of seizure, the chattel, obstruction or vehicle may be sold at public auction at the direction of the Chief Administrative Officer.
 - (ii) Despite any other provision of this bylaw, if in the opinion of the Chief Administrative Officer a chattel, obstruction or vehicle removed, detained, or impounded is a perishable article, has an apparent market value of less than \$2,000.00 or if its custody involves unreasonable expense or inconvenience, the Chief Administrative Officer may decide not to proceed to public auction, and may dispose of the chattel, obstruction or vehicle in any manner deemed expedient.

33. REGULATED PARKING ZONES

All highways in the Village are hereby designated as regulated parking zones and traffic control devices may be placed from time to time to indicate such regulations or restrictions.

34. STUNTING

A person, whether as a pedestrian, passenger, or driver, and whether or not with the use of aid of any animal, vehicle, or other thing, must not perform or engage in any stunt or other activity on a highway that is likely to distract, startle, or interfere with other users of the highway.

PART 5 - PEDESTRIAN REGULATIONS

35. CROSSING HIGHWAYS

No pedestrian shall stand on the travelled portion of a highway while waiting to cross a highway.

36. ENTERING HIGHWAY

No pedestrian shall walk or run into the path of a vehicle that is so close that it is impractical for the driver to stop.

37. BUS STOP

No pedestrian shall cross a highway in front of a bus which has stopped to load or unload passengers except at an intersection controlled by a traffic control device.

38. WALKING ON HIGHWAY

No pedestrian shall walk on the travelled portion of a highway if a shoulder or other space is available as a walking area.

39. CROSSWALKS

No pedestrian crossing a highway where marked crosswalks exist shall cross outside the limits of the markings.

40. TRAFFIC CONTROL DEVICE

No pedestrian shall cross a highway in a crosswalk in contravention of a traffic control device.

41. HITCHHIKING

No pedestrian shall stand upon or walk along a travelled portion of the highway for the purpose of soliciting a ride.

42. WALKING ON HIGHWAYS

Every pedestrian crossing a highway at any point other than within a marked crosswalk or within an unmarked crosswalk at an intersection shall give the right of way to all vehicles on the highway.

PART 6 - PARKING REGULATIONS

43. UNLAWFUL PARKING

- (a) No person shall park a vehicle in any public place unless such person shall comply with all conditions of this bylaw and other regulations posted by traffic control devices.
- (b) Where a motor vehicle or trailer is left, without the consent of the occupier of private property on such private property in the Village, the owner of a motor vehicle or trailer shall be deemed to have authorized and empowered the occupier to be their agent for the purpose of towing the motor vehicle or trailer to a place of storage and of storing it.
- (c) The agent shall be deemed to have a lien against the motor vehicle or trailer for all reasonable advances made or charges incurred in connection with the towing and storing of the motor vehicle or trailer in the course of the agency.
- (d) The procedure respecting enforcement of the lien shall be governed by the *Warehouse Lien Act*.

44. TIME LIMITS

Notwithstanding any other provisions of this bylaw:

- (a) No village resident shall park a vehicle on any highway for more than seventy-two (72) hours continuously; and
- (b) No non-resident shall park a vehicle on any highway for more than six (6) hours continuously.

45. LANE PARKING

- (a) Whenever access can be had to any laneway, all deliveries or collections of goods to or from any residential building shall be made from there.

- (b) No person shall park a vehicle in a laneway unless they are actively engaged in the loading or unloading of goods from a vehicle in which case parking will be permitted for a period of up to fifteen (15) minutes.
- (c) No person shall park a vehicle in a laneway for the purpose of loading and unloading where a loading zone is provided on site.

46. PROHIBITED PARKING

- (a) Except when necessary to avoid conflict with traffic or to comply with the directions of a Peace Officer or Enforcement Officer or traffic control device, no person shall stop, stand, or park a vehicle:
 - i) in front of nor within one (1) meter of a public or private driveway
 - ii) within an intersection; except in designated loading and bus zones;
 - iii) within two and one-half (2.5) meters of a fire hydrant measured from a point in the curb or edge of the highway which is closest to the fire hydrant;
 - iv) on a crosswalk;
 - v) within six (6) meters of a crosswalk or an intersection or any flashing beacon, stop sign, or traffic control signal located at the side of a highway;
 - vi) Except with the prior written approval of Council, upon any highway for the purpose of:
 - 1) displaying a vehicle for sale;
 - 2) advertising, greasing, painting, wrecking, storing, loading, cleaning, or repairing any vehicle, except where repairs are necessitated by an emergency;
 - 3) displaying signs;
 - 4) selling any product;
 - vii) alongside or opposite a highway excavation or obstruction when stopping, standing, or parking obstructs the traffic;
 - viii) on a highway in such a manner as to obstruct or impede the normal flow of traffic or on a marked lane of a highway; (as per 32 (a) v).
 - ix) in a place in contravention of a traffic control device that gives notice that stopping, standing or parking is thereby prohibited or restricted;
 - x) in such manner as to obstruct the visibility of any standard traffic sign;
 - xi) on any portion of a highway where lines, markings or other signs are placed indicating the manner in which vehicles shall be parked, except in accordance with such lines, markings or other signs;
 - xii) obstruct access to, including the area of (1) metre radius surrounding, any Private Hydrant, Curb Stop, Water Meter or other component of the Waterworks by placing, covering, or burying or allowing brick, gravel, lumber, sand, stone, vegetation growth, vehicles, timber, wood, or other material or thing.

47. DOUBLE PARKING

No person shall double park a vehicle on a highway.

48. TRAILER PARKING

No person shall park any trailer unattached upon any highway unless in emergency situations or the trailer is attached to a vehicle by which it may be propelled or drawn.

49. PERSON WITH DISABILITIES (PWD) PARKING ZONE

- (a) No driver shall stop or park a vehicle in a Parking Space designated for use by a PWD, unless such vehicle displays a valid PWD parking permit pursuant to the *Motor Vehicle Act*.
- (b) Permitted vehicles may remain parked at a designated PWD Parking Space up to a maximum of four (4) continuous hours.
- (c) The holder of a valid PWD parking permit pursuant to the *Motor Vehicle Act* may apply to the Superintendent of Public Works for an exemption to section 52(b).

50. RESIDENTIAL PARKING PERMIT

No person shall park a vehicle on a highway in a residential area contrary to a traffic control device unless such person has:

- (a) Acquired an authorized Residential Parking Permit;
- (b) The permit is displayed face up on the dashboard of the vehicle, visible through the front windshield; and
- (c) The vehicle is parked in accordance with the conditions of the permit.

51. LENGTH AND WEIGHT RESTRICTIONS

Notwithstanding any other provisions of this bylaw,

- (a) No person shall park any vehicle having a GVW exceeding 5,500 kilograms, or a length in excess of seven and one-half (7.5) meters on a local highway within a residential area for a consecutive period longer than two (2) hours.

52. HAZARDOUS MATERIALS

- (a) No person shall park or leave unattended, a vehicle or trailer loaded or unloaded and used for the conveyance of hazardous materials;
- (b) Temporary parking within the Village is permitted for a period of time not exceeding two (2) hours when making deliveries only.

PART 7 - USE OF HIGHWAYS REGULATIONS**53. SNOW REMOVAL**

- (a) No person shall deposit, pile, or spread snow or ice cleaned from roofs, parking lots, or garages or any other surface or property, on any highway, boulevard, or other public place, except the place designated therefore by the Superintendent of Public Works.
- (b) Nothing herein contained shall be construed as prohibiting the Village from plowing snow to the property line of any highway or from removing such plowed snow.

54. DRAINAGE

No person shall alter or stop the flow of water through any drain, sewer, ditch or culvert on any highway.

55. LITTERING

- (a) No person shall operate on a highway, a vehicle, or combination of vehicle and trailer, unless it is so constructed, loaded, or covered as to prevent any of its load from dropping, shifting, leaking, or otherwise escaping there from.
- (b) Should any material, due to any cause whatsoever, fall from the vehicle, the operator shall take all reasonable precautions to safeguard traffic from the consequences thereof and shall remove such material from the spillage area.
- (c) No person shall place, throw, deposit or discard on any highway any rubbish, litter, vegetation or waste material of any description.

56. CONSTRUCTIONS

- (a) No person shall excavate, construct any works or occupy the highway for the purposes of construction adjacent to the highway unless otherwise authorized by permit.
- (b) Where authorized works are carried out on, over, or under any highway, appropriate signs, flashers, barricades or other warning devices shall be provided around the construction zone to the satisfaction of the Village.

57. IMPEDING TRAFFIC, DAMAGE TO HIGHWAYS

- (a) No person shall cut, saw, break, split, place, or pile firewood, lumber, blocks, stone, debris or other material or mix mortar upon any highway.
- (b) No person shall use any highway for any purpose other than that of lawful traffic, except with the permission of Superintendent of Public Works.
- (c) No person shall coast or slide on any highway, or boulevard with sleds, toboggans, skis, skates, skate boards, roller skates, or other like apparatus except on highways, or boulevards expressly closed to vehicular traffic by Council for such purposes.
- (d) No person shall ride a cycle, skateboard, coaster, roller skates, play vehicle, sled, toboggan, skis or other like apparatus when attached by any means to any vehicle.

58. NOISES AND ADVERTISING

No person shall operate upon a vehicle any calliope, loudspeaker or other noise making device upon the highways of the Village for advertising or other purposes unless a permit has been applied for and granted by Council.

59. TREES OVER HIGHWAYS

Every person being the owner or occupier of real property shall cause all trees, shrubs or other vegetation to be properly trimmed and cut back a minimum of one point eight (1.8) meters from the edge of asphalt to prevent physical obstruction and visibility impairment to pedestrian and vehicle traffic on the boulevard or highway.

60. STRUCTURES OVER HIGHWAYS

- (a) No person shall, except as provided herein, or by any other bylaw, or unless otherwise authorized by Council, erect or maintain any structure which encroaches on or over any highway or public land.
- (b) Approved structures overhanging the highway shall have a minimum clearance of five (5) meters above any highway.

- (c) No person shall place, erect, remove or alter any sign, structure or other device on or over a highway or land without the express consent of Council.
- (d) Every owner or occupier of real property, or their agents or any other person who shall in any way require to drive, pull or propel any vehicle, equipment or trailer across any pavement, boulevard or curb and gutter for the purpose of entering their property or when leaving the travelled portion of the highway, or for any other reason, shall first construct across the pavement, boulevard, curb and gutter, a protection sufficient to prevent the same from being damaged and shall not obstruct the drainage of surface water on or in any ditch, highway or storm drain within the Village.
- (e) Every person who in any way damages any pavement, curb or gutter while leaving the travelled portion of the highway, shall be liable to the Village and shall pay for the cost of repairing such damage to the satisfaction of the Village.

61. PROPERTY ACCESS

- (a) No person shall alter an existing access to a property or construct a new access to a property without obtaining an access permit from the Superintendent of Public Works.
- (b) Every means of access to and from a highway for any parcel of land or real property abutting thereon shall require the approval of the Village. The location and extent of such access shall be within the discretion of the Village. The cost of constructing any such approved access shall be borne by the owner of the property abutting on the highway from where the access is taken.
- (c) Where the approval of any access under this section involves the construction of any public property, the owner of the property requiring the access shall be responsible for the construction and on-going maintenance and repair of such access, and shall indemnify and save harmless the Village against all liability, suits, actions, claims, accidents, injuries or damages which may occur to persons or property as a result of the access being constructed and maintained on public property and the Village may require that such approval of access over public property be in the form of an easement or statutory right-of-way agreement between the Village and the abutting owner.

62. HIGHWAYS

No person shall light, water, oil or otherwise treat any highway or portion thereof without the express permission of the Superintendent of Public Works.

63. PUBLIC UTILITIES

- (a) No person or telephone, gas, electrical, pipeline company, radio or television broadcasting company or closed-circuit television company shall use the highways in the Village for the construction and installation of the aforementioned utilities until they have first supplied the Village with complete plans and specifications of the proposed work to be constructed or installed and have in turn received written permission from the Village.
- (b) All construction undertaken by any utility company under the provisions of this section shall be in accordance with applicable Village Bylaws and all applicable Federal and Provincial Statutes.
- (c) Where a utility is granted a permit under this section, the utility shall erect and maintain a good and sufficient fence, railing or barricade around every excavation, construction or installation in such a manner as to prevent accidents, and shall place and keep upon such fence, railing or barricade, suitable and sufficient lights

during the night and shall take such further care and precaution as the Village may deem necessary for the safety of the public.

64. BOULEVARDS

Every owner or occupier of (a) a business or (b) a residential premise shall be responsible for the general maintenance, including but not limited to grass cutting and removal of accumulation of leaves, on the boulevards abutting the residential lands or premises.

65. DEFAULTS

In addition to any other penalty which may be incurred, anyone failing to comply with the provisions of this Part within the time specified or within a reasonable time upon notice to that effect by the Village, shall be subject to:

- (a) The Village carrying out any such work at the expense of the offender along with any charges or costs incurred by the Village for such work performed.

PART 8 – ENFORCEMENT AND PENALTIES

- 66.** Enforcement Officers may issue a Bylaw Notice to any person who has contravened this bylaw. Notwithstanding, nothing shall limit or remove the right of the Village to prosecute any offence by way of an information being laid and a summons issued in accordance with the procedures set out in the Offence Act.
- 67.** Every person who violates a provision of this bylaw, or who consents, allows or permits an act or thing to be done in violation of a provision of this bylaw, or who neglects or refrains from doing anything required by a provision of this bylaw, is guilty of an offence and is liable, upon summary conviction, to a fine not exceeding \$10,000. and not less than \$2,500 and is guilty of a separate offence each day that a violation continues or exists.
- 68.** Without limiting the enforcement options under Sections 66 and 67, a person who commits an offence under this Bylaw will be liable to a penalty established under the Bylaw Notice Enforcement Bylaw No. 520, 2018.
- 69.** No person may obstruct an Enforcement Officer in the fulfillment of their duties under this Bylaw.

Read a First Time on May 7, 2018

Read a Second Time on May 7, 2018

Read a Third Time on May 7, 2018

ADOPTED by the Council on May 22, 2018



Ralph Drew
Mayor



Lorna Dysart
Chief Administrative Officer

This is a certified true copy of Village of Belcarra
Traffic and Parking Regulation Bylaw No. 518, 2018

Chief Administrative Officer



VILLAGE OF BELCARRA
Bylaw Notice Enforcement
Bylaw No. 520, 2018
(Bylaw Notice Dispute Adjudication Registry)



Consolidated

A bylaw respecting the enforcement of bylaw notices in conjunction with Village of Belcarra Bylaw Adjudication Registry

This consolidation is a copy of a bylaw consolidated under the authority of Section 139 of the *Community Charter*. This consolidation is not a legal document. Individual copies of the bylaw may be obtained by contacting the Village Office. This bylaw is printed under and by authority of the Chief Administrative Officer of the Village of Belcarra.

- Amendment Bylaw No. 565, 2020 effective date June 22, 2020.

The Council of the Village of Belcarra enacts as follows:

Part 1 Citation

- 1.1 This Bylaw may be cited as Village of Belcarra Bylaw Notice Enforcement Bylaw No. 520, 2018 (Bylaw Notice Dispute Adjudication Registry).

Part 2 Severability

- 2.1 If a portion of this bylaw is held invalid by a Court of competent jurisdiction, then the invalid portion must be severed and the remainder of this bylaw is deemed to have been adopted without the severed section, subsection, paragraph, subparagraph, clause or phrase.

Part 3 Definitions

- 3.1 In this Bylaw:

"**Act**" means the *Local Government Bylaw Notice Enforcement Act*;

"**Municipality or Village**" means the Village of Belcarra;

"**Registry**" means the Village of Belcarra Bylaw Notice Adjudication Registry established pursuant to Part 8 of this Bylaw.

Part 4 Terms

- 4.1 The terms in this Bylaw have the same meaning as the terms defined in the *Act*.

Part 5 Bylaw Contraventions

- 5.1 The bylaw and bylaw contraventions designated in Schedule A may be dealt with by bylaw notice.

Part 6 Offence and Penalty

- 6.1 The penalty for a contravention referred to in Part 5 is as follows:

6.1.1 Subject to subsection 6.1.2 and 6.1.3 is the penalty amount set out in column A1 of Schedule A.

- 6.1.2 If received by the Municipality within 14 days of the person receiving or being presumed to have received the notice, is the Early Payment Penalty set out in column A2 of Schedule A.
- 6.1.3 If more than 28 days after the person received or is presumed to have received the bylaw notice, is subject to a late payment surcharge in addition to the penalty under subsection 6.1.1, is the Late Payment Penalty set out in column A3 of Schedule A

Part 7 Period for Paying a Disputed Notice

- 7.1 A person who receives a Bylaw Notice must, within 14 days of the date on which the person received or is presumed to have received the Bylaw Notice:
 - 7.1.1 Pay the penalty, or
 - 7.1.2 Request dispute adjudication by filling in the appropriate portion of the Bylaw Notice form indicating either a payment or a dispute and delivering it, either in person during regular office hours, by mail, or pay on-line to the Belcarra Village Hall.
- 7.2 A person may pay the indicated penalty after 14 days of receiving the notice, subject to the applicable surcharge for late payment accordance with Subsection 6.1.3, but no person may dispute the notice after 14 days of receiving the Bylaw Notice.
- 7.3 Pursuant to the requirements of Section 25 of the *Act*, where a person was not served personally with a Bylaw Notice and advises the Municipality that they did not receive a copy of the original notice, the time limits for responding to a bylaw notice under Part 6 and Section 7.1 of this bylaw do not begin to run until a copy of the Bylaw Notice is re-delivered to them in accordance with the *Act*.

Part 8 Bylaw Notice Dispute Adjudication Registry

- 8.1 The Registry is established as a Bylaw Notice Dispute Adjudication System in accordance with the *Act* to resolve disputes in relation to Bylaw Notices.
- 8.2 Every person who is unsuccessful in a Dispute Adjudication in relation to a Bylaw Notice or a compliance agreement under the Dispute Adjudication System established under this section must pay the Municipality an additional fee of \$25 for the purpose of the Municipality recovering the costs of the adjudication system.

Part 9 Screening Officers

- 9.1 The position of Screening Officer is established pursuant to the *Act*.
- 9.2 The following are designated classes of persons that may be appointed as Screening Officers:
 - 9.2.1 Chief Administrative Officer
 - 9.2.2 Public Works Superintendent
 - 9.2.3 Bylaw Enforcement Officers
 - 9.2.4 Bylaw Ticket Screening Contractorand Council may appoint Screening Officers from these classes of persons by name of office or otherwise.

Part 10 Powers, Duties and Functions of Screening Officers

- 10.1 The powers, duties and functions of Screening Officers are as set out in the *Act*, and include the following powers:
- 10.1.1 Where requested by the person against whom a contravention is alleged, communicate information respecting the nature of the contravention, the provision of the bylaw contravened, the facts on which the contravention allegation is based, the penalty for a contravention, the opportunity to enter into a compliance agreement, the opportunity to proceed to the Bylaw Notice Dispute Adjudication system and the fee or fees payable in relation to the Bylaw Notice enforcement process;
 - 10.1.2 To communicate with any or all of the following for the purposes of performing their functions under this bylaw or the *Act*:
 - (a) the person against whom a contravention is alleged or their representative;
 - (b) the officer issuing the notice;
 - (c) the complainant or their representative;
 - (d) the municipal staff and records regarding the disputant's history of bylaw compliance.
 - 10.1.3 To prepare and enter into compliance agreements under the *Act* with persons who dispute Bylaw Notices, including to establish terms and conditions for compliance that the Screening Officer considers necessary or advisable, including time periods for payment of penalties and compliance with the bylaw;
 - 10.1.4 To provide for payment of a reduced penalty if a compliance agreement is entered into, as provided in column A4 of Schedule A; and
 - 10.1.5 To cancel Bylaw Notices in accordance with the *Act* or Village policies and guidelines.
- 10.2 The bylaw contraventions in relation to which a Screening Officer may enter into a compliance agreement are indicated in column A4 of Schedule A.
- 10.3 The maximum duration of a Compliance Agreement is one year.

Part 11 Bylaw Enforcement Officers

- 11.1 Persons acting as any of the following are designated as Bylaw Enforcement Officers for the purposes of this bylaw and the *Act*:
- 11.1.1 A designated member of the Royal Canadian Mounted Police;
 - 11.1.2 Bylaw enforcement officers appointed pursuant to the *Police Act* and *Community Charter*;
 - 11.1.3 Local assistants to the Fire Commissioner under Section 6 of the *Fire Services Act*;

- 11.1.4 Bylaw Enforcement Officers, Licensing Inspectors, Building Inspectors, Animal Control Officers or other persons acting in another capacity on behalf of a municipality for the purpose of enforcement of one or more of its bylaws.

Part 12 Form of Bylaw Notice

- 12.1 The Municipality may from time to time provide for the form or forms of the bylaw notice, provided the Bylaw Notice complies with Section 4 of the Act.

Schedules

Schedule A - Designated Bylaw Contraventions and Penalties

Schedule A – Designated Bylaw Contraventions and Penalties (Bylaw Notice Enforcement Bylaw 520, 2018)

Bylaw No.	Section	Description	A1 Penalty	A2 Early Payment Penalty	A3 Late Payment Penalty	A4 Compliance Agreement Available <small>(*Maximum 50% Reduction in Penalty Amount Where Compliance Agreement is shown as "Yes")</small>
Animal Control Bylaw No. 431, 2010						
431	3	Number of Dogs	\$75.00	\$50.00	\$100.00	YES
431	4 & 5	Nuisance Dogs	\$100.00	\$75.00	\$150.00	YES
431	6 & 7	Dog Defecation	\$100.00	\$75.00	\$150.00	NO
431	8 to 11	Aggressive Dogs	\$200.00	\$150.00	\$250.00	YES
Building and Plumbing Code Regulation No. 355, 2003, as Consolidated						
355	13 (1)	Traffic Management Plan	\$150.00	\$100.00	\$200.00	YES
355	29	Contravention of Order	\$150.00	\$100.00	\$200.00	YES
355	32	Contravention of Building Code	\$150.00	\$100.00	\$200.00	YES
355	33	Refuse Entry	\$150.00	\$100.00	\$200.00	NO
355	34	Failure to Obtain Permit	\$150.00	\$100.00	\$200.00	YES
355	35	False Information	\$150.00	\$100.00	\$200.00	NO
355	38	Fail to Post Permit	\$150.00	\$100.00	\$200.00	NO
355	39 & 40	Construct to Building Code	\$150.00	\$100.00	\$200.00	YES
355	41	Damage to Municipal Works	\$150.00	\$100.00	\$200.00	YES
355	42	Post Civic Address	\$150.00	\$100.00	\$200.00	NO
355	42 (1) & (2)	Transportation Management Plan	\$150.00	\$100.00	\$200.00	YES
355	43 to 48	Failure to give Proper Notice	\$150.00	\$100.00	\$200.00	YES
355	49	Uncovered Works	\$150.00	\$100.00	\$200.00	YES
355	50	Security Deposit	\$150.00	\$100.00	\$200.00	NO
355	51	Requirement of Permit	\$150.00	\$100.00	\$200.00	NO
355	52	Occupancy Permit	\$150.00	\$100.00	\$200.00	NO
355	53	Unsafe Condition	\$150.00	\$100.00	\$200.00	NO
355	54 to 56	Demolition Procedures	\$150.00	\$100.00	\$200.00	NO
355	57 to 59	Obligations of Contractor	\$150.00	\$100.00	\$200.00	YES
355	63 to 65	Requirements of Registered Professional	\$150.00	\$100.00	\$200.00	YES
355	66 to 68	Professional Plan Certification	\$150.00	\$100.00	\$200.00	NO
355	113 to 118	Stop Work Orders	\$150.00	\$100.00	\$200.00	NO

Bylaw No.	Section	Description	A1 Penalty	A2 Early Payment Penalty	A3 Late Payment Penalty	A4 Compliance Agreement Available <small>(*Maximum 50% Reduction in Penalty Amount Where Compliance Agreement is shown as "Yes")</small>
355	119 & 120	Do Not Occupy	\$150.00	\$100.00	\$200.00	NO
355	131	Occupancy Permit	\$150.00	\$100.00	\$200.00	YES
355	141	Retaining Wall	\$150.00	\$100.00	\$200.00	NO
355	142	Swimming Pool	\$150.00	\$100.00	\$200.00	NO
355	146	Building Move	\$150.00	\$100.00	\$200.00	NO
355	147 to 151	Building Numbering	\$150.00	\$100.00	\$200.00	NO
355	156	Conformity to Building Code	\$150.00	\$100.00	\$200.00	YES
355	158	General Provisions	\$150.00	\$100.00	\$200.00	YES
Business License Bylaw No. 227, 1995, as Consolidated						
227	2 (a)	License Required	\$100.00	\$50.00	\$150.00	YES
227	7	Post License	\$75.00	\$50.00	\$100.00	NO
227	11	Direct Selling	\$150.00	\$100.00	\$200.00	NO
Recycling and Refuse Collection and Removal Regulation Bylaw No. 422, 2010						
422	3 to 15	Owners Responsibility	\$100.00	\$50.00	\$150.00	NO
422	42	Contravention of Bylaw	\$100.00	\$50.00	\$150.00	NO
Traffic and Parking Regulation Bylaw No. 518, 2018						
518	14	Parking Conformity	\$160.00	\$100.00	\$240.00	NO
518	15	Damage to Device	\$250.00	\$200.00	\$300.00	NO
518	16	Obey Commands	\$250.00	\$200.00	\$300.00	NO
518	17 to 19	Speed Limit	\$160.00	\$100.00	\$240.00	NO
518	21	Vehicle Wheels on Highways	\$200.00	\$150.00	\$250.00	NO
518	23	Load Limits	\$200.00	\$150.00	\$250.00	NO
518	24	Vehicle Size	\$200.00	\$150.00	\$250.00	NO
518	28 a - g	Recreation Apparatus	\$200.00	\$150.00	\$250.00	NO
518	31	Removal of Notice	\$200.00	\$150.00	\$250.00	NO
518	43 a - d	Unlawful Parking	\$160.00	\$100.00	\$240.00	NO
518	44 a - b	Time Limits	\$160.00	\$100.00	\$240.00	NO
518	45 a - c	Lane Parking	\$160.00	\$100.00	\$240.00	NO
518	46 i - xii	Prohibited Parking	\$160.00	\$100.00	\$240.00	NO
518	47	Double Parked	\$160.00	\$100.00	\$240.00	NO
518	48	Trailer Parking	\$160.00	\$100.00	\$240.00	NO
518	49 a - c	Disability Parking Zone	\$160.00	\$100.00	\$240.00	NO

Bylaw No.	Section	Description	A1 Penalty	A2 Early Payment Penalty	A3 Late Payment Penalty	A4 Compliance Agreement Available <small>(*Maximum 50% Reduction in Penalty Amount Where Compliance Agreement is shown as "Yes")</small>
518	50	Residential Parking	\$160.00	\$100.00	\$240.00	NO
518	51 a	Length / Weight Restrictions	\$250.00	\$200.00	\$300.00	NO
518	52 a - b	Hazardous Material	\$250.00	\$200.00	\$300.00	NO
518	53 a - b	Snow Removal	\$160.00	\$100.00	\$240.00	NO
518	54	Drainage	\$160.00	\$100.00	\$240.00	NO
518	55 a - c	Littering	\$160.00	\$100.00	\$240.00	NO
518	56 a - b	Construction	\$200.00	\$150.00	\$250.00	NO
518	57 a - d	Impeding Traffic	\$160.00	\$100.00	\$240.00	NO
518	58	Noise / Advertising	\$200.00	\$150.00	\$250.00	NO
518	59	Trees Over Highway	\$160.00	\$100.00	\$240.00	NO
518	60 a - c	Structures Over Highway	\$250.00	\$200.00	\$300.00	NO
518	61 a - c	Property Access	\$250.00	\$200.00	\$300.00	NO
518	62	Highway Damage	\$300.00	\$225.00	\$400.00	YES
518	63 a - c	Public Utility	\$300.00	\$225.00	\$400.00	YES
518	64	Boulevards Maintenance	\$160.00	\$100.00	\$240.00	YES
(entire Traffic & Parking Regulation Bylaw Table amended by Bylaw No. 565, 2020)						
Water Well Regulation Bylaw No. 455, 2012, as Consolidated						
455	3 a - b	Well Disconnection	\$200.00	\$150.00	\$250.00	YES
455	4 a - d	Non-Domestic Purpose	\$200.00	\$150.00	\$250.00	YES
455	5 a	Introduce Water System	\$200.00	\$150.00	\$250.00	YES
Water Works Regulation Bylaw No. 456, 2012, as Consolidated						
456	5 a - g	Prohibitions	\$100.00	\$75.00	\$150.00	NO
456	18	Require Connection	\$200.00	\$150.00	\$250.00	YES
456	58	Approval of System	\$200.00	\$150.00	\$250.00	YES
456	62	Air Conditioners	\$100.00	\$75.00	\$150.00	NO
456	68	Water Meter	\$200.00	\$150.00	\$250.00	YES
456	75	Prohibition of Contamination	\$200.00	\$150.00	\$250.00	NO
456	83 a - e	Maintenance Responsibility	\$200.00	\$150.00	\$250.00	YES
456	84	Leaks	\$200.00	\$150.00	\$250.00	YES
456	86	Water Restrictions	\$100.00	\$50.00	\$150.00	NO
456	91 and 97	Use of Hydrant / Open	\$200.00	\$150.00	\$250.00	NO



VILLAGE OF BELCARRA
5-Year (2023 – 2027) Financial Plan
Bylaw No. 606, 2023
Amendment Bylaw No. 613, 2023



A bylaw to amend the 5-Year Financial Plan for the years 2023 – 2027 inclusive.

WHEREAS pursuant to Section 165 of the Community Charter, “Village of Belcarra 5- Year (2023 – 2027) Financial Plan Bylaw No. 606, 2023” was adopted on March 27, 2023.

AND WHEREAS pursuant to Section 165 of the Community Charter, the financial plan may be amended by bylaw at any time.

NOW THEREFORE, the Council of the Village of Belcarra enacts as follows:

1. This Bylaw shall be cited for all purposes as the “Village of Belcarra 5-Year (2023 – 2027) Financial Plan Bylaw No. 606, 2023, Amendment Bylaw No. 613, 2023”.
2. “Village of Belcarra 5-Year (2023 – 2027) Financial Plan Bylaw No. 606, 2023”, is hereby amended by deleting Schedule A – Financial Plan in its entirety and replacing it with Schedule A – Financial Plan attached to and forming part of this Bylaw.

READ A FIRST TIME on June 19, 2023

READ A SECOND TIME on June 19, 2023

READ A THIRD TIME on June 19, 2023

ADOPTED by the Council on

 Jamie Ross
 Mayor

 Paula Richardson
 Chief Administrative Officer

This is a certified a true copy of
 Village of Belcarra 5-Year (2023 – 2027) Financial
 Plan Bylaw No.606, 2023, Amendment Bylaw No. 613, 2023

 Chief Administrative Officer

Schedule A - Financial Plan

	2023	2024	2025	2026	2027
REVENUE					
Taxation (including grants in lieu)	(1,006,297)	(1,036,380)	(1,067,363)	(1,099,273)	(1,132,139)
Parcel taxes	(267,617)	(267,617)	(267,617)	(267,617)	(267,617)
Sale of services & regulatory fees	(685,699)	(746,355)	(813,326)	(887,294)	(969,009)
Government transfers	(569,119)	(507,677)	(502,279)	(519,477)	(776,167)
Investment income	(57,693)	(58,425)	(59,171)	(59,930)	(60,704)
Actuarial income	(44,814)	(50,547)	(56,482)	(62,623)	(68,980)
Total Revenue	(2,631,239)	(2,667,001)	(2,766,238)	(2,896,214)	(3,274,616)
EXPENSES					
General government & fiscal services	223,262	228,842	234,474	265,198	241,798
Administration & human resources	267,901	273,757	285,942	291,535	297,237
Information technology	40,636	41,478	42,347	43,243	44,166
Support services (engineering, finance & planning)	178,985	140,854	142,757	144,697	146,671
Building inspection & bylaw enforcement	87,334	89,057	90,813	92,605	94,432
Public works & transportation	255,585	250,905	255,063	268,331	272,825
Major road network (MRN)	168,196	170,403	173,628	176,923	179,683
Fire & emergency services	7,454	7,492	7,530	7,568	7,607
Waste & recycle depot (WARD)	187,873	192,246	198,155	204,252	209,690
Water system	514,922	529,209	555,788	579,713	605,853
Amortization	354,090	371,555	389,889	409,135	429,339
Total Expenses	2,286,238	2,295,798	2,376,386	2,483,200	2,529,301
ANNUAL SURPLUS	(345,001)	(371,203)	(389,852)	(413,014)	(745,315)
RESERVES, DEBT & CAPITAL					
Tangible capital assets	690,100	425,500	200,000	253,000	436,000
Amortization	(354,090)	(371,555)	(389,889)	(409,135)	(429,339)
Repayment of debt (principal & actuarial)	163,816	169,549	175,484	181,625	187,982
Transfers from reserves	(675,146)	(446,196)	(231,946)	(300,748)	(205,446)
Transfers to reserves	520,947	569,038	609,642	656,680	724,494
Transfer from appropriated surplus	(9,400)	-	-	-	-
Transfers from surplus	(17,726)	(1,663)	-	-	-
Transfers to surplus	26,500	26,530	26,561	31,592	31,624
Total Reserves, Debt & Capital	345,001	371,203	389,852	413,014	745,315
FINANCIAL PLAN BALANCE	-	-	-	-	-



City of
Richmond



9.1

Malcolm D. Brodie
Mayor

6911 No. 3 Road
Richmond, BC V6Y 2C1
Telephone: 604-276-4123
Fax No: 604-276-4332
www.richmond.ca

May 25, 2023

Via email & Post

Mayor Jamie Ross
Village of Belcarra
4084 Bedwell Bay Road
Belcarra, BC V3H 4P8

Dear Mayor Ross,

Jamie

Re: Changes in Provincial Legislation Needed to Address Gas Utilities in British Columbia

I write to you to request that you send a letter to the Province asking to reform the BC Utilities Commission (BCUC) and enact legislation to regulate greenhouse gas emissions (GHGs) from gas utilities in BC. This request reflects our shared objective to achieve a zero carbon community by 2050. The City's Community Energy & Emission Plan 2050 emphasizes that advocacy, alongside regulation, education, partnerships and the provision of infrastructure and incentives, is an essential tool for achieving the City's greenhouse gas (GHG) 2030 and 2050 emission reduction targets.

Accordingly, on May 8, 2023, Richmond City Council resolved:

- (1) That, as described in the report titled 'Changes in Provincial Legislation Needed to Address Gas Utilities in British Columbia' from the Director, Sustainability & District Energy, dated March 17, 2023:*
- a) Letters be sent to the Premier, the Minister of Municipal Affairs, the Minister of Environment and Climate Change Strategy, the Minister of Energy, Mines and Low Carbon Innovation and to local Members of the Legislative Assembly, asking the Government of British Columbia to*
 - i. reform the British Columbia Utilities Commission in the context of a changing climate as noted in the report;*
 - ii. urgently enact legislation that regulates greenhouse gas emissions from gas utilities; and,*
 - b) Letters be sent to Metro Vancouver, Metro Vancouver member local governments, the City of Victoria and the District of Saanich requesting their support by sending letters to the Office of the Premier, the Minister of Municipal Affairs, the Minister of*

Environment and Climate Change Strategy and the Minister of Energy, Mines and Low Carbon Innovation accordingly.

The City greatly appreciates the Province's longstanding partnership in the pursuit of GHG reductions, in particular, supporting cities with the necessary tools and funding needed to do so, including:

- implementing a carbon tax in 2008;
- implementing the Energy Step Code for energy efficiency in 2017;
- approving increased funding to cities through the Local Government Climate Action Plan; and most recently,
- adopting the opt-in Zero Carbon Step Code, adopted into the BC Building Code in February 2023.

The City undertook extensive analysis to inform the above recommendations, including assessing concerning issues currently being reviewed by the BCUC, articulating international best practices in the regulation of gas utilities, and the urgent role of provincial policy to regulate GHGs from gas utilities. The City believes that there is a role for gas utilities in BC but they will likely be trimmed and reshaped over time to provide heat and process energy to those existing users that are the most challenging to electrify due to cost and/or location considerations. The City's analysis culminated with the following key requests of the Province. An expanded version of the recommendations can be found in Attachment 1 in this letter. Finally, the City's extensive analysis that led to these recommendations can be found in the May 8, 2023 Council report in Attachment 2. The City puts forward the following requests in an effort to engage in constructive dialogue, given our shared GHG reduction goals:

- 1) **Bring forward legislation implementing the 2030 GHG cap on the gas sector** without further delay as committed to in the Province's CleanBC plan and recently reaffirmed by the Premier on March 14, 2023 with the launch of a new energy action framework;
- 2) **Launch an independent gas utility planning exercise** that plots a course for addressing an expected decline in throughput of gas grids and the transition of gas grids towards transporting RNG and hydrogen to sectors and/or locations that are hard to decarbonize, leading to the increased role of electrification in building heating and transport;
- 3) **Reject the use of RNG and hydrogen in new construction** to meet GHG limits in the Step Code, so that the limited and costly supply of these alternative fuels can be put to highest and best uses;
- 4) **Develop policies to assess, certify and track the GHG intensity** of RNG, hydrogen and other alternative gases;
- 5) **Reform the BCUC in the context of a changing climate** to consider, quantify and minimize the potential costs of lock-in and stranded investments when evaluating capital plans, rate setting and extension policies for gas utilities. This direction should also include greater consideration of non-pipe alternatives to marginal investments in gas grids as well as consideration of strategic opportunities to prune gas grids in conjunction with targeted electrification strategies. Finally, proceedings should be

guided by a framework or set of guidelines that do not impact or limit the jurisdiction and authority of local governments without provincial direction;

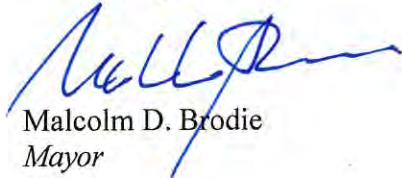
- 6) **Bring forward legislation and other regulatory changes specific to the heat transition** that, among other issues, establishes a distinct BCUC regulatory framework for public district energy systems more aligned with their small scale and localized nature; and,
- 7) **Require that a minimum percentage of low-carbon methane-based fuels** (i.e. up to 100%) be produced within BC.

Some of the above is consistent with recommendations in the Climate Solutions Council's (CSC) 2022 Report. The CSC is an advisory group with a legislated mandate under the *Climate Change Accountability Act* to advise the Minister of Environment and Climate Change Strategy regarding plans and actions to achieve climate targets and reduce emissions and related matters. Attachment 1 notes where the above recommendations align with CSC's 2022 report.

Our cities share common zero carbon outcomes for our respective jurisdictions. The Province's work in reducing GHGs coupled with its resolve to reach its regulated GHG reduction targets are truly world-class. The City's requests of the Province if acted on, will allow the Province to maintain the momentum it has created with the CleanBC plan.

I trust that our requests will be given due consideration. Please contact the City's Director, Sustainability and District Energy, Peter Russell, at peter.russell@richmond.ca or (604) 516-9873 for more information.

Yours truly,



Malcolm D. Brodie
Mayor

More Information Regarding the City's Requests

- 1) **Bring forward legislation implementing the 2030 GHG cap on the gas sector without further delay** as committed to in the Province's CleanBC plan and recently reaffirmed by the Premier on March 14, 2023 with the launch of a new energy action framework;
- 2) **Launch an independent gas utility planning exercise that plots a course for addressing an expected decline in throughput of gas grids** and the transition of gas grids towards transporting RNG and hydrogen to sectors and/or locations that are hard to decarbonize, consistent with the Province's 2030, 2040 and 2050 GHG emission reduction targets, all leading to the increased role of electrification in building heating and transport.
- 3) **Reject the use of RNG and hydrogen in new construction to meet GHG limits in the Step Code, so that the limited and costly supply of these alternative fuels can be put to highest and best uses.** RNG volumes are very limited and RNG may be the only option for decarbonizing heavy industry and some portions of the transportation sector. There are affordable low-carbon alternatives for heating new buildings. Heating new buildings is not the highest and best use of limited RNG resources. In addition, prioritizing electric heat pumps, including district energy heat pump applications, over generating hydrogen gas from electricity is a more efficient use of BC's electricity resources. The Climate Solutions Council identifies these issues as *Opportunity #7: Electrifying our Economy and Communities* in their 2022 Annual Report.
- 4) **Develop policies to assess, certify and track the GHG intensity of RNG, hydrogen and other alternative gases** B.C. needs a robust and credible system for assessing the GHG intensity of renewable gases and ensuring these fuels do not contribute further to GHG emissions. Key issues include avoiding double-counting GHG credits and minimizing fugitive methane emissions.
- 5) **Reform the BCUC in the context of a changing climate to consider to:**
 - consider and minimize lock-in and stranded investment risks when evaluating capital plans, rate setting and extension policies for gas utilities including:
 - ensuring extension policies of gas utilities take into account reduced consumption and stringent GHG limits for new construction;
 - using different depreciation rates and allowable returns on equity for new investments commensurate with the uncertainty over useful life and stranding risk;
 - ensuring non-pipe alternatives are adequately considered as alternatives to maintaining and/or upgrading gas infrastructure, including local decommissioning of gas infrastructure in favour of electrification or district energy; and
 - considering provincial policy and credible independent studies into the future role of hydrogen when considering hydrogen or hydrogen-ready infrastructure
 - proceedings should be guided by a framework or set of guidelines that do not impact or limit the jurisdiction and authority of local governments without provincial direction.

The Climate Solutions Council identifies these issues as *Opportunity #7: Electrifying our Economy and Communities* in their 2022 Annual Report, asking the Province to identify an appropriate role for the BCUC in supporting BC's clean energy transition.

- 6) **Bring forward legislation and other regulatory changes specific to the heat transition similar to recent initiatives implemented or proposed in the UK, Netherlands, Germany, France and New York State, among others, which would among other things:**
 - recognize the unique role for district energy systems in the energy transition;
 - establish a distinct BCUC regulatory framework for public district energy systems that is more aligned with their small scale and localized nature;
 - provide incentives and resources to support the development of local heat plans to coordinate and optimize incremental investments in gas, electric and district energy infrastructure, as well as spatially targeted retrofit and fuel switching programs and incentives.
 - provide incentives and fairer tax treatment for low-carbon district energy systems, including addressing the unequal burden from property taxes and PST on these systems

- 7) **Require that a minimum percentage of low-carbon methane-based fuels (i.e. up to 100%) be produced within BC.** Currently there is no requirement that low-carbon gases be produced and procured within B.C. and as a result, FortisBC has sought out low-cost supply in other provinces and in the US. This may help reduce renewable gas prices but it also limits the ability of B.C. workers to benefit from investments in new low-carbon gas production. Procuring out-of-Province gases is a risk because since they are limited resources and it is anticipated that net-zero state- or federal-level commitments in other jurisdictions are likely to affect long-term supply and prices for consumers in B.C. Mandating that a minimum share of gas utilities' low-carbon gases be produced within B.C. would also drive employment opportunities in B.C. and manage the impacts of the energy transition on B.C.'s workforce. The Climate Solutions Council identifies these issues as *Opportunity #8: Minimizing Reliance on Offsets* in their 2022 Annual Report.




City of Richmond

Report to Committee



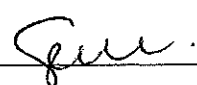
To: General Purposes Committee **Date:** March 17, 2023
From: Peter Russell, MCIP, RPP **File:** 10-6000-00/Vol 01
 Director, Sustainability and District Energy
Re: **Changes in Provincial Legislation Needed to Address Gas Utilities in British Columbia**

Staff Recommendation

1. That, as described in the report titled 'Changes in Provincial Legislation Needed to Address Gas Utilities in British Columbia' from the Director, Sustainability & District Energy, dated March 17, 2023:
 - a) Letters be sent to the Premier, the Minister of Municipal Affairs, the Minister of Environment and Climate Change Strategy, the Minister of Energy, Mines and Low Carbon Innovation and to local Members of the Legislative Assembly, asking the Government of British Columbia to
 - i. reform the British Columbia Utilities Commission in the context of a changing climate as noted in the report;
 - ii. urgently enact legislation that regulates greenhouse gas emissions from gas utilities; and
 - b) Letters be sent to Metro Vancouver, Metro Vancouver member local governments, the City of Victoria and the District of Saanich requesting their support by sending letters to the Office of the Premier, the Minister of Municipal Affairs, the Minister of Environment and Climate Change Strategy and the Minister of Energy, Mines and Low Carbon Innovation accordingly.


 Peter Russell
 Director, Sustainability and District Energy
 (604-276-4130)

Att. 3

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Law	<input checked="" type="checkbox"/>	
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO
		

March 17, 2023

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Staff Report

Origin

Council adopted the Community Energy & Emission Plan 2050 (CEEP) in February 2022, which emphasized that advocacy, alongside regulation, education, partnerships and the provision of infrastructure and incentives, is an essential tool for achieving the City's greenhouse gas (GHG) 2030 and 2050 emission reduction targets. In this report, it is recommended that the City ask the Government of British Columbia (Province) to take swift action to regulate gas utilities, as committed in the Province's CleanBC plan. This report also recommends that the Province take action to reform the British Columbia Utilities Commission (BCUC) to restore public confidence and to revise its mandate in the context of the Province's GHG reduction targets and.

Related to the above, Council endorsed the call for a Global Fossil Fuel Non-Proliferation Treaty in May 2022, and endorsed a Union of British Columbian Municipalities (UBCM) resolution asking the Province to do the same. The resolution additionally asked the Province to implement a GHG reduction cap on gas utilities. The resolution was not endorsed by the UBCM membership but staff observed that there was a vigorous debate on the matter at the 2022 annual convention.

Finally, on March 14, 2023, the Province announced the launch of a new energy action framework in the context of approval requirements for LNG export facilities. The announcement noted that the Province will '*put in place a regulatory emissions cap for the oil and gas industry to ensure B.C. meets its 2030 emissions-reduction target for the sector*' and '*create a BC Hydro task force to accelerate the electrification of B.C.'s economy by powering more homes, businesses and industries with renewable electricity*'. The recommendations in this report are consistent with these directions but also further expands on how the BCUC can be reformed to support the clean energy transition.

This report supports Council's Strategic Plan 2022-2026 Focus Area #1 Proactive in Stakeholder and Civic Engagement:

Proactive stakeholder and civic engagement to foster understanding and involvement and advance Richmond's interests.

1.1 Continue fostering effective and strategic relationships with other levels of government and Indigenous communities.

This report supports Council's Strategic Plan 2022-2026 Focus Area #5 A Leader in Environmental Sustainability:

Leadership in environmental sustainability through innovative, sustainable and proactive solutions that mitigate climate change and other environmental impacts.

5.1 Continue to demonstrate leadership in proactive climate action and environmental sustainability.

March 17, 2023

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Findings of Fact

Methane is a greenhouse gas with a global warming potential 28 times that of carbon dioxide, when impacts are compared over a 100-year period.¹ Conventional natural gas is 95% methane, sourced from plant material that was buried over the past 540 million years and chemically transformed into this fossil fuel through heat, pressure and time. Renewable Natural Gas (RNG) is also methane but it is generated through the anaerobic digestion of organic wastes, such as sewage sludge, food waste, and yard waste, that would have otherwise released methane and carbon dioxide to the atmosphere through decomposition within a conventional landfill. RNG can displace fossil methane without further increases in atmospheric concentrations of methane or carbon dioxide. Renewable Gas (RG) includes RNG as well as other potentially low-carbon gases such as hydrogen, which may be derived from fossil fuels with carbon capture, biomass, or green electricity. This report highlights concerns related natural gas, RNG and hydrogen.

Analysis

This report brings together a number of policy and regulatory concerns to light and makes connections as the report progresses. To support readability, the content is organized under the follow section headings:

- Ongoing BCUC and Court of Appeal Proceedings
- The Case for Expedited Regulation of Gas Utilities in BC
- Best Regulatory Practices and Utility Responses
- Urgent Need for Provincial Policy and Review of BCUC's Related Mandate

Ongoing BCUC and Court of Appeal Proceedings

The BCUC is an independent regulatory tribunal of the Government of British Columbia. The BCUC is primarily governed by the Utilities Commission Act. The City is participating or monitoring the following BC Utilities Commission proceedings, based on the rationale below:

- **FortisBC Revised Renewable Gas Program:** FortisBC recognizes that RNG is not a cost-competitive low-carbon solution, so they are proposing to provide new construction with 100% RNG, with additional costs paid for by existing ratepayers who would receive a lower percentage of RNG in their own natural gas supply. The subsidy aggregates to over \$750 million over an eight year period from 2024 through 2032, expressed in real dollar terms in 2022 dollars.² The use of RNG can be positive and supports circular economy outcomes; RNG is currently being harvested at the Lulu Island Waste Water Treatment plant in which the City purchases RNG credits in order to offset natural gas use at select City facilities for a portion of their annual energy consumption. As active Interveners in this proceeding, staff intend to argue against FortisBC's proposed allocation of 100% RNG in new residential construction on the grounds that existing ratepayers should not be subsidizing new ratepayers at such high levels. Staff will further argue that the highest and best use of this scarce resource is in existing buildings where full

¹ Methane has a much higher GWP of 84-87 when measured over a 20-year period, but breaks down relatively quickly in the atmosphere, resulting in the lower 100-year value.

² https://docs.bcuc.com/Documents/Proceedings/2022/DOC_69044_C7-5-CoV-Intervener-Evidence.pdf, page 26.

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electrification is not economically feasible. Ultimately, RNG should be used to reduce natural gas use for existing ratepayers and not for the expansion of gas infrastructure. The City is working with other local government Interveners in this proceeding including Metro Vancouver, the cities of Vancouver, Surrey and Victoria and the districts of North Vancouver and Saanich.

- **FortisBC Long-Term Gas Resource Plan:** FortisBC is seeking approval for its vision of continued system growth with an increased overall use of gaseous fuels – including natural gas, augmented by RNG, hydrogen and other fuels. Much of the fuel used would be conventional natural gas to which the “attributes” of low-carbon fuel are transferred. Most of the actual RNG and other low-carbon fuels would be generated in other provinces or the United States, and most of this supply would not be physically transferred to BC for use. Rather, offsets, similar to carbon credits, are transferred from out-of-province and international RNG suppliers. As active Interveners, staff are currently requesting more information from FortisBC regarding current and anticipated RNG agreements and the viability of using of other gases, such as hydrogen in their distribution network. Staff are also concerned that FortisBC’s long term gas demand projections do not take into consideration the impact of energy efficiency and carbon reduction standards for cities participating in the BC Energy Step Code and those anticipating to adopt the newly released Zero Carbon Step Code;
- **BCUC Inquiry into Regulation of Municipal Energy Utilities:** The BCUC continues to inquire into issues related to ownership structures and operational arrangements of utilities affiliated with municipalities and regional districts in order to determine whether the BCUC has a mandate to regulate these entities. The City is seeking leave from the Court of Appeal to appeal and quash the BCUC’s Stage 1 Inquiry report which concluded that wholly-owned municipal corporations fall under BCUC regulation;
- **BCUC Inquiry into Regulation of Municipal Energy Utilities:** The BCUC continues to inquire into issues related to ownership structures and operational arrangements of utilities affiliated with municipalities and regional districts in order to determine whether the BCUC has a mandate to regulate these entities. The City is seeking leave to appeal the BCUC’s Stage 1 Inquiry report which concluded that wholly-owned municipal corporations fall under BCUC regulation;
- **BCUC Inquiry into Hydrogen Energy Services:** BCUC is inquiring into the appropriate regulation of hydrogen in different sectors. Staff note that the applicability of hydrogen is not defined in provincial policy and the findings in this inquiry could be used as *de facto* policy in the absence of policy direction from the Province. This inquiry is a good example of the BCUC effectively setting policy within a policy vacuum created by provincial government inaction; and,
- **City of Richmond v. the BCUC and FortisBC Energy Inc. (Court of Appeal):** The City has been granted leave to appeal the decision of the BCUC in relation to FortisBC natural gas pipeline relocations in City highways in Burkeville that were necessary to accommodate City infrastructure projects. The BCUC imposed a term which the City

March 17, 2023

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maintains it had no jurisdiction to impose that limits the City's ability to sue and recover damages from Fortis. Recognizing the importance of this issue, the Court of Appeal granted the City leave. The decision of the Court of Appeal is attached as Attachment 1 to this report.

The Case for Expedited Regulation of Gas Utilities in BC

*The Province's CleanBC Roadmap to 2030 highlights that 'local governments play a vital role in meeting provincial climate targets. Along with directly controlling emissions from their own facilities, operations and vehicle fleets, municipalities and regional districts have the capacity to influence about 50% of our GHG emissions through decisions on land use, transportation and infrastructure that affect where people live and work, how they get around, and how their communities grow and change with time. This puts local governments on the front lines of climate action, where all these policies converge.'*³

In support of the above, the Province has provided local governments with a number of important tools for achieving GHG emission reductions at the local level, including: the opt-in Energy Step Code for energy efficiency in 2017; increased funding through the Local Government Climate Action Plan in 2022; and most recently, the opt-in Zero Carbon Step Code, adopted into the BC Building Code in February 2023.⁴

Despite these advances, the Province has yet to implement key measures that will determine whether or not Richmond and the Province can fully achieve their respective 2030 and 2050 GHG emission reduction targets. Of particular concern is Province's delayed and piecemeal implementation of specific climate action measures related to the gas sector. The result is a policy vacuum that has enabled provincial agencies and industry to initiate projects that threaten, impede or prevent effective climate action by local governments.

The BCUC has become an agency of particular concern in this context. Staff have the following concerns regarding the wide scope and potential for *de facto* policy-making within current BCUC proceedings, specifically because of their potential to restrict the ability of provincial and local governments to achieve GHG reductions:

- **Feasible North American RNG Supplies:** Because of the finite sources of RNG, research indicates that feasible North American RNG supplies are limited to 5- 20% of existing North American natural gas consumption. The allocation of highly-subsidized 100% RNG in new residential construction as proposed by FortisBC, where electrification is most cost-effective, is not the highest and best use of this scarce resource. While FortisBC has been quick to recognize the value of RNG, and has secured significant supplies from around North America, it is anticipated that once these initial supply contracts expire, the amount of affordable RNG available to FortisBC will decline dramatically as other jurisdictions compete for this limited resource, ultimately leaving ratepayers at risk;

³ https://www2.gov.bc.ca/assets/gov/environment/climate-change/action/cleanbc/cleanbc_roadmap_2030.pdf p.44

⁴ Richmond Council and staff were vocal advocates for all of these advancements.

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- **Cost Competitiveness of RNG:** At present, using unsubsidized RNG in boilers in new construction is not cost-competitive with electric heat pumps and/or with district energy services. Further, heat pumps and Richmond's district energy utilities also provide cooling services, providing resilience for new buildings in the face of climate change. FortisBC's proposed Revised Renewable Gas Program relies on existing natural gas ratepayers to subsidize RNG consumption in new construction to the tune of \$750M from 2024 through 2032, enabling the utility to keep increasing overall demand for the fuels it provides. Under the new Zero Carbon Step Code, new construction is already required to reduce GHG emissions so this subsidy has the potential to divert new buildings away from heat pumps, leading to an inefficient use of scarce RNG resources;
- **Overreliance on Hydrogen Gases to Reduce GHGs:** Low-carbon hydrogen is currently not a viable or cost-effective approach for heating buildings. This is validated in over three dozen independent international studies of hydrogen for heating. Producing zero-carbon hydrogen from green electricity for heating could require up to six times as much electricity as using that same electricity directly in a heat pump. In addition, research indicates that existing natural gas infrastructure cannot safely convey a gaseous fuel blend containing more than a 20% hydrogen. At a 20% hydrogen mix, GHG emissions reductions would be less than 7% relative to natural gas. At higher concentrations of hydrogen, major upgrades would be required both to the existing gas distribution network and to end-use devices, including household equipment, to convey the fuel.
- **Health Considerations:** Leakage of methane and hydrogen from gas grids, and end use devices within homes and building is also a growing health and environmental concern, whether these are produced from green energy sources or not.

Best Regulatory Practices and Utility Responses

Research indicates that other jurisdictions have recognized that building heating must largely transition away from gas. There is an emerging consensus that while gas utilities will not disappear, these networks will likely be trimmed and reshaped over time to provide heat and process energy to those existing users that are the most challenging to electrify due to cost and/or location considerations. Given the above concerns, policymakers in the US and in Europe are taking steps to manage this transition to avoid further stranded investments and reduce the impacts on consumers, with policies such as (see Attachment 2 for examples):

- a) Prioritizing "non-pipe alternatives" over sustaining, upgrading or expanding gas grids. This approach seeks to implement deep retrofit and fuel-switching programs within defined areas so as to enable the decommissioning of less cost-effective portions of the gas grid, reducing overall systems operations costs.
- b) Limiting or banning gas connections for new construction, as has already been done in a number of US cities and parts of Europe;
- c) Requiring accelerated depreciation rates for new methane-based fuel infrastructure, reflecting the risk that these assets will need to be retired early and signaling clearly to

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gas utilities that they will bear risk for their investments, as is already being done in the UK and Australia;

- d) Establishing local “heat planning” processes to coordinate and manage the optimal transition away from gas and towards alternative heating solutions including electrification and low carbon district energy. This could also include consideration of strategic investments to upgrade portions of the gas grid to hydrogen (i.e. to individual users or to supply peaking energy intense users). Staff completed such heat mapping to as part of the City Centre District Energy Utility due diligence work.

Policymakers are aware of the potential for RNG and hydrogen and have determined that these low-carbon gases can play a crucial, but necessarily limited role in decarbonizing BC’s economy. When supply limitations, higher costs inherent with RNG and hydrogen fuels are considered, together with the risks of reverting to the use of natural gas in the wake of supply shortfalls, makes it imperative that demand for building heating be transitioned from methane-based fuels to near-zero GHG electricity wherever it is practical to do so. The City is a leader in this regard: building electrification policies in the BC Energy Step Code, district energy services and forthcoming building retrofit initiatives together will support a gas grid transition that will minimize costs and stranded investments compared to an uncoordinated and ad hoc approach.

Urgent Need for Provincial Policy and Review of BCUC’s Related Mandate

BC is lagging in addressing the above noted issues. An ongoing policy vacuum at the provincial government level is resulting in continued demand for gas and expansion of gas grids, without any clear and cost-effective pathway to decarbonize existing demand and infrastructure. Natural gas utilities in BC continue to operate within BCUC’s utility regulation regime that guarantees profits as a function of investments in infrastructure expansion. Natural gas utilities in BC have continued with a business-as-usual approach without any credible path to full decarbonization that is cost-competitive with significant electrification. For context, FortisBC will invest \$666 million in new expansion infrastructure into service in 2023, equivalent to 9% of their total existing infrastructure.

Regarding the utility regulator, the BCUC allows gas utilities to subsidize service extensions, and approves infrastructure expansion plans on past rates of demand growth rather than the projected reductions in energy demand produced by high-performance buildings now being built to BC Energy Step Code requirements. Continuing expansion of gas infrastructure heightens the risk of stranded assets and imposes greater costs and risks for ratepayers, particularly low-income households with fewer options to avoid these costs in future.

As noted above, the long-term potential supply of RNG and alternative gases available for BC residents is limited to a fraction of current demand for natural gas. FortisBC has secured a number supply contracts before many other utilities had entered the market. These contracts are, however, limited in volume and will expire before 2050, placing homeowners and businesses at risk. Further, many of the supply contracts that FortisBC has secured were from sources outside of BC. Most of these fuels will not actually be consumed within BC, foregoing provincial economic and employment opportunities. Instead, FortisBC will transfer the “RNG” attributes

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from the producer, similar to carbon credits. By contrast, current provincial energy policy stipulates that all additional electricity supply, virtually all of which is to come from low-carbon technologies, will have to be generated within BC. According to BC Hydro's 2021 assessment of new generation resources, most of this new supply will come from wind farms, solar arrays, small hydro facilities, and biomass plants, at locations throughout the province, powering local jobs and economic activity.

There are also risks for the Province. BC does not have a viable pathway to decarbonize existing demand using natural gas, let alone any increased demand resulting from new development, as would occur if the BCUC approves FortisBC's current application to provide new customers with RNG.

The BCUC is not well-suited to lead the transition of the heating sector, let alone reconfigure energy regulation in the context of the climate crisis. The BCUC was not designed to do so but in the context of a provincial policy vacuum in the regulation of GHGs from gas utilities, this is what is occurring. Regulatory commissions, such as the BCUC, are meant to take a passive approach by assessing proposals by utilities within a relatively narrow set of issues. The scale, complexity and rapidity of the energy transition requires proactive provincial regulation to address emerging issues and cultivate new solutions rather than manage incremental changes. The ongoing provincial policy vacuum on these matters has left the BCUC as the *de facto* lead entity, establishing the Province's energy policies despite its lack of a elected mandate to make these strategic policy determinations.

The BCUC as a *de facto* lead entity is even more concerning given that the BCUC is a captured regulator whose primary objective is advancing the commercial interests of FortisBC. Both the Deputy Chair of the BCUC and a sitting Commissioner are former senior executives of FortisBC. The legitimacy of the BCUC as a regulator depends upon its independence and a clear separation of the BCUC from those it regulates. Public confidence, therefore, demands that the appointments to the BCUC do not include former FortisBC executives. Filling the ranks of the BCUC at its highest levels with former long serving executives and senior employees of FortisBC, who are then tasked to regulate and investigate FortisBC's past and present activities that have resulted from the implementation of corporate policies and procedures which they played a role in establishing, is the opposite of regulatory independence and separation. Moreover, these corporate policies and procedures, combined with BCUC advancing the commercial interests of FortisBC under the guise of ratepayer protection, not only frustrate the GHG reduction goals, but have also resulted in a history of the BCUC saddling municipalities with onerous terms including bearing 100% of the costs of natural gas infrastructure relocations that are necessary to accommodate municipal infrastructure within municipal highways that FortisBC occupies without paying any compensation to municipalities. In effect, the BCUC has forced municipalities to subsidize the shareholders of FortisBC at the expense of the public purse and to the detriment of GHG reduction goals of municipalities and the Province.

A final point and concern is the consideration of local governments in BCUC proceedings. The City should be concerned when an agency of the province, as is the case for the BCUC, independently acts to limit the Provincially-granted jurisdiction of local governments as was the case for BCUC's Inquiry into Regulation of Municipal Energy Utilities. The BCUC does not

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have a mandate to establish policy and its regulatory mandate is limited to certain considerations. Ultimately, many aspects of the energy transition will be carried out by local governments and the BCUC does not have the purview of a provincial regulator.

For the above reasons, Attachment 3 includes a set of requests to be sent to the Premier's Office and other Ministers, asking that the Province take urgent action consistent with the Province's commitment to achieve deep GHG emission reductions. More specifically, these requests call upon the Province to:

- 1) **Bring forward legislation implementing the 2030 GHG cap on the gas sector** without further delay as committed to in the Province's CleanBC plan and recently reaffirmed by the Premier on March 14, 2023 with the launch of a new energy action framework;
- 2) **Launch an independent gas utility planning exercise** that plots a course for addressing an expected decline in throughput of gas grids and the transition of gas grids towards transporting RNG and hydrogen to sectors and/or locations that are hard to decarbonize, leading to the increased role of electrification in building heating and transport;
- 3) **Reject the use of RNG and hydrogen in new construction** to meet GHG limits in the Step Code, so that the limited and costly supply of these alternative fuels can be put to highest and best uses;
- 4) **Develop policies to assess, certify and track the GHG intensity** of RNG, hydrogen and other alternative gases;
- 5) **Reform the BCUC in the context of a changing climate** to consider, quantify and minimize the potential costs of lock-in and stranded investments when evaluating capital plans, rate setting and extension policies for gas utilities. This direction should also include greater consideration of non-pipe alternatives to marginal investments in gas grids as well as consideration of strategic opportunities to prune gas grids in conjunction with targeted electrification strategies. Finally, proceedings should be guided by a framework or set of guidelines that do not impact or limit the jurisdiction and authority of local governments without provincial direction;
- 6) **Bring forward legislation and other regulatory changes specific to the heat transition** that, among other issues, establishes a distinct BCUC regulatory framework for public district energy systems more aligned with their small scale and localized nature; and,
- 7) **Require that a minimum percentage of low-carbon methane-based fuels** (i.e. up to 100%) be produced within BC.

Attachment 3 includes further information related to the above concerns based on information and recommendation in the Climate Solutions Council's (CSC) 2022 Report. The CSC is an advisory group with a legislated mandate under the Climate Change Accountability Act to advise the Minister of Environment and Climate Change Strategy regarding plans and actions to achieve climate targets and reduce emissions and related matters.

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Financial Impact

None.

Conclusion

The report highlights and makes a case for the urgent need to implement Provincial legislation that regulates GHG emissions from gas utilities, as committed in the Province's CleanBC Plan and recently reaffirmed by the Premier on March 14, 2023. The report also details ways in which the BCUC can be reformed to better consider GHG reductions from gas utilities. In support of the recommendations, the report highlights a number of international best practices for how gas utilities are being regulated in the context of climate change. Given the importance of the issues highlighted in the report, a recommendation is also included asking Metro Vancouver, other Metro Vancouver local governments, the District of Saanich and the City of Victoria to support the recommendations in the report and send their own support to the Premier, Ministers and their local MLAs.



Peter Russell, MCIP, RPP
Director, Sustainability and District Energy
(604-276-4130)

- Att. 1: Decision of the Court of Appeal Richmond (City) v. British Columbia (Utilities Commission)
2: Best Utility Regulatory Practices
3: City of Richmond Requests for the Government of British Columbia

Attachment 1

COURT OF APPEAL FOR BRITISH COLUMBIA

Citation: *Richmond (City) v. British Columbia (Utilities Commission)*,
2022 BCCA 348

Date: 20221013
Docket: CA48336

Between:

City of Richmond

Appellant
(Applicant)

And

British Columbia Utilities Commission

Respondent
(Administrative Tribunal)

And

FortisBC Energy Inc.

Respondent
(Respondent)

Before: The Honourable Madam Justice Saunders
(In Chambers)

On appeal from: A decision of the British Columbia Utilities Commission,
dated May 9, 2022 (Order Number G-123-22).

Oral Reasons for Judgment

Counsel for the Appellant:

T. Kruger

Counsel for the Respondent, British
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T. Shoranick

Counsel for the Respondent, FortisBC
Energy Inc.:

D.G. Cowper, K.C.
M.T. Ghikas
T. Ahmed

Place and Date of Hearing:

Vancouver, British Columbia
October 6, 2022

Place and Date of Judgment:

Vancouver, British Columbia
October 13, 2022

Summary:

The application is for leave to appeal a decision of the British Columbia Utilities Commission taking jurisdiction to limit liability as between the parties. Held: The jurisdictional issue is sufficiently arguable as to meet the criteria of Queens Plate Dev. Ltd. v. Vancouver Assessor, Area 09 (1987), 16 B.C.L.R. (2d) 104. Leave to appeal is granted.

[1] **SAUNDERS J.A.:** The City of Richmond seeks leave to appeal a decision of the British Columbia Utilities Commission acting under the *Utilities Commission Act*, R.S.B.C. 1996, c. 473, on issues between the City and FortisBC Energy Inc.

[2] The issues of appeals to this court are governed by s. 101(1)(b) of the *Act*, which requires leave to appeal:

101 (1) An appeal lies from

...

(b) any other decision or order of the commission to the Court of Appeal, with leave of a justice of that court.

[3] The application for leave to appeal, in turn, is guided by the factors listed in *Queens Plate Dev. Ltd. v. Vancouver Assessor, Area 09* (1987), 16 B.C.L.R. (2d) 104. For purposes of this application, the key factors are Mr. Justice Taggart's points: (a), (b)(i), and (d):

(a) whether the proposed appeal raises a question of general importance as to the extent of jurisdiction of the tribunal appealed from (*Chevron Can. Ltd. v. Vancouver Assessor, Area 09*, [1986] B.C.W.L.D. 2210, No. CA005532, 17th April 1986 (not yet reported));

(b) whether the appeal is limited to questions of law involving:

(i) the application of statutory provisions (*Allard Contr. Ltd. v. Coquitlam Assessor, Area 12*, [1986] B.C.W.L.D. 2601, No. CA003122, 29th March 1985 (not yet reported));

...

(d) whether there is some prospect of the appeal succeeding on its merits (*Clarke v. Supt. of Brokers* (1985), 67 B.C.L.R. 294, 23 D.L.R. (4th) 315 (C.A.), and *Re Wasmuth* (1984), 58 B.C.L.R. 17 (C.A.)); although there is no need for a justice before whom leave is argued to be convinced of the merits of the appeal, as long as there are substantial questions to be argued;

[4] In the impugned decision, the Commission declined to reconsider its earlier affirmation of jurisdiction under s. 32 of the *Act* to impose an order limiting the

liability of Fortis to the City, in tort, for loss resulting from Fortis' work directed by the Commission to be performed.

[5] The work concerned offsetting gas mains to enable completion by the City of drainage, sewer, water main and sanitary sewer upgrades in the Burkeville area. The question sought to be raised on appeal is whether ss. 32 and 36 of the *Act* give the jurisdiction propounded by the Commission. Relevant is also s. 92.

[6] Fortis resists the application. The question of liability, it says, is intimately tied to establishment of rates and the recent decision of this court in *Coquitlam (City) v. British Columbia (Utilities Commission)*, 2021 BCCA 336, applies, with the result that the Commission has jurisdiction to make the impugned order.

[7] While the proposed appeal raises a question of jurisdiction, and is limited to a question of law involving the application of the *Act*, Fortis says it cannot meet the merits threshold as the City cannot succeed on the authority of *Coquitlam*. In the vernacular, Fortis says the appeal is a dead duck. In support of that submission, Fortis also refers to *ATCO Gas & Pipelines Ltd. v. Alberta (Energy & Utilities Board)*, 2006 SCC 4.

[8] The City contests Fortis' view of *Coquitlam*. It says *Coquitlam* addressed the jurisdiction of the Commission to order decommissioning and abandonment of a line. That circumstance, says the City, is materially different from orders shielding Fortis from liability.

[9] It seems to me that the application of *Coquitlam* to the circumstances here is sufficiently questionable that the City should have the opportunity to advance its position on that question fully before a division of this court.

[10] Going further into matters that may engage this court, should a division conclude that *Coquitlam* does not answer the jurisdictional question, the questions of statutory interpretation will follow. Those questions, absent *Coquitlam*, have substance, are important, and have the degree of merit required for the granting of leave to appeal.

[11] The application of the City is allowed.

"The Honourable Madam Justice Saunders"

Attachment 2

Best Utility Regulatory Practices

- a) *Prioritizing “non-pipe alternatives” over sustaining, upgrading or expanding gas grids. This approach seeks to implement deep retrofit and fuel-switching programs within defined areas so as to enable the decommissioning of less cost-effective portions of the gas grid, reducing overall systems operations costs.*

California: On December 1, 2022, the California Public Utilities Commission (CPUC) adopted a new framework to comprehensively review utility natural gas infrastructure investments in order to help the state transition away from natural gas-fueled technologies and avoid stranded assets in the gas system.⁵ Key elements of the decision:

- Utilities must seek CPUC approval of natural gas infrastructure projects of \$75 million or more or those with significant air quality impacts.
- Utility applications must demonstrate the need for the project and provide information on projected financial impacts on customers and a summary of engagement with local communities likely to be impacted. Applications would also trigger a California Environmental Quality Act (CEQA) review by the CPUC.
- Emergency projects, routine repair and maintenance projects, and projects expected to be in service by January 1, 2024 are exempt from the new review process.
- To advance transparency in long-term gas system planning, the decision directs utilities to file annual reports detailing planned long-term infrastructure projects exceeding \$50 million over the next 10 years. The reports must include a detailed description of the project, projected capital expenditures, cost drivers, and environmental implications.
- For projects planned to start within five years, utilities must provide information on non-pipeline alternatives, projected operational costs, and reliability benefits from the project.

This new framework is modeled on the CPUC’s existing framework for review of significant electric infrastructure projects. Previously, all natural gas infrastructure projects were considered in utility General Rate Cases, where individual natural gas projects can get buried in the extensive applications without meaningful environmental or strategic reviews. The framework focusses on avoiding potentially stranded large incremental investments in gas grid infrastructure. It is not yet clear if this framework will be sufficient on its own to minimize stranded investments as there are also questions about the obligation to serve and minimizing safety issues during any transition.

Separately, the state is also beginning to confront the concept of tactical decommissioning of portions of the state’s gas infrastructure, as a means of reducing the cost of operating and maintaining the gas grid and managing the transition. This has not yet been tested at scale. Instead, the state is undertaking pilot projects to fill knowledge gaps. In 2021 the CEC awarded two EPIC grants for consortia to conduct pilot projects of strategic pathways and analytics for tactical decommissioning of portions of the natural gas infrastructure within the service areas of Southern California Gas Company (SoCalGas) and Pacific Gas & Electric Company (PG&E).

⁵ The proposal voted on is available at docs.cpuc.ca.gov/PublishedDocs/Published/G000/M499/K396/499396103.PDF. Documents related to the proceeding are available at apps.cpuc.ca.gov/p/R2001007

These pilots are still in progress. The team for the pilot project in PG&E's service area includes East Bay Community Energy (EBCE), Energy and Environmental Economics (E3), and Gridworks. PG&E is assisting the team with technical insights into their gas and electric systems.⁶ Elements of the pilot include:

- Develop a replicable framework to identify electrification opportunities that support the objective of gas system cost savings through tactical decommissioning.
- Engage local communities to share their perspectives and priorities related to building electrification and gas decommissioning in order to produce a community needs assessment.
- Identify up to three candidate pilot sites, including at least one within a disadvantaged community. Produce deployment plans for the recommended pilots, including a proposal for community stakeholder engagement.
- Conduct targeted education and outreach to stakeholders and policymakers within and beyond California to motivate action, including lessons learned at key milestones and final work products.

Northeastern US : National Grid, a natural gas distributor operating in New York, Massachusetts and Rhode Island, actively seeks non-pipeline alternatives (NPA) which would allow it to avoid or defer upgrades to the natural gas system. It has already completed several NPA projects and is seeking several new opportunities based on system needs⁷. Other gas utilities in New York state, including Con Edison and NYSEG, have established similar programs to defer major investments⁸. These initiatives seem to be largely driven by the companies themselves rather than by regulation. In general, the northeast US has an older natural gas network than B.C. with more need for major upgrades and replacements.

a. Limiting or banning new gas connections, as has already been done in a number of US cities and parts of Europe;

California: The updated state building code requires, as a baseline, the use of electric heat pumps for either space heating or DHW. Builders can forego installing a heat pump but face greater energy efficiency requirements as a result. This is expected to result in most homes constructed from 2023 onwards to have no gas grid connection⁹. Separately, several California communities have enacted bans on new gas grid connections for new construction within their boundaries.

Washington State: Updates to the state's building code mean that new multi-family residential and commercial construction will be required to have all-electric heating and DHW systems as of 2023¹⁰. Previously, individual municipalities in Washington had enacted similar policies.

⁶ <https://gridworks.org/2022/06/tactical-gas-decommissioning-project-overview/>

⁷ <https://www.nationalgridus.com/Business-Partners/Non-Pipeline-Alternatives/Third-Party-Opportunities>

⁸ <https://info.aee.net/hubfs/Sarah%20S%20uploads/NPAs.pdf>

⁹ <https://www.nrdc.org/media/2021/210811-0>

¹⁰ <https://www.seattletimes.com/seattle-news/environment/wa-building-council-votes-to-require-heat-pumps-in-new-homes-and-apartments/>

Quebec: As of 2023, oil-fired furnaces cannot be replaced with new fossil fuel-based heating systems in Quebec. This is expected to help shift existing oil-heated buildings to electrification¹¹.

- b. Requiring accelerated depreciation rates for new methane-based fuel infrastructure, reflecting the risk that these assets will need to be retired early and signaling clearly to gas utilities that they will bear risk for their investments, for example in the UK and Australia;*

California: As of early 2023, Pacific Gas & Electric has a rate application before the California Public Utilities Commission which includes accelerated depreciation for its gas distribution grid, driven in part by the possibility of the grid being rendered obsolete by California's Net Zero by 2045 commitment. The CPUC has yet to rule on this request¹².

UK: In 2011 the UK national regulator, Ofgem, established a new performance-based model to regulate network costs for gas and electricity, referred to as the RIIO model or Revenues = Incentives + Innovation + Output. One of the inputs to the model is an asset life and depreciation profile for gas and electricity utilities (both transmission and distribution segments). At the time, Ofgem established an asset life of 45 years for gas distribution but also uses a front-end loaded depreciation profile for these assets which is different from gas transmission and also electricity. This allocates a larger share of depreciation charges to the initial period of depreciation. The effect of this decision is that ~75% of new gas distribution assets are recovered in the first 22 years of use. For comparison, under straightline depreciation rates of 50 – 60 years typically seen for B.C., only 35 – 45% of the asset is recovered by Year 22. The increased depreciation means current ratepayers pay more of these assets affecting economic comparisons with alternatives and there is less chance of stranded assets being borne by a smaller and captive group of customers in future.

Australia: In 2021, the Australian Energy Regulator (AER) issued a decision allowing a gas distribution utility to include accelerated depreciation for rate setting purposes so as to reduce bill impacts on future customers due to future declines in gas demand¹³. Other Australian gas utilities have since proposed similar rate treatment.

- d. Establishing local “heat planning” processes to coordinate and manage the optimal transition away from gas and towards alternative heating solutions including electrification and low carbon district energy. This could also include consideration of strategic investments to upgrade portions of the gas grid to hydrogen (i.e. to individual users or to supply peaking energy intense users). Staff completed such heat mapping to as part of the City Centre District Energy Utility due diligence work.*

Denmark: Denmark pioneered the concept of top-down policies coupled with bottom-up power, which is often credited with the extensive and sustained growth of district energy in the country and rapid transition to renewables in heating. The 1979 *Danish Heat Supply Act* provided the

¹¹ <https://www.cbc.ca/news/canada/montreal/quebec-bans-oil-heating-1.6252420>

¹² “Opening Brief on Depreciation of Pacific Gas and Electric Company (U39M)”, CPUC Proceeding A2106021.

¹³ “Final Decision – Evoenergy Access Arrangement 2021 to 2026, Overview April 2021”. Australian Energy Regulator, pp. 37-39. <https://www.aer.gov.au/system/files/AER%20-%20Final%20decision%20-%20Evoenergy%20access%20arrangement%202021-26%20-%20Overview%20-%20April%202021.pdf>

legal framework for municipal heat plans and planning. Under the framework, municipalities are responsible for approving district energy projects, subject to national standards for feasibility which includes requirement for lifecycle costing, evaluation of both financial and non-financial considerations, common evaluation methodologies, and standardization of some common assumptions.

Others: While frameworks and requirements for local heat planning have existed for many years in Denmark, it is now showing up in other jurisdictions. Three examples where heating and cooling plans have recently become mandatory include: the State of Baden Württemberg in Germany (under its revised 2021 Heating Climate Protection Act); The Netherlands (under the 2019 Dutch National Climate Agreement); and Scotland (under the 2021 Heat Network Act and 2022 Local Heat and Energy Efficiency Strategies (LHEES) statutory order.¹⁴ Some of these mandates allow municipalities to implement mandatory connection in district energy priority zones (for certain types of buildings and with conditions).

The European Commission has proposed updating its Energy Efficiency Directive to require Member States to make heating and cooling plans mandatory for municipalities above a threshold of 50,000 inhabitants. Building on the direction from the European Commission and also the experience of several states which already have mandatory heat planning (e.g. Baden Württemberg, above, and also Schleswig-Holstein), the federal government of Germany is planning to introduce a national mandate for municipal heat plans in cities over 10,000 to 20,000 inhabitants (thresholds will be determined by states). The obligation would be implemented by states (which regulate cities), but it would come with federal law to permit cities to request the necessary data from energy suppliers and others in preparing heat plans. These heat plans are to include an inventory analysis, an analysis of potential, target scenarios and an action strategy. It is expected heat plans will include, among other things, the creation of heat registers (including waste heat sources), the monitoring of heat network expansion, the decarbonization of existing heat networks, the securing of areas for energy generation and storage, and concepts refurbishing of public buildings.¹⁵

The UK (which is no longer subject to EU requirements after Brexit) has recently introduced national requirements for municipal heat zoning as part of its recent Energy Security Bill (see Appendix B). A pilot program for to test a heat zoning methodology is under way. A consultation is planned for later this year on the detail of regulations for heat network zoning. In early 2022, the UK government set up A Heat Network Zoning Pilot Program (HNZPP) to test a methodology for heat network zoning in ~28 English cities and towns of varying sizes. The results of the pilot program are expected in early 2023.¹⁶

¹⁴ <https://energy-cities.eu/wp-content/uploads/2022/06/Factsheet-1-Final-1.pdf>

¹⁵ <https://www.bayern-innovativ.de/en/page/draft-law-on-municipal-heat-planning-by-the-end-of-the-year>

¹⁶ <https://www.gov.uk/government/publications/heat-networks-zoning-pilot#:~:text=The%20zoning%20pilot%20aims%20to,mandating%20powers%20and%20market%20support>

Attachment 3

City of Richmond Requests of the Government of British Columbia

Summary of issues to be included in the letters to Government of BC elected officials, as listed in the report:

- 1) **Bring forward legislation implementing the 2030 GHG cap on the gas sector** without further delay as committed to in the Province's CleanBC plan and recently reaffirmed by the Premier on March 14, 2023 with the launch of a new energy action framework;
- 2) **Launch an independent gas utility planning exercise that plots a course for addressing an expected decline in throughput of gas grids** and the transition of gas grids towards transporting RNG and hydrogen to sectors and/or locations that are hard to decarbonize, consistent with the Province's 2030, 2040 and 2050 GHG emission reduction targets, all leading to the increased role of electrification in building heating and transport.
- 3) **Reject the use of RNG and hydrogen in new construction to meet GHG limits in the Step Code**, so that the limited and costly supply of these alternative fuels can be put to highest and best uses.
- 4) **Develop policies to assess, certify and track the GHG intensity of RNG, hydrogen and other alternative gases.**
- 5) **Reform the BCUC in the context of a changing climate to consider, quantify and minimize the potential costs of lock-in and stranded investments** when evaluating capital plans, rate setting and extension policies for gas utilities. This direction should also include greater consideration of non-pipe alternatives to marginal investments in gas grids as well as consideration of strategic opportunities to prune gas grids in conjunction with targeted electrification strategies. Finally, proceedings should be guided by a framework or set of guidelines that do not impact or limit the jurisdiction and authority of local governments without provincial direction;
- 6) **Bring forward legislation and other regulatory changes specific to the heat transition** that, among other issues, establishes a distinct BCUC regulatory framework for public district energy systems more aligned with their small scale and localized nature;
- 7) **Require that a minimum percentage of low-carbon methane-based fuels (i.e. up to 100%) be produced within BC.**

More information to be included as an attachment in the letters:

- 1) **Bring forward legislation implementing the 2030 GHG cap on the gas sector without further delay** as committed to in the Province's CleanBC plan and recently reaffirmed by the Premier on March 14, 2023 with the launch of a new energy action framework;
- 2) **Launch an independent gas utility planning exercise that plots a course for addressing an expected decline in throughput of gas grids** and the transition of gas grids towards transporting RNG and hydrogen to sectors and/or locations that are hard to

decarbonize, consistent with the Province's 2030, 2040 and 2050 GHG emission reduction targets, all leading to the increased role of electrification in building heating and transport.

- 3) **Reject the use of RNG and hydrogen in new construction to meet GHG limits in the Step Code, so that the limited and costly supply of these alternative fuels can be put to highest and best uses.** RNG volumes are very limited and RNG may be the only option for decarbonizing heavy industry and some portions of the transportation sector. There are affordable low-carbon alternatives for heating new buildings. Heating new buildings is not the highest and best use of limited RNG resources. In addition, prioritizing electric heat pumps, including district energy heat pump applications, over generating hydrogen gas from electricity is a more efficient use of BC's electricity resources. The Climate Solutions Council identifies these issues as *Opportunity #7: Electrifying our Economy and Communities* in their 2022 Annual Report.
- 4) **Develop policies to assess, certify and track the GHG intensity of RNG, hydrogen and other alternative gases** B.C. needs a robust and credible system for assessing the GHG intensity of renewable gases and ensuring these fuels do not contribute further to GHG emissions. Key issues include avoiding double-counting GHG credits and minimizing fugitive methane emissions.
- 5) **Reform the BCUC in the context of a changing climate to consider to:**
 - consider and minimize lock-in and stranded investment risks when evaluating capital plans, rate setting and extension policies for gas utilities including;
 - ensuring extension policies of gas utilities take into account reduced consumption and stringent GHG limits for new construction;
 - using different depreciation rates and allowable returns on equity for new investments commensurate with the uncertainty over useful life and stranding risk;
 - ensuring non-pipe alternatives are adequately considered as alternatives to maintaining and/or upgrading gas infrastructure, including local decommissioning of gas infrastructure in favour of electrification or district energy; and
 - considering provincial policy and credible independent studies into the future role of hydrogen when considering hydrogen or hydrogen-ready infrastructure
 - proceedings should be guided by a framework or set of guidelines that do not impact or limit the jurisdiction and authority of local governments without provincial direction.

The Climate Solutions Council identifies these issues as *Opportunity #7: Electrifying our Economy and Communities* in their 2022 Annual Report, asking the Province to identify an appropriate role for the BCUC in supporting BC's clean energy transition.

- 6) **Bring forward legislation and other regulatory changes specific to the heat transition similar to recent initiatives implemented or proposed in the UK, Netherlands, Germany, France and New York State, among others, which would among other things:**
 - recognize the unique role for district energy systems in the energy transition;

- establish a distinct BCUC regulatory framework for public district energy systems that is more aligned with their small scale and localized nature;
 - provide incentives and resources to support the development of local heat plans to coordinate and optimize incremental investments in gas, electric and district energy infrastructure, as well as spatially targeted retrofit and fuel switching programs and incentives.
 - provide incentives and fairer tax treatment for low-carbon district energy systems, including addressing the unequal burden from property taxes and PST on these systems
- 7) **Require that a minimum percentage of low-carbon methane-based fuels (i.e. up to 100%) be produced within BC.** Currently there is no requirement that low-carbon gases be produced and procured within B.C. and as a result, FortisBC has sought out low-cost supply in other provinces and in the US. This may help reduce renewable gas prices but it also limits the ability of B.C. workers to benefit from investments in new low-carbon gas production. Procuring out-of-Province gases is a risk because since they are limited resources and it is anticipated that net-zero state- or federal-level commitments in other jurisdictions are likely to affect long-term supply and prices for consumers in B.C. Mandating that a minimum share of gas utilities' low-carbon gases be produced within B.C. would also drive employment opportunities in B.C. and manage the impacts of the energy transition on B.C.'s workforce. The Climate Solutions Council identifies these issues as *Opportunity #8: Minimizing Reliance on Offsets* in their 2022 Annual Report.



550 Poirier Street, Coquitlam, BC Canada V3J 6A7 • Phone: 604-939-9201 • Fax: 604-939-6758

June 22, 2023

Raul Allueva, City Manager
City of Coquitlam
managersoffice@coquitlam.ca

Karen Elrick, Chief Administrative Officer
Village of Anmore
karen.elrick@anmore.com

Tim Savoie, City Manager
City of Port Moody
tsavoie@portmoody.ca

Paula Richardson, Chief Administrative Officer
Village of Belcarra
prichardson@belcarra.ca

Rob Bremner, Chief Administrative Officer
City of Port Coquitlam
bremnerr@portcoquitlam.ca

Dear Chief Administrative Officers and City Managers:

Re: 2023 Eligible School Sites Proposal Resolution

The district's 2023 Eligible School Site Proposal (ESSP) Resolution was passed by the Board of Education on June 20, 2023.

In this package, you will find a copy of the resolution along with the corresponding schedules for acceptance.

Pursuant to the Act, local governments have 60 days to either:

1. Pass a resolution accepting the Board's proposed eligible school site requirements; or
2. Respond in writing to the Board indicating that it does not accept the Board's proposed site requirements by listing each school site it objects and the reasons for the objection.

If no response is received within 60 days from the date, which the Board of Education passed the resolution, the legislation states that the local government will have deemed to accept the proposal. An amended capital bylaw with the new SSAC rates will be adopted by the Board of

Education in September 2023, giving the local governments a 60-day grace period before the bylaw will come into effect.

Should you have any questions on the above, please contact myself or Kimberley Wakil, Manager of Financial Services, at 604-939-9201.

Yours truly,

SCHOOL DISTRICT NO. 43 (COQUITLAM)

A handwritten signature in black ink, appearing to read 'Randy Manhas', with a long horizontal stroke extending to the right.

Randy Manhas
Secretary-Treasurer/CFO

Attach: ESSP Resolution; Schedule A; Schedule B

cc: Nita Mikl, Assistant Secretary-Treasurer
Ivano Cecchini, Executive Director – Facilities and Planning Services
Kimberley Wakil, Assistant Director, Financial Services

**Board of Education of
School District No. 43 (Coquitlam)**

2023 Eligible School Sites Resolution

The Eligible School Sites Proposal is a required component of the capital plan submission, which must be passed annually by Board resolution and referred to local governments in the District for acceptance pursuant to the *Local Government Act*.

Pursuant to the Act, the school district has consulted with local governments with respect to the following information:

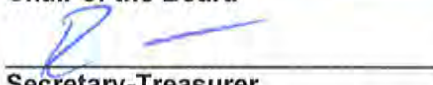
- 1) Projections by municipalities of the number of eligible development units to be authorized or created in School District No. 43 (Coquitlam) in the 10 year time frame, 2023-2033, pursuant to Section 142 of the School Act for school site acquisition planning (Schedule 'A' Table A-1 and A-2 attached);
- 2) A projection of the number of children of school age, as defined in the School Act, that will be added to the school district as the result of the eligible development units projected in paragraph (1) (Schedule 'A' Table A-3, A-4 attached);
- 3) The approximate size and number of school sites required to accommodate the number of children projected under paragraph (2) (Schedule 'B' attached); and
- 4) The approximate location and value of the school sites referred to in paragraph (3) (Schedule 'B' attached).

WHEREAS the Board of Education of School District No. 43 (Coquitlam) has consulted with representatives from the development industry and staff for the City of Coquitlam, City of Port Coquitlam, City of Port Moody, Village of Anmore and Village of Belcarra on these matters;

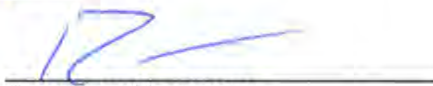
IT IS RESOLVED THAT:

- 1) Based on information from local government, the Board of Education of School District No. 43 (Coquitlam) estimates that there will be 29,245 **new development units** constructed in the School District over the next 10 years (Schedule 'A');
- 2) These 29,245 new development units will be home to an estimated 5,911 **school age children** (Schedule 'A');
- 3) The School Board expects that **6 new school sites**, over the 10 year period, will be required as a result of the growth within the School District as represented in Schedule 'B';
- 4) According to Ministry of Education and Child Care site standards presented in Schedule 'B' the sites will require a total of **11.1 hectares** of land. These sites are expected to be purchased within 5 years and, at current serviced land cost, the land will **cost approximately \$192,724,900**;
- 5) The Eligible School Site Proposal be incorporated in the 5 Year Facility Capital Budget **2024-2028** and submitted to the Ministry of Education and Child Care.


Chair of the Board


Secretary-Treasurer

I HEREBY CERTIFY this to be a true original of a resolution passed by the Board of Education of School District No. 43 (Coquitlam) at a regular meeting held June 20, 2023.


Secretary-Treasurer

2023-2033
SCHEDULE 'A'

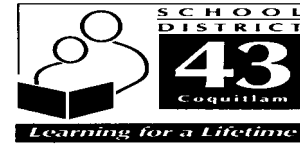


Table A-1: Growth Forecasts -Housing Units By Type - 10 year forecast by school year:

Estimates by school year	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032	2032-2033	10 yr. Total	Total Units
VILLAGE OF ANMORE												210
Single Detached	21	21	21	21	21	21	21	21	21	21	210	
Mobile Home	0	0	0	0	0	0	0	0	0	0	-	
Row House	0	0	0	0	0	0	0	0	0	0	-	
Low Rise Apart./suites	0	0	0	0	0	0	0	0	0	0	-	
High Rise Apart.	0	0	0	0	0	0	0	0	0	0	-	
VILLAGE OF BELCARRA												30
Single Detached	3	3	3	3	3	3	3	3	3	3	30	
Mobile Home	0	0	0	0	0	0	0	0	0	0	-	
Row House	0	0	0	0	0	0	0	0	0	0	-	
Low Rise Apart.	0	0	0	0	0	0	0	0	0	0	-	
High Rise Apart.	0	0	0	0	0	0	0	0	0	0	-	
CITY OF COQUITLAM												19,650
Single Detached	25	30	35	40	40	35	30	25	20	20	300	
Mobile Home	0	0	0	0	0	0	0	0	0	0	-	
Row House	325	300	300	300	300	300	300	300	250	250	2,925	
Low Rise Apart./suites	350	325	300	275	275	275	250	250	250	250	2,800	
High Rise Apart.	1350	1400	1400	1400	1375	1375	1350	1350	1325	1300	13,625	
City OF PORT COQUITLAM												2,600
Single Detached	30	30	30	30	30	30	30	30	30	30	300	
Mobile Home	0	0	0	0	0	0	0	0	0	0	-	
Row House	50	50	50	50	50	50	50	50	50	50	500	
Low Rise Apart./suites	180	180	180	180	180	180	180	180	180	180	1,800	
High Rise Apart.	0	0	0	0	0	0	0	0	0	0	-	
CITY OF PORT MOODY												6,755
Single Detached	15	15	15	15	15	15	15	15	15	15	150	
Mobile Home	0	0	0	0	0	0	0	0	0	0	-	
Row House	28	12	39	44	30	30	30	30	30	30	303	
Low Rise Apart./suites	337	456	1001	772	496	240	240	240	240	240	4,262	
High Rise Apart.	0	0	0	220	220	320	320	320	320	320	2,040	

Table A-2: SCHOOL DISTRICT #43 - ELIGIBLE DEVELOPMENT UNIT ANNUAL TOTALS BY TYPE

Estimates by school year	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032	2032-2033	10 yr. Total	29,245
Single Detached	94	99	104	109	109	104	99	94	89	89	990	
Mobile Home	-	-	-	-	-	-	-	-	-	-	-	
Row House	403	362	389	394	380	380	380	380	330	330	3,728	
Low Rise Apart./suites	867	961	1,481	1,227	951	695	670	670	670	670	8,862	
High Rise Apart.	1,350	1,400	1,400	1,620	1,595	1,695	1,670	1,670	1,645	1,620	15,665	
Total Units	2,714	2,822	3,374	3,350	3,035	2,874	2,819	2,814	2,734	2,709	29,245	

Table A-3: YIELD CALCULATIONS BY MUNICIPALITY - SD#43

ESTIMATED NUMBER OF NEW SCHOOL AGED POPULATION BASED ON AVERAGE YIELD RATIO ESTIMATES FOR NEW HOUSING IN MUNICIPALITY

Estimates by school year	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032	2032-2033	10 Yr. Yield	Yield Ratio
VILLAGE OF ANMORE												
Single Detached	11	11	11	11	11	11	11	11	11	11	105	0.5
Mobile Home	-	-	-	-	-	-	-	-	-	-	-	n/a
Row House	-	-	-	-	-	-	-	-	-	-	-	n/a
Low Rise Apart./suites	-	-	-	-	-	-	-	-	-	-	-	n/a
High Rise Apart.	-	-	-	-	-	-	-	-	-	-	-	n/a
Total Yield School Age 5-19	11	11	11	11	11	11	11	11	11	11	105	
Estimates by school year	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032	2032-2033	10 Yr. Yield	Yield Ratio
VILLAGE OF BELCARRA												
Single Detached	2	2	2	2	2	2	2	2	2	2	15	0.5
Mobile Home	-	-	-	-	-	-	-	-	-	-	-	n/a
Row House	-	-	-	-	-	-	-	-	-	-	-	n/a
Low Rise Apart./suites	-	-	-	-	-	-	-	-	-	-	-	n/a
High Rise Apart.	-	-	-	-	-	-	-	-	-	-	-	n/a
Total Yield School Age 5-19	2	2	2	2	2	2	2	2	2	2	15	
Estimates by school year	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032	2032-2033	10 Yr. Yield	Yield Ratio
CITY OF COQUITLAM												
Single Detached	13	15	18	20	20	18	15	13	10	10	150	0.5
Mobile Home	-	-	-	-	-	-	-	-	-	-	-	n/a
Row House	130	120	120	120	120	120	120	120	100	100	1,170	0.4
Low Rise Apart./suites	42	39	36	33	33	33	30	30	30	30	336	0.12
High Rise Apart.	257	266	266	266	261	261	257	257	252	247	2,589	0.19
Total Yield School Age 5-19	441	440	440	439	434	432	422	419	392	387	4,245	
Estimates by school year	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032	2032-2033	10 Yr. Yield	Yield Ratio
CITY OF PORT COQUITLAM												
Single Detached	15	15	15	15	15	15	15	15	15	15	150	0.5
Mobile Home	-	-	-	-	-	-	-	-	-	-	-	n/a
Row House	18	18	18	18	18	18	18	18	18	18	175	0.35
Low Rise Apart./suites	29	29	29	29	29	29	29	29	29	29	288	0.16
High Rise Apart.	-	-	-	-	-	-	-	-	-	-	-	n/a
Total Yield School Age 5-19	61	61	61	61	61	61	61	61	61	61	613	
Estimates by school year	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032	2032-2033	10 Yr. Yield	Yield Ratio
CITY OF PORT MOODY												
Single Detached	8	8	8	8	8	8	8	8	8	8	75	0.5
Mobile Home	-	-	-	-	-	-	-	-	-	-	-	n/a
Row House	17	7	24	27	18	18	18	18	18	18	185	0.61
Low Rise Apart./suites	37	50	110	85	55	26	26	26	26	26	469	0.11
High Rise Apart.	-	-	-	22	22	32	32	32	32	32	204	0.10
Total Yield School Age 5-19	62	65	141	141	102	84	84	84	84	84	933	

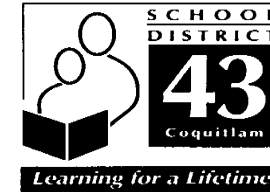
Table A-4: Total School District #43(Coquitlam) School Age Yield (New Development)

Estimates by school year	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032	2032-2033	10 Yr. Yield	Yield Ratio
Single Detached	47	50	52	55	55	52	50	47	45	45	495	0.50
Mobile Home	-	-	-	-	-	-	-	-	-	-	-	-
Row House	165	145	161	164	156	156	156	156	136	136	1,530	0.41
Low Rise Apart./suites	108	118	175	147	116	88	85	85	85	85	1,093	0.12
High Rise Apart.	257	266	266	288	283	293	289	289	284	279	2,793	0.18
Total Yield School Age 5-19	576	578	654	654	610	589	579	577	549	545	5,911	0.20
Estimated new SD#43 students	484	486	550	549	512	495	486	484	461	457	4,965	0.17
												Average

Does not include projections for potential development which are in the ALR and require BC Land Commission approval.

Does not include projections for potential development which may require major changes to an Official Community Plan.

The annual estimate of new development units for each category is based on a ten year average distribution of the ten year total expectation for new housing, provided by each municipality



SCHEDULE 'B' Capital Projects Requiring New Sites

Table B-1: ELIGIBLE SCHOOL SITES REQUIRING APPROVAL - 2024-2028 Five Year Capital Plan

School Site #	112259	109228					TOTALS
Basis of Costs	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate
Type of Project	New	New	New	New	New	New	
Grade Level	Elementary	Elementary	Elementary	Elementary	Elementary	Elementary	
Approximate Location	Riverwalk	Marigold	Port Moody Centre	Fraser Mills	Coquitlam City Centre	Hazel Coy	
Proposed Capacity	455	455	455	455	455	455	2,730
Approx. Size (ha)	2.5	2.5	1.2	1.2	1.2	2.5	11.1
Market Land Costs	\$ 28,380,300	\$ 28,380,300	\$ 35,864,000	\$ 26,000,000	\$ 45,720,000	\$ 28,380,300	192,724,900

Total Acquisition Sites to be included in the 2024-2028 Five Year Capital Plan = 6

Proposed school site sizes are based on an assumption that some sites may be joint school and park sites. Stand alone school sites would require greater site area and market land cost.

Note: This Schedule includes proposed sites only. Approved eligible school sites since the inception of the ESSP are not included on this list.

Note: Approx size of each site has been updated to reflect update to date requirements for a elementary and middle school requirement.

June 8, 2023

Re: Community preparedness for hot and smoky periods during summer 2023

Dear Mayor and Council,

The heat and smoke season has had an early start in 2023, and we are sharing our yearly communication to assist in preparation. As experienced in summer 2021 and currently visible in wildfires across the country, the impacts from both extreme heat and wildfire smoke events can have devastating impacts. These impacts are expected to worsen without adaptation and mitigation measures. Building resilience requires an all-of-society approach, with many organizations working to minimize negative impacts on our communities.

Relevant to heat event preparation, the provincial BC Heat Alert and Response System is no longer a pilot and is largely similar to last year, with two notable changes:

- Howe Sound has been decoupled from Metro Vancouver and the Fraser Valley for heat alerts
- After the first three heat events in a season in a given forecast region, the criteria for Heat Warnings may become more stringent to account for acclimatization

New resources and messaging have been created to support your iterative planning for heat and smoke. Fraser Health Healthy Environments team can help support your municipality in developing or updating municipal heat and smoke response plans. Some elements we recommend including are:

- A **designated point of contact between the municipality and the health authority** with respect to heat and wildfire smoke events.
- Pre-season planning with key partners, including first responders, your health authority, and non-governmental organizations in your area, with a focus on most susceptible populations.
- **Communication plans to be activated in the event of heat or air quality alerts** to inform the public and key partners about the anticipated event, possible impacts, protective actions, and municipal resources (e.g. encouraging neighbours to check in on one another, sharing an online map or other information on municipal cool/cleaner air spaces).
 - Draft messaging is available from the [BC Government](#) or Fraser Health Authority (FHA).
 - [Check-in guides](#) can be shared via partners and social media channels
 - Staff and partner organizations who work with residents who are not comfortable in English can connect those residents to [extreme weather checks from MOSIAC](#) (most Lower Mainland communities)
 - Sharing locations of cooling centres, where applicable, with non-governmental organizations and the public can help ensure spaces are well-used, especially if advertised ahead of season.
- A **phased or scalable response plan** that can be tailored to the given situation and could include responses such as opening cool/cleaner air spaces, expanding access to drinking water in public spaces, expanding hours of air conditioned facilities, rescheduling events, etc. Available guidance documents include:
 - [Guidance on how to create a municipal heat plan](#) (BC Centre for Disease Control, 2017)
 - [Guidance on cleaner air spaces during wildfire smoke events](#) (Health Canada, 2020)

Most funding for extreme heat preparedness in your communities require local government to be partners/ applicants. Partnering with organizations already connected to susceptible residents can be effective in expanding your reach.

Long-term heat and wildfire smoke adaptation strategies can include:

- **Land use planning policies (e.g. urban forest and tree canopy cover related) that reduce urban heat islands** and support people's use of cool areas such as shaded parks
- Increasing **public amenities with energy efficient air conditioning and good air filtration**
- Work with housing providers and non-profit organizations to ensure that there are spaces where people who are unhoused or otherwise marginalized feel safe and welcome to access during extreme weather, ideally in areas people are already located.
- Increasing permanent drinking water access points in public spaces.
- Consider amending or creating **standards of maintenance by-laws to require adequate air conditioning/cooling and enhanced air filtration** for part or all of a building.

Funding for emergency/ extreme heat preparedness is available through [United Way](#) and [UBCM](#).

Informational resources available:

New/curated resources:

- Emergency Management BC (EMBC) has produced a [PreparedBC Extreme Heat Guide](#) for the public.
- Changes to the BC-wide heat alert levels and criteria, as well as standardized actions corresponding with heat alert levels, is now available in [BC HARS](#) documentation.
- [Wildfire Smoke during Heat Events](#) (New, BCCDC 2023)
- New evidence about potential risks of fans from FHA: [Fan FAQ](#) and [infographic](#)
- Information to support particularly susceptible populations
 - [Extreme Heat](#) and [Smoke](#) infographics have been updated (FHA/VCH) *multiple languages
 - [Health checks during Extreme Heat](#) (NCCEH) *multiple languages
 - [Heat preparation for Seniors and People with Chronic Illnesses](#) (FHA/ VCH) *multiple languages
 - [Be prepared Wallet card](#) *multiple languages
 - [Heat Health Recommendations for Landlords and Stratas](#) (FHA/ VCH)
 - [Supporting Those with Schizophrenia during Extreme Heat](#) (BCCDC)
 - [How to be a Heat/Smoke Healthy Business Leader](#) (FHA)
 - [Extreme Heat Preparedness for those who use Substances](#) (Toward the Heart)

Coming soon:

- Medications and Heat Interaction Guide (Gov of BC) (estimated June 2023)
- Guidance for outdoor events for smoke and heat (VCH) (estimated June 2023)
- Pregnancy and Wildfire Smoke (Gov of BC) (estimated June 2023)
- Cooling Shelter Guidance for local governments and non-profits (VCH) (estimated June 2023)
- Protecting communities during wildfire smoke events: Guidance for Community Organizations, Local Authorities, and First Nations Communities (FHA) (July 2023)
- Best practices guidance for local government heat response (Gov of BC) (estimated June 2023)

As part of our own response to heat and wildfires, Fraser Health has undertaken a number of initiatives, including seasonal readiness planning for health authority programs and facilities, the development of new resources, assisting in policy development, collaborative projects and monitoring, and providing support to local partners. **We are pleased to assist in the development of heat and smoke plans, as well as long-term actions to reduce risk.**

In addition, over the last several years, we have worked with researchers at UBC and Vancouver Coastal Health to develop [climate vulnerability maps](#) that spatially represent community vulnerability to four climate hazards (heat,

smoke, ozone, and flooding). We are also happy to discuss how these maps and other health evidence may be integrated into your climate planning, to provide presentations regarding the health implications of heat and smoke, to assist in policy development, or to provide other guidance where possible.

If you are interested in engaging with Fraser Health on climate change and health, you can contact your Medical Health Officer or your Community Health Specialist at healthybultenvironment@fraserhealth.ca.

Thank you for supporting health in your community.

Sincerely,

A handwritten signature in black ink, appearing to read 'I. Tyler', written in a cursive style.

Ingrid Tyler
Executive Medical Director
Population and Public Health
Fraser Health

Additional Extreme Heat Information Resources

	Description
Communications	
Communicating the Health Risks of Extreme Heat Events: Toolkit for Public Health and Emergency Management Officials	Guide for public communication of health risks of extreme heat
Heat and Health	
Extreme heat: Heat wave	Canadian climate change and extreme heat information.
Brochure: Protect yourself from extreme heat	Heat related illness and actions individuals can take to prepare for extreme heat.
Fact sheet: staying healthy in the heat	Three one-page infographics: "Signs and Symptoms", "Who's at Risk" and "Safety Tips".
Fraser Health Extreme Heat Webpage	Resources for the public, community partners and health professionals regarding extreme heat.
Toward the Heart – Harm Reduction Resources	Harm Reduction for those who use Substances, including making a cool kit, supporting people with mental health challenges and those who use substances
Heat Response Planning	
Developing a Municipal Heat response plan: a guide for medium sized municipalities	In-depth information on the development of a municipal heat response plan including pre-season preparation and implementation.
Interior Health - Heat Alert and Response Planning for Interior BC Communities (Jul 2020)	A new user-friendly BC resource for Heat Alert and Response Planning
Intact Centre on Climate Adaptation: Irreversible extreme heat: protecting Canadians and communities from lethal future (2022)	Guide for actions individuals, property owners and managers, and communities can take to mitigate the risks of extreme heat events including 1) planning and behavioural changes, 2) working with nature, and 3) improving buildings and public infrastructure.
Health Canada - Heat Alert and Response Systems to Protect Health: Best Practices Guidebook (2012)	Recommendations on how to develop and implement a heat plan
BC Housing Planning Resources	BC housing heat response planning resources
AARP - Do-It-Yourself Project: Help Someone Stay Cool During Extreme Heat	Resources for promoting neighbours to check on one another during extreme heat events by the American Association of Retired Persons (AARP).
Primer for Organizations Supporting those Experiencing Homelessness	Resources for supporting people experiencing homelessness during extreme heat events.
Heat Stress - WorkSafe BC	Resources on how to protect outdoor works during extreme heat.
Regional Heat Alerts	
Weather App	Weather app for Android and IOS devices.
Public Weather Alerts for Canada and How to use public weather alert maps and tables	Weather alerts across Canada; how to interpret the different weather alerts.

Additional Wildfire Smoke and Air Quality Information Resources

BCCDC scholar Dr. Sarah Henderson recently has also published [an article describing 10 steps to help your residents develop a plan for the wildfire smoke season](#).

	Description
Education	
Fraser Health Air Quality and Wildfires Page	A variety of resources related to the public health impacts of poor air quality and wildfires.
Wildfire Smoke Response Planning	In-depth information for the public with a number of fact sheets regarding wildfire smoke and health.
Wildfires and your Health	Information and links to resources from HealthLink BC for before during and after a wildfire (incl. stress and trauma)
Monitoring	
BC Air Quality Subscription Service Metro Vancouver Air Quality Advisories	Subscribe to receive emails when Smoky Sky Bulletins (outside of Metro Vancouver) or Air Quality advisories are issued (Metro Vancouver)
FireWork Environment Canada Daily Smoke Forecast Maps	Wildfire smoke forecast map for Canada
BC Air Quality <ul style="list-style-type: none"> • Air Quality Health Index (AQHI) • BC Particulate Matter (PM2.5) Data • Smoky Skies Bulletins • Metro Vancouver Air Quality Advisories 	Contains air quality information. Note that the AQHI and particulate matter data is not available for all communities. The Smoky Skies Bulletins are issued when there is a higher likelihood of smoke in a region.
FireWork Environment Canada Daily Smoke Forecast Maps	Wildfire smoke forecast map for Canada
BC Wildfire Service App	Interactive wildfire map
Response	
Clean Air Shelters	A quick guide to clean air shelters.
Guidance for Cleaner Air Spaces during Wildfire Smoke Events	In-depth guide on how to identify buildings for clean air spaces and how to equip them once identified.
Evidence Review: Home and community clean air shelters to protect public health during wildfire smoke events	In-depth considerations regarding home clean air shelters (HCASs) and community clean air shelters (CCASs).
Worksafe BC Health and Safety Resources for the Wildfire Season	Worksafe BC information to protect workers
BCCDC - Guidance for BC Public Health Decision Makes during Wildfire Smoke Events (2014)	This guidance provides BC-specific guidance about tools for situational awareness (smoke and health surveillance) and summarizes the evidence for effectiveness of intervention measures to protect public health.
BC Health and Smoke Exposure (HASE) Coordination Committee Guideline (2021)	This guideline describes how the Health Wildfire Smoke Response Coordination Group will support regional response to a wildfire smoke event in BC

From: Dayna & Klaus Fitzbever [REDACTED]
Sent: Thursday, June 8, 2023 1:11 PM
To: Carolina Clark <cclark@belcarra.ca>; Jamie Ross <jross@belcarra.ca>; Liisa Wilder <lwilder@belcarra.ca>; Paula Richardson <prichardson@belcarra.ca>; Stewart Novak <snovak@belcarra.ca>; Joe Elworthy <jelworthy@belcarra.ca>; Janet Ruzycki <jruzycki@belcarra.ca>
Subject: Followup on motion of November 2022

Hi Paula,

This letter is written in followup to the amended motion of November 21, 2022 that addresses Council's response to the ICBC Safety Review presented to Council on that date.

The motion consisted of three subjects: that the "ICBC Safety report be received for information", " that Council approve the recommendation of installing pedestrian-activated beacons at the intersection of Bedwell Bay Road and Kelly Avenue", and " that staff pursue potential grant funding from [the] ICBC Road Improvement Program".

The three subjects of that motion are not interdependent. To my reading, Council's support of ICBC's installation recommendation is not dependent on the securing of funding. The instruction to staff to pursue funding is a key part of the motion but it does not instruct staff to withhold proceeding, or delay proceeding, on the installation of the equipment noted.

Further, the minutes of the Council meeting of November 21, 2022 characterize the discussion that preceeded the motion as pointing to some sense of urgency to Council's resolve, so that implementation could be "in a short time frame to improve road safety".

Although recent comment at Council seems to indicate that some work on Council's motion of November 21, 2022 can be expected by August of 2023, would you please comment on what seems to be an unjustifiable delay and on what you now hope to be able to provide, and when?

Sincerely,

Klaus Bever
 [REDACTED]

Freedom of Information &
 Protection of Privacy Act
Section 22(1)
 (Severed portions are shaded)

From: Emergency_Management – Trans Mountain <Emergency_Management@transmountain.com>
Sent: Wednesday, June 14, 2023 4:40 PM
To: Emergency_Management – Trans Mountain <Emergency_Management@transmountain.com>
Cc: Trefanenko, Christine <Christine_Trefanenko@transmountain.com>
Subject: Report on Trans Mountain Fate & Behaviour Bitumen Research (BC EAO Condition 35) - Local Coastal Governments

Good afternoon,

Trans Mountain is committed to working with Indigenous communities, Potentially Affected Coastal Local Governments, and agencies on ongoing enhancements to its Emergency Management Program and is pleased to provide the attached updated *Fate and Behaviour of Bitumen Research Report* (Report), as per BC Environmental Assessment Certificate Condition 35.

In October 2022, Trans Mountain formally invited appropriate Indigenous groups, agencies, and Potentially Affected Coastal Local Governments to review and provide comment on the draft Report. A written explanation of how the views of the community or agency were considered and addressed, or why such views were not addressed, was provided directly to each group who submitted questions or feedback.

Condition 35 requires Trans Mountain to provide the final report to Indigenous groups, the BC Environment Assessment Office (BC EAO), Environment and Climate Change Canada (ECCC), Canada Energy Regulator (CER), Canadian Coast Guard (CCG), BC Ministry of Environment and Climate Change Strategy (MOE), Ministry of Energy, Mines & Low Carbon Innovation (EMLI), the BC Energy Regulator (BCER), and Potentially Affected Coastal Local Governments prior to the commencement of TMEP operations.

The Report is in regard to the current and future research programs that Trans Mountain is leading, jointly leading, supporting, or otherwise involved in regarding the behaviour and recovery of heavy oils spilled in freshwater and marine aquatic environments, including research programs having the objective of providing spill responders with improved information on how to effectively respond to spills. Progress updates will be provided one year and every five years after commencement of TMEP operations.

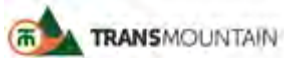
Should you have questions or wish to discuss the Condition 35 Report or other elements of the Emergency Management Program, please do not hesitate to reach out.

Sincerely,

Christine

Christine Trefanenko
 Manager, Project Emergency Management

Trans Mountain Expansion Project
 Toll Free: 1.866.514.6700 | E: info@transmountain.com | W: transmountain.com
 Follow: @TransMtn





TRANS MOUNTAIN EXPANSION PROJECT

Fate and Behaviour of Bitumen Research EAO Condition 35

June 2023



Suite 2700, 300 – 5th Avenue S.W.
Calgary, Alberta T2P 5J2
Ph: 403-514-6400

TABLE OF CONCORDANCE

The Table of Concordance describes how this Report addresses the applicable British Columbia Environmental Assessment Office (BC EAO) Condition.

BC EAO Condition	Location in Report
BC EAO Condition 35: Fate and Behaviour of Bitumen Research	
<p>The Holder must provide a report regarding the current and future research programs that the Holder is leading, jointly leading, supporting, or otherwise involved in regarding the behaviour and recovery of heavy oils spilled in freshwater and marine aquatic environments, including research programs having the objective of providing spill responders with improved information on how to effectively respond to spills.</p> <p>The report must be developed in consultation with the MOE, MNGD, OGC, ECCC, Canadian Coast Guard, Aboriginal Groups, and Potentially Affected Local Coastal Governments.</p> <p>The report must include:</p>	
a) A statement of the funding provided or allocated to ensure the research is undertaken and concluded within a specified period;	Section 2.1
b) Specifics of the Holder's approach to ongoing engagement with the NEB, ECCC, Canadian Coast Guard, MOE, MNGD, OGC Aboriginal Groups, and Potentially Affected Local Coastal Governments in the research programs;	Section 5.4
c) Research topics, including the different physical and chemical properties of the oil and other products intended to be shipped from the Westridge Marine Terminal, product weathering, dispersion and oil/sediment interactions, product submergence, product behaviour and cleanup following in-situ burning, and cleanup and remediation options for sediments and shoreline;	Section 3.0
d) The scope, objectives, methods, and timeframe for the research topics;	Section 3.0; Appendix A
e) How the Holder will incorporate applicable results of the research into its emergency preparedness and response plans;	Section 4.0
f) How the Holder will work with spill responders to support the incorporation of the results of the research into their emergency preparedness plans and programs; and	Section 2.0; Section 4.0 Section 5.3; Appendix A
g) A plan for reporting to the NEB, ECCC, Canadian Coast Guard, NRCan, MOE, MNGD, OGC, Aboriginal Groups, and Potentially Affected Local Coastal Governments on the progress of the research program.	Section 5.4
The Holder must provide the report to EAO, MOE, MNGD, OGC, ECCC, Canadian Coast Guard, Aboriginal Groups, and Potentially Affected Local Coastal Governments prior to the commencement of Operations and must provide progress updates pursuant to g) above at one year following commencement of Operations and every five years following during the period of Operations, or as otherwise authorized by the EAO. EAO may amend these timelines and may request additional reports at any time by providing written notice to the Holder.	Section 5.5

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1 INTRODUCTION

Trans Mountain Pipeline ULC (“Trans Mountain”) has in place a robust Emergency Management (“EM”) Program. The EM Program has been developed and implemented for the existing pipeline and facility network based on a combination of regulatory compliance, operational need, industry practice and lessons learned through regular exercises and actual incidents response. Comprised of a comprehensive set of standards, processes and procedures, the EM Program is designed to support Trans Mountain’s commitment to the safety and security of public, workers, company property and the environment. The EM Program is an all-hazards program of mitigation, preparedness and response designed to provide a continual cycle of improvement as mandated by the Canadian Energy Regulator Onshore Pipeline Regulations.

The BC Environmental Assessment Office (EAO) Certificate Condition 35 requires Trans Mountain to provide a report regarding the current and future research programs that Trans Mountain is leading, jointly leading, supporting, or otherwise involved in regarding the behaviour and recovery of heavy oils spilled in freshwater and marine aquatic environments, including research programs having the objective of providing spill responders with improved information on how to effectively respond to spills. The report must include the components listed below and must be developed in consultation with the BC Ministry of Environment (MOE), Ministry of Energy, Mines & Low Carbon Innovation (EMLI) (formerly Ministry of Natural Gas and Development [MNGD]), BC Oil and Gas Commission (OGC), Environment and Climate Change Canada (ECCC), Canadian Coast Guard (CCG), Indigenous Groups, and Potentially Affected Local Coastal Governments. The required components are:

- A statement of the funding provided or allocated to ensure the research is undertaken and concluded within a specified period;
- Specifics of the Holder’s approach to ongoing engagement with the CER, ECCC, Canadian Coast Guard, MOE, EMLI, OGC, Indigenous Groups, and Potentially Affected Local Coastal Governments in the research programs;
- Research topics, including the different physical and chemical properties of the oil and other products intended to be shipped from the Westridge Marine Terminal, product weathering, dispersion and oil/sediment interactions, product submergence, product behaviour and cleanup following in-situ burning, and cleanup and remediation options for sediments and shoreline;
- The scope, objectives, methods, and timeframe for the research topics;
- How the Holder will incorporate applicable results of the research into its emergency preparedness and response plans;
- How the Holder will work with spill responders to support the incorporation of the results of the research into their emergency preparedness plans and programs; and
- A plan for reporting to the CER, ECCC, Canadian Coast Guard, NRCan, MOE, EMLI, OGC, Indigenous Groups, and Potentially Affected Local Coastal Governments on the progress of the research program.

The purpose of this BC EAO Condition 35 Report (Report) is to demonstrate Trans Mountain’s fulfillment of the requirements of BC EAO Certificate Condition 35 *Fate and Behaviour of Bitumen Research*.

2 EMERGENCY MANAGEMENT RESEARCH STANDARD

Trans Mountain is committed to the development, implementation, maintenance, and continual improvement of the company's Integrated Safety and Loss Management System ("ISLMS") to address all phases of the pipeline life cycle to protect the safety and security of people and the environment. As part of the ISLMS, Trans Mountain maintains an Emergency Management (EM) Program that anticipates, prevents, manages, and mitigates conditions during an emergency that could adversely affect the safety of workers, the public, the environment, and property.

The EM Program is made up of several functional components including the Emergency Management Research Standard (Research Standard), which forms part of the Trans Mountain Emergency Management Liaison/Continuing Education/Consultation Plan. The Research Standard (Appendix A) describes Trans Mountain's approach to supporting, evaluating, tracking, and incorporating emergency management and/or oil spill related research into its EM Program. The Research Standard also provides direction on the approach to fulfilling regulatory requirements and guides external research engagement and the sharing of research findings with spill responders.

2.1 Funding

Trans Mountain has contributed more than \$2 Million for research on the fate and behaviour of bitumen research to date. At the outset of the pandemic, new opportunities and initiatives were limited and existing projects that were paused have since resumed. For future investment into the fate and behaviour of bitumen research, Trans Mountain is allocating funding towards initiatives the company will lead, jointly lead, support or be otherwise involved in.

Funding for initiatives Trans Mountain leads, jointly leads, supports, or is otherwise involved in is approved by the Director, Emergency Management. Once a potential research project is approved, funding is disbursed or allocated on behalf of Trans Mountain to ensure the research is undertaken and concluded within a specific period, per the respective research project agreement. In addition to tracking the total and study specific funding contributed to research, Trans Mountain monitors and maintains records for each project, including topics of research satisfied, status of research initiatives, and how applicable research findings have been incorporated into the EM Program. See Section 5.3 and Section 5.7 of the Research Standard (Appendix A).

3 RESEARCH TOPICS

As described in Section 5.1 of the Research Standard (Appendix A), participation by Trans Mountain focuses on studies associated with the behaviour and recovery of heavy oils spilled in freshwater and marine aquatic environments, and/or those with the objective of providing spill responders with improved information on how to effectively respond to spills. The studies Trans Mountain leads, jointly leads, supports, or is otherwise involved in must include and/or incorporate one or more of the following topics:

1. Physical and chemical properties of the oil (including blends) and other products intended to be shipped from the Westridge Marine Terminal
2. Product weathering
3. Dispersion and oil/sediment interactions
4. Product submergence
5. Product behaviour and cleanup following in-situ burning
6. Cleanup and remediation options for sediments and shorelines

Many of the research initiatives in which Trans Mountain participates address multiple research topics. For example, the completed Gainford Studies (See Section 3.1.3) evaluated all six of the research topics listed above, while the scope of the ongoing Experimental Lakes Area Program (See Section 3.2.3) includes topics 1, 2, and 6. Apart from topic 5, all required research topics have been included in at least three completed or ongoing studies since 2012. See Appendix A for a list of research topics by past project.

In-situ burning is an alternative countermeasure which requires specific federal regulatory approval. In-situ burning is referenced in Trans Mountain's emergency response plans as a non-traditional and alternative recovery technique and is considered an option in rare and exceptional circumstances due to its potential human health impacts.

As such, product behaviour and cleanup following in-situ burning has not been a focus of research for Trans Mountain and is limited to the Gainford Studies. However, product behaviour and cleanup has been explored through studies on the various other listed research topics.

3.1 Past Projects

3.1.1 Comparison of Behaviour of Spilled Oils

Trans Mountain supported an independent, science-based multi-million-dollar study commissioned by the Canadian Energy Pipeline Association (CEPA) and the Canadian Association of Petroleum Producers (CAPP). The study, *“Comparison of the Behaviour of Spilled Conventional and Non-Conventional Oils through Laboratory and Meso-scale Testing”* was published in 2020 and evaluated and compared the physical and chemical properties of more than 10 types of crude oil under different environmental conditions to determine how the fresh and weathered oils behave in various marine, estuarine, and freshwater settings. The findings of the study were reviewed by an advisory committee that included Canada Energy Regulator (CER), Environment and Climate Change Canada (ECCC), Fisheries and Oceans Canada (DFO), Natural Resources Canada (NRCan), and Polaris Applied Sciences, Inc. The results of the study concluded that both the conventional and oil sand-derived products tested remain floating in the marine environment for extended periods of time. The results also showed that diluted bitumens do not separate into their original bitumen and diluent after they spill because the hydrocarbons in both are infinitely soluble to each other.

3.1.2 Underwater Seabed Cleanup and Assessment Technique Guide

Trans Mountain, together with Western Canada Marine Response Organization (WCMRC), Canadian Coast Guard (CCG), NRCan, and DFO, have supported the development of an Underwater Seabed Cleanup and Assessment Technique (uSCAT) Guide. The uSCAT Guide identifies standardized strategies for the detection and assessment of nearshore non-floating oil in varying environments. In addition, the uSCAT Guide provides methods for recording, storing, and processing response data. The uSCAT is now referenced in Trans Mountain’s *Non-Floating Oil Assessment and Response Plan*.

3.1.3 Gainford Studies

In 2012, Trans Mountain, together with WCMRC, completed field-scale research that evaluated the fate and behaviour of representative samples of diluted bitumen discharged into a brackish water environment and subjected to various conditions of weathering. Referred to as the Gainford Studies, the project assessed the performance of various types of oil spill recovery equipment. As part of testing, fresh and weathered diluted bitumen was collected from the surface of the water using traditional mechanical equipment (skimmers). The tests revealed that oleophilic skimmers would be preferred during the early stages of a spill and likely would shift to brush and/or belt skimmers as diluted bitumen weathers. Countermeasures including in-situ burning, chemical dispersant and shoreline cleaners were also assessed. Tests showed that multiple countermeasures can be successfully used for spilled diluted bitumen and that there are preferred options depending on the condition of weathered oil, as with any spill of persistent oil.

3.1.4 Salish Sea Oil Spill Trajectory

In 2016, Trans Mountain also supported an evaluation modelling of spilled hydrocarbon fate and behaviour, and the associated effects. The modelling was based on five representative sites along the shipping route in the Salish Sea. The findings concluded that due to variables, including wind and tides, hydrocarbon does not migrate in a uniform pattern and a single model cannot be predictive of a real outcome at a particular site.

3.1.5 Review of Oil Mineral Aggregates Formation Mechanisms for the Salish Sea and the Lower Fraser River

Trans Mountain supported several research initiatives to better understand the potential interaction between oil and sediment in the Lower Fraser River and the Salish Sea. The results were shared during the 2016 Arctic and Marine Oilspill Program (AMOP) seminar and align with previous studies describing the conditions required for oil mineral aggregates to form. The study concluded that the formation of Oil Mineral Aggregate (OMA) in the Salish Sea and

Lower Fraser River is highly unlikely. Findings regarding oil behaviour on water, particularly the factors influencing the submergence and sinking of oil, influenced the selection and design of response strategies in Trans Mountain's response plans and were shared with WCMRC for consideration into the enhancement of its response plans.

3.1.6 Shoreline Treatment Decision Support Tool

Trans Mountain provided support for a 2019 workshop that explored potential development of a decision-support tool for future oiled shoreline response. As part of the Multi-Partner Research Initiative Studies, the objective of the project was to create the framework for the decision tool to enable strategic planners, decision makers, oil spill response managers, and the public to better understand the effects and consequences of the options that exist to accelerate the weathering of spilled oil, and therefore environmental recovery, following an oil spill that could impact Canada's shorelines. Development of the framework is in progress; the timeline for further development has not yet been determined.

3.2 Ongoing and Future Projects

3.2.1 Human Health Risk Report

In support of the Human Health Risk Report to be developed in accordance with BC EAO Condition 38, Trans Mountain will be conducting stochastic and deterministic oil spill modelling of English Bay. The modelling will be based on a scenario of a laden tanker releasing 16,500m³ of cargo, which represents the equivalent of two tanker cargo holds, in English Bay over 13 hours. The modelling will evaluate unmitigated dispersion of crude oil (Cold Lake Winter Blend) through the air, water column and shorelines. The results will inform an ecological assessment that will determine human health risk based on the potential pathways of effects and demographics involved. Thereafter, Trans Mountain will consult with WCMRC to identify opportunities to enhance the oil spill response plans and response measures. Being that the plans are held by WCMRC, the final decision on revisions lies with WCMRC. As appropriate, the measures may be assessed through additional spill modeling.

3.2.2 Submerged Oil Detection – Joint Industry Project

Trans Mountain is currently supporting a joint-industry project being managed by C-FER Technologies. The goal of the project is to minimize the environmental impact of hydrocarbon releases into waterways by understanding the factors that affect the performance of various leak detection technologies. The project is being conducted in five phases: define technology requirements; review technologies; test facility design and setup; technology testing; and analysis and reporting. The first two phases, define technology requirements and the review of technologies are complete. The third phase, test facility design and setup, is underway. A Steering Committee represented by C-FER Technologies Inc., Trans Mountain, Enbridge, TC Energy, OGC, and Alberta Ministry of Environment and Parks, has been established to provide input on performance requirements and details on typical application environments in which these technologies may be deployed.

3.2.3 Experimental Lakes Area Program

Trans Mountain continues to support the International Institute for Sustainable Development – Experimental Lakes Area Program. This multi-year industry and government collaborative program is examining the fate and behaviour of diluted bitumen and conventional heavy crude oil in a freshwater environment. This program involves three phases: the establishment of microcosms to examine the chemical and physical behaviour of diluted bitumen in freshwater and on adjacent shorelines; the re-creation of a controlled oil spill to determine if degradation is different for diluted bitumen and conventional heavy crude oil, if wave energy has a significant effect on oil degradation rates in shoreline freshwater environments; biological effects from exposure and degradation, and the comparison of cleanup methods.

3.2.4 Shoreline Retention of Sunken and Submerged Oil

Trans Mountain is supporting a three-year study to further explore, utilizing a variety of shoreline oiling scenarios, representative of coastal BC, the ability of very low sulphur fuel oil (VLSFO) and diluted bitumen to form sunken oil mats (SOM) and/or oil-granule particle aggregates (OgPA). The research aims to measure physico-chemical properties throughout the weathering process, refine the current understanding of shoreline sediment sizes that

allow for OgPA formation, provide a better understanding of how shoreline conditions in coastal British Columbia influence SOM and OgPA formation, and make operational recommendations to minimize SOM and OgPA formation.

4 INCORPORATING RESULTS

Upon completion of each project, results are reviewed and assessed for applicability and incorporation into Trans Mountain's EM Program. If an opportunity for enhancement exists, the component may be tested during emergency exercises, if practicable and/or appropriate. New components could include a new procedure, equipment type, emergency response document, or technology. Final approval for incorporation into the EM Program is determined by the Director, Emergency Management as noted in Section 3.3.2 of the Research Standard.

In 2018, because of research and input received through consultation with stakeholders and engagement with Indigenous Groups, Trans Mountain developed a specific plan to address the management of non-floating oil. The *Non-Floating Oil Assessment and Response Plan* is designed to provide guidance for the initial assessment and response actions for released oil that is at risk of, or has become, non-floating within an inland water environment. The *Non-Floating Oil Assessment and Response Plan* is used until an incident specific non-floating oil response plan can be developed. It is not intended to limit the discretion of responders to choose appropriate response actions to meet the site-specific circumstances presented at a release. When oil is released into a waterbody, its physical and chemical characteristics can change due to the environmental factors it may interact with. While the likelihood of oil becoming non-floating is low, the *Non-Floating Oil Assessment and Response Plan* is intended to provide response tactics to address this potential. The scope of the plan addresses non-floating oil containment and recovery, focusing on the assessment, plume tracking, containment, and recovery of non-floating oil within several types of waterbodies (rivers, lakes, inlets) with low, medium, and high-water flows. Implementation of the *Non-Floating Oil Assessment and Response Plan* is a function of the Environmental Unit within the Planning Section. Development of an incident specific non-floating oil plan was included as an objective of the Westridge Marine Terminal exercise in April 2021.

A subsequent version of the plan was enhanced with the addition of the Underwater Seabed Cleanup and Assessment Technique (uSCAT) in 2020. Trans Mountain was also involved in the research and development of the *uSCAT Technical Reference Manual*, which is available for download at www.uscat.ca and referenced in Trans Mountain's emergency response documents. The *Non-Floating Oil Assessment and Response Plan* is publicly available on Trans Mountain's website at <https://www.transmountain.com/emergency-response-plans>.

Findings of the Comparison of Behaviour of Spilled Oils (Section 3.1.1) study have been used to develop fact sheets on oil properties and behaviour under a range of environmental conditions. These were incorporated into the *Non-Floating Oil Assessment and Response Plan* in 2021 to help guide initial response actions and assist responders to determine the most effective countermeasure. Each fact sheet describes what to expect in freshwater and marine environments for the product type, and provides available information on oil properties, evaporation potential, emulsification potential, interaction with suspended sediment and shoreline, oil weathering, submergence potential, and viscosity. As part of the Westridge Marine Terminal full-scale exercise in April 2021, the Access Western Blend (AWB) fact sheet was referenced and attached as an appendix to the (Exercise) Westridge Loading Arm Non-Floating Oil Assessment and Cleanup (uSCAT) Plan. The information within the fact sheet was used to help predict the potential behaviour of the AWB oil in the marine environment, which then informed appropriate assessment and recovery strategies outlined in the plan. The study results were also shared with WCMRC, and the response organization has prepared similar fact sheets as support to their response plans.

Incident specific plans and document templates have also been developed to support the activities of the Environmental Unit during a response. For example, Trans Mountain has in place an incident specific non-floating oil plan template, as well a Shoreline Treatment Recommendations document, which is issued to the Operations Section to guide initial shoreline assessment and recovery strategies.

Trans Mountain added to its equipment inventory a non-floating oil response trailer in 2018. The trailer contains emergency and spill response equipment specifically selected for the detection of sunken or submerged oil. Equipment such as silt fencing, boom, view boxes, pompoms and other sorbent materials are housed inside the trailer, to be dispatched if there is the possibility of spilled product becoming sunken or submerged.

Results of the Salish Sea Oil Spill Trajectory study (Section 3.1.4) were leveraged by WCMRC when developing the Enhanced Response Regime (as required by CER Condition 133b) to meet WCMRC's new planning standard which identifies its improved response times. This included selecting the location of the new response bases and allocating respective response equipment and staff for each. The implementation of the Enhanced Response Regime is nearing completion, enhancing the capacity and capabilities of WCMRC in the support of response to incidents affecting the lower Fraser River and the Burrard Inlet.

In 2020/21, Trans Mountain replaced its existing drum skimmers in British Columbia and Alberta with the high-capacity RBS TRITON 35 model. The updated technology offers extremely high recovery rates with up to 98% efficiency and is versatile enough for most oil spill needs. Testing of the skimmers was certified by Det Norske Veritas & American Bureau Services and witnessed to ASTM Standard F631-99 for oil recovery volume & efficiency and heavy oil recovery capability¹. Additionally, the ability for the brush, disc, and drum recovery modules to be easily changed without tools in minutes based on the needs of the response supports the rapid deployment of the equipment.

In September 2019, objectives for the Kamloops District deployment drill included testing the functionality of new and emerging spill response equipment in different water courses. As part of the training and exercise Trans Mountain assessed a lightweight cartridge-based containment boom in both a river system and lake. The results of the exercise indicated the tested boom was not ideal for moving BC rivers, however Trans Mountain has attended testing of the boom in the Burrard Inlet, where its efficacy in certain environments was demonstrated. Considering its overall applicability for Trans Mountain's operational districts, and challenges to train with the product (e.g., single use boom) it was decided not to purchase the boom at that time, although the product is still being considered for the future. Spill responders from industry, response organizations, and government agencies participate regularly in Trans Mountain exercises, as well as in other joint exercises designed to increase response efficiency, interoperability, and coordination between parties.

5 ENGAGEMENT AND REPORTING

Engagement with Indigenous Groups and stakeholders continues to be a priority for Trans Mountain Emergency Management and an important component of the ongoing enhancements to the EM Program. Since 2014, Emergency Management has consulted with Indigenous Groups, local governments, and agencies on EM Program topics including (but not limited to) fate and behaviour of bitumen research, emergency response equipment, Emergency Response Plans (ERP), Geographic Response Plans (GRP), and supplemental plans and documents.

5.1 Emergency Management Workshops & Meetings

Trans Mountain Emergency Management has hosted a series of regional workshops in each of Trans Mountain's four operational districts (Alberta, North Thompson, Kamloops & Sumas), to which Indigenous Groups, local governments, and agencies were invited. During the initial sessions (EM2) in 2014, Emergency Management was included as an agenda topic as part of consultation activities related to the TMEP Environmental Protection Plan (EPP). The objective of EM2 was to obtain feedback from Indigenous Groups and stakeholders on the EM Program, by having scenario-based discussions to explore possible sequence of events and local resource requirements in the event of a pipeline emergency in the various communities. In collaboration with attendees, Trans Mountain personnel reviewed in detail ERPs, response times, equipment type and placement, response personnel, control point manuals, and other response plans. Additional workshops (EM3) were held in 2016 to provide an overview of Trans Mountain's EM Program, collect inputs for consideration on the EM Program elements including (but not limited to) equipment type and placement, the Planning Standard, ERPs, and research initiatives.

Subsequent workshops (EM4) were conducted in the Alberta, North Thompson & Kamloops Districts in 2018, with the Sumas District workshop held in March 2020 following the pause in consultation during the CER Reconsideration Period. Objectives for these sessions were to share the enhancements made to the EM Program, demonstrate how input from ongoing consultation and engagement has been incorporated into the Program, and

¹ Source: <https://aquaguard.com/products/skimmers/rbs-triton-35-skimmer>

to gain additional feedback from invited emergency management stakeholders and Indigenous communities on various elements of the enhanced program. Attendees were invited to review the enhanced EM Program and supporting materials, including research initiatives, ERPs, GRPs, supplemental plans, equipment maps, and the Exercise and Training Program. Throughout the workshops Trans Mountain representatives were available to discuss the research Trans Mountain was leading, jointly leading, supporting, or was otherwise involved in, in support of improved spill response.

In the May and June 2022, Trans Mountain hosted a series of Marine Engagement Workshops for Indigenous Groups and coastal local governments, respectively. The 2022 Research Newsletter (See Section 5.2) was provided to participants in advance of the workshop and the fate and behaviour of bitumen research was included as an agenda item.

Meetings with Indigenous Groups and stakeholders were another important forum where attendees were encouraged to provide input for consideration into the enhancement of the EM Program. The scope of consultation covered all components of the EM Program and Trans Mountain's goal was to gather unique and varying input from Indigenous Groups and Stakeholders on respective topics of interest, including feedback on Trans Mountain's research program and potential research initiatives.

5.2 Communications

In 2018, Trans Mountain distributed to applicable Indigenous communities and agencies a Research Newsletter which highlighted ongoing research, new initiatives, and results and findings of projects Trans Mountain was conducting and funding related to the fate and behaviour of bitumen. The communication was distributed electronically and via registered mail and invited recipients to contact Emergency Management to discuss current research programs, answer questions, and explore options for future collaboration.

Following consultation pauses due to the CER Reconsideration Period and the subsequent pandemic, Trans Mountain provided an updated Research Newsletter to Indigenous Groups and agencies in June 2022 via email. The communication included a progress report for ongoing studies, highlighted recently completed projects, and introduced new research initiatives Trans Mountain is supporting (See Section 3.1; Section 3.2). Correspondence also noted Trans Mountain values and encourages input for consideration into its EM Program and invited parties to contact the Director of Emergency Management to provide feedback or discuss potential research initiatives. As required by the BC EAO amended scope of consultation for Condition 35, the list of stakeholders to receive the newsletter was broadened to include the potentially affected coastal local governments listed in Appendix E.

Please see Appendix F for the 2018 and 2022 newsletters.

5.3 Work Groups, Committees, and Conferences

Inter-agency work groups and committees provide a means for sharing results of applicable research projects that have enhanced the EM Program, and to identify potential new opportunities for participation by Trans Mountain. Similarly, Trans Mountain regularly attends conferences like Clean Pacific, the International Oil Spill Conference, the International Oil Spill Science Conference, and the BC Emergency Preparedness and Business Continuity Conference, as both delegates and/or presenters to report on and seek out research initiatives.

5.4 Progress Updates

Per the requirements of Condition 35, Trans Mountain will provide progress updates to EAO, MOE, EMLI, OGC, ECCC, Canadian Coast Guard, Indigenous Groups, and Potentially Affected Local Coastal Governments at one year following the commencement of TMEP Operations and at every five years thereafter during the period of Operations. With the commencement of TMEP Operations, Trans Mountain's research newsletter will transition into a research update and feature content highlighting the ongoing research, new initiatives, and results and findings of projects Trans Mountain is leading, jointly leading, supporting, or is otherwise involved in. The update will provide the opportunity for ongoing engagement with those entities interested in Trans Mountain's research activities, and for the parties to bring forth considerations for research initiatives. Information regarding diluted bitumen is and will continue to be updated and made available on the Trans Mountain website: <https://www.transmountain.com/diluted-bitumen-information>.

5.5 Report

Trans Mountain formally invited appropriate agencies, Indigenous Groups, and Potentially Affected Local Coastal Governments to review and provide comment on the draft BC EAO Condition 35 Report (Report) on October 19, 2022. On November 7, 2022, a reminder and extension were offered to groups who had yet to respond by the deadline for comment, followed by a final reminder on November 28, 2022, one week prior to the revised deadline.

Trans Mountain received acknowledgement, questions and/or comments from 3 of 6 agencies, 5 of 77 Indigenous groups, and 6 of 52 Potentially Affected Local Coastal Governments on the draft Report.

The feedback and information requests received from Indigenous communities and stakeholders included themes such as research needs, areas and topics; past and ongoing engagement; spill response; and the scope of the Report. Trans Mountain also received several specific questions related to research projects and results, and the fate and behaviour of bitumen in various conditions and environments.

A written explanation of how the views of the community or agency were considered and addressed, or why such views were not addressed, was provided to each group who submitted questions or feedback. Trans Mountain formally responded to all parties by February 22, 2023, and no additional feedback has been received. Appendix G provides a list of agencies, Indigenous Groups, and Potentially Affected Local Coastal Governments that were invited to review and provide comment on the draft Report, as well as those that provided feedback. Several groups also responded acknowledging receipt of the Report noting no comments or concerns, as described in Appendix G.

APPENDIX A RESEARCH STANDARD



TRANSMOUNTAIN

EMERGENCY MANAGEMENT RESEARCH STANDARD

Revision 0

September 12, 2022

Document Owner: Ken McLernon
Subject Matter Expert: Ken McLernon

Effective Date	10/12/2022	Reviewed Date	10/12/2022
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TRANSMOUNTAIN

1420 INTEGRATED SAFETY & LOSS MANAGEMENT SYSTEM
Emergency Management

REVISION LOG

REV	DESCRIPTION	DATE	BY
0	Emergency Management Research Standard issued CMR approval (Approved 22156)	10/12/2022	K. Malinoski

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Subject Matter Expert: Ken McLernon

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1.0 INTRODUCTION

1.1 Purpose

- 1.1.1 The purpose of the Emergency Management Research Standard (“Research Standard”) is to describe the approach to support, evaluate, track, and incorporate emergency management and/or oil spill related research into the Emergency Management Program.
- 1.1.2 Provide direction on the approach to fulfill regulatory requirements.
- 1.1.3 Provide guidance on the approach to conduct external research engagement.
- 1.1.4 Provide guidance on the approach to share research findings with spill responders.

1.2 Scope

This Standard describes and identifies the following:

- a) Topics of study.
- b) Research study funding.
- c) Approach to evaluate and incorporate research findings into the Emergency Management Program, where appropriate.
- d) Engagement audiences and approaches.
- e) Information and investment tracking requirements.

1.3 Definitions

- 1.3.1 **Drills** – A planned activity that tests a single or specific operation or function. Drills are commonly used to provide training on new equipment or test new procedures; to practice and maintain skills; or to prepare for more complex exercises.
- 1.3.2 **Potentially Affected Coastal Local Governments** - As per the definitions in Schedule B of the BC Environment Assessment Office (amended) Certificate, the entities listed in Appendix B, and the local governments within them that border the ocean.
- 1.3.3 **Research Participation** – Research studies that Trans Mountain leads, supports, or is otherwise involved in.
- 1.3.4 **Research Initiative** – An evaluation that involves the use of scientific methods to analyze and collect information on a topic of interest.
- 1.3.5 **Research Study** – Is used interchangeably with the term research initiative and carries the same meaning.



2.0 RELEVANT STANDARDS AND DOCUMENTS

The following Trans Mountain documents are relevant to the administration and operation of the Emergency Management Research Standard:

- [*Liaison/Continuing Education/Consultation Plan*](#)
- [*Technology Review Process*](#)

3.0 RESPONSIBILITY FOR COMPLIANCE

3.1 Emergency Management Program Personnel

Emergency Management Program Personnel (as assigned) are responsible for:

- 3.1.1 Reviewing research findings and presenting enhancement opportunities to the Manager, Emergency Management for incorporation to the Emergency Management Program.
- 3.1.2 Identifying opportunities for research initiative participation by Trans Mountain.
- 3.1.3 Preparing research engagement material.
- 3.1.4 Preparing research regulatory reports.
- 3.1.5 Maintaining the Research Information Tracking Document.

3.2 Manager, Emergency Management

The Manager, Emergency Management is responsible for:

- 3.2.1 Reviewing proposed research initiatives and recommending participation by Trans Mountain.
- 3.2.2 Assessing the incorporation of applicable research findings into the Emergency Management Program.
- 3.2.3 Approving engagement material developed by Emergency Management Program Personnel.
- 3.2.4 Attending Emergency Management Advisory Committee meetings to discuss the status of current research initiatives.
- 3.2.5 Providing oversight to Emergency Management Program Personnel in the development of research regulatory reports.
- 3.2.6 The annual review of this document and ensuring compliance with regulatory requirements.

3.3 Director, Emergency Management

The Director, Emergency Management is responsible for:



- 3.3.1 Approving Trans Mountain participation in research initiatives, including research funding and/or allocation.
- 3.3.2 Approving incorporation of identified research findings into the Emergency Management Program.
- 3.3.3 Leading Emergency Management Advisory Committee discussions on the status of current research initiatives.
- 3.3.4 Maintaining the Research Investment Tracking Document.
- 3.3.5 Providing oversight and direction to the Manager, Emergency Management in the development, implementation, and maintenance of this Standard.
- 3.3.6 Reviewing and approving suggested changes to this Standard prior to implementation and Change Management Request (CMR).

4.0 REGULATORY BACKGROUND

This Standard complies with the requirements of the following regulations:

4.1 BC Environment Assessment Office (EAO)

- 4.1.1 The EAO Environmental Assessment Certificate for the Trans Mountain Expansion Project -amended (2022), Schedule B, Condition 35 requires the Holder to provide a report regarding the current and future research programs that it is leading, jointly leading, supporting, or otherwise involved in regarding the behaviour and recovery of heavy oils spills in freshwater and marine aquatic environments, including research programs with the objective of providing spill responders with improved information on how to effectively respond to spills; the report must contain the information contained in (a) to (g).
- 4.1.2 The EAO Environmental Assessment Certificate for the Trans Mountain Expansion Project – amended (2022), Schedule B, Condition 35 requires the Holder to develop the report in consultation with the B.C. Ministry of Environment and Climate Change Strategy (MOE), B.C. Ministry of Energy, Mines, and Low Carbon Innovation (EMLI), B.C. Oil and Gas Commission (OGC), Environment and Climate Change Canada (ECCC), Canadian Coast Guard (CCG), Indigenous Groups, and Potentially Affected Coastal Local Governments.
 - 4.1.2.1 The EAO Environmental Assessment Certificate for the Trans Mountain Expansion Project (2022), Schedule B, Condition 3 requires the Holder to consult a particular party or parties regarding the content of a plan, program, or other document, where a condition of the Certificate requires the Holder to consult a particular party or parties and must comply with the information in (a) to (e).



- 4.1.3 The EAO Environmental Assessment Certificate for the Trans Mountain Expansion Project (2022), Schedule B, Condition 35 requires the Holder to provide the report to the BC EAO, MOE, EMLI, OGC, ECCC, CCG, Indigenous Groups, and Potentially Affected Coastal Local Governments every five years following the commencement of Operations of Line 2, during the period of Operations, or as otherwise authorized by the EAO.

5.0 RESEARCH OVERVIEW

5.1 Topics of Study

Research participation by Trans Mountain focuses on studies associated with the behaviour and recovery of heavy oils spilled in freshwater and marine aquatic environments and/or those with the objective of providing spill responders with improved information on how to effectively respond to spills. Current and future research studies must include and/or incorporate one or more of the following topics:

- Physical and chemical properties of the oil (including blends) and other products intended to be shipped from the Westridge Marine Terminal.
- Product weathering.
- Dispersion and oil/sediment interactions.
- Product submergence.
- Product behaviour and cleanup following in-situ burning.
- Cleanup and remediation options for sediments and shorelines.

5.2 Funding of Research Studies

The Director, Emergency Management holds the authority to determine which potential research initiatives Trans Mountain will lead, jointly lead, or support. If a potential research initiative is approved, funding shall be provided, or allocated, on behalf of Trans Mountain to ensure the research is undertaken and concluded within a specific period per the research project agreement.

5.3 Incorporating Findings into the Emergency Management Program

The following process is utilized to continually improve the Emergency Management Program through the incorporation of research findings and outputs:

5.3.1 Review of Research Findings

5.3.1.1 Emergency Management Program Personnel review research findings and/or outputs for applicability to the continual enhancement of the Emergency Management Program.

5.3.1.2 Emergency Management Program Personnel present the findings to the Manager, Emergency Management for assessment.

5.3.2 Assessment and Approval of New Procedures, Equipment, and/or Technology

5.3.2.1 All potential enhancement opportunities, including procedures, equipment, and/or technology will be assessed, and approved if applicable, in accordance with the *Emergency Management Technology Review Process*.

5.4 Research Engagement – External Audiences

Trans Mountain utilizes the following approaches to share research findings with select Government entities, Indigenous Groups, and Local Coastal Governments and to request input on existing and/or new research initiatives. See Section 5.6. Research Engagement - Audiences for list of entities.

5.4.1 Electronic Communications

5.4.1.1 Electronic forms of communications, including the Trans Mountain website, emails, and blog posts, are used to provide external entities with updates on research initiatives supported by Trans Mountain and to share research specific resources.

5.4.2 Formal Correspondence

5.4.2.1 Letters addressed to emergency spill response equipment vendors are used to request research studies and findings that support new emergency spill response equipment.

5.4.3 Electronic Mail

5.4.3.1 Electronic newsletters are used to communicate past and current research initiatives, enhancements of the Emergency Management Program, and request feedback and input on existing and/or new initiatives.

5.4.4 Work Groups and Committees

5.4.4.1 Inter-agency work groups and committees are used to share results that have been used to enhance the Emergency Management Program and identify opportunities for participation by Trans Mountain.

5.4.5 Conferences

5.4.5.1 Conferences are used to communicate research initiatives being supported by Trans Mountain, share research findings that have enhanced the Emergency Management Program, and identify research opportunities for participation by Trans Mountain.

5.5 Research Engagement – Spill Responders

Trans Mountain utilizes the following approaches to share research findings with spill responders to provide updated information on how to effectively respond to spills and to support the incorporation of the results of research into their emergency preparedness plans and programs, as appropriate. See Section 5.6. Research Engagement - Audiences for list of entities.

**5.5.1 Formal Correspondence**

5.5.1.1 Formal letters are used to share research findings that have enhanced the Emergency Management Program and to support the incorporation of the results into their emergency preparedness plans and programs.

5.5.2 Work Groups and Committees

5.5.2.1 Inter-agency work groups and committees, including the Industry Association Committee, are used to share results that have been used to enhance the Emergency Management Program and identify opportunities for participation by Trans Mountain.

5.5.3 Conferences

5.5.3.1 Conferences are used to communicate research initiatives being supported by Trans Mountain and to share research findings that have enhanced the Emergency Management Program and to support the incorporation of the results into their emergency preparedness plans and programs.

5.6 Research Engagement – Audiences

Trans Mountain engages with the following external audiences on the topic of research:

5.6.1 Indigenous Groups, including:

- See Appendix A for the list of BC Indigenous Groups.

5.6.2 Government Entities, including:

- Alberta Agencies
- Canada Energy Regulator (CER)
- Environment and Climate Change Canada (ECCC)
- B.C. Ministry of Environment (MOE)
- B.C. Ministry of Energy, Mines, and Low Carbon Innovation (EMLI) (*formerly B.C. Ministry of Natural Gas Development; MNGD*)
- B.C. Oil and Gas Commission (OGC)
- U.S. State and Federal Agencies

5.6.3 Potentially Affected Coastal Local Governments, including:

- See Appendix B for the list of potentially affected BC coastal local governments.

5.6.4 Spill Responders, including:

- Canadian Coast Guard (CCG)
- United States Coast Guard (USCG)
- Western Canada Marine Response Corporation (WCMRC)
- Western Canadian Spill Services (WCSS)



5.7 Investment and Information Tracking

- 5.7.1 The Director, Emergency Management maintains the *Research Investment Tracking Document* to track the total and study specific funding that Trans Mountain has contributed/allocated to research.

For details on funding provided on behalf of Trans Mountain, refer to [Research Investment Tracking Document](#).

- 5.7.2 The Emergency Management Program Personnel maintain the *Research Information Tracking Document* to record and maintain the following information:

- Topics of research satisfied.
- Status of research initiatives.
- Research findings incorporated into the Emergency Management Program.

For details on research specific information, refer to [Research Information Tracking Document](#).

5.8 Regulatory Reporting

- 5.8.1 Trans Mountain develops regulatory reports to be submitted to the CER, BC EAO, MOE, EMLI, OGC, ECCC, CCG, BC Indigenous Groups, and BC Potentially Affected Coastal Local Governments at the following intervals:

- Prior to the commencement of Operations of Line 2
- 1 year after commencement of Operations of the Line 2.
- Every 5 years following during the period of Operations of the Line 2.

- 5.8.2 Emergency Management Program Personnel will utilize the *Research Information Tracking Document* as a reference during development of each regulatory report.

- 5.8.3 Regulatory reports detail the following:

- Research topics currently being supported by Trans Mountain and the scope, objectives, methods, and timeframes for each topic.
- A statement of the research funding provided.
- Research findings incorporated into the Emergency Management Program.
- Activities and outputs shared with spill responders for consideration for incorporation into their emergency preparedness plans and programs.

6.0 IMPLEMENTATION

6.1 General

- 6.1.1 The implementation of this Standard is demonstrated by the application of research funding, and the engagement, incorporation, reporting, and tracking process.



6.2 Ownership of Documentation and Materials

- 6.2.1 The Emergency Management Department owns all documentation associated with research. Emergency Management Program Personnel are responsible for conducting the annual review of these documents and associated materials.

7.0 REVIEW AND REVISIONS TO THIS STANDARD

7.1 Review of this Standard

- 7.1.1 The document is owned by the Manager, Emergency Management.
- 7.1.2 The Manager, Emergency Management will assess the effectiveness of this Standard on an annual basis and will maintain a record of the assessment. Trans Mountain recognizes that Standard evaluation will help ensure the goals and objectives for emergency equipment operations and maintenance are being met and seeks opportunities for improvement.
- 7.1.3 The review is done annually and whenever these documents and materials are affected by changing requirements or regulations. The review is done to ensure accuracy and compliance with current regulations.
- 7.1.4 Following any major evaluation, program changes or modifications to the Emergency Management Program, a determination will be made as to what additional resources or what activities are needed or what resources and activities should be ceased. Changes to this Standard may include resources, frequency, method, or other enhancements.
- 7.1.5 Any substantial changes will be communicated to Senior Management using the Management of Change procedure.

7.2 Management of Change

- 7.2.1 This Standard is a Controlled Document subject to the requirements of the [5.1 Controlled Document Standard](#).
- 7.2.2 Substantial changes to procedures must be managed and approved through the Operational Management of Change Request (CMR) process.
- 7.2.3 For details, refer to Document Administration and Management Standard [5.1 Controlled Document Standard](#) and the Operations and Maintenance Standard [4.1 Management of Change Standard](#).

**APPENDIX A: ENGAGEMENT AUDIENCES – BC INDIGENOUS GROUPS**

Trans Mountain engages with the following BC Indigenous Groups on the topic of research:

- Adams Lake Indian Band
- Aitchelitz First Nation
- Ashcroft Indian Band
- Boothroyd Indian Band
- Boston Bar First Nation
- Canim Lake Band
- Chawathil First Nation
- Cheam First Nation
- Coldwater Indian Band
- Cook's Ferry Indian Band
- Cowichan Tribes
- Ditidaht First Nation
- Esquimalt Nation
- Halalt First Nation
- Hwlitsum First Nation
- Katzie First Nation
- Kwantlen First Nation
- Kwaw-kwaw-Apilt First Nation
- Kwikwetlem First Nation
- Lake Cowichan First Nation
- Leq'á:mel First Nation
- Lheidli-T'enneh First Nation
- Lhtako Dene Nation
- Little Shuswap Lake Band
- Lower Nicola Indian Band
- Lower Similkameen Indian Band
- Lyackson First Nation
- Lytton First Nation
- Maa Nulth First Nations
- Malahat First Nation
- Matsqui First Nation
- Musqueam Indian Band
- Neskonalith Indian Band
- Nlaka'pamux Nation Tribal Council
- Nooaitch Indian Band
- Okanagan Indian Band
- Oregon Jack Creek Band
- Pacheedaht First Nation
- Pauquachin First Nation
- Penelakut Tribe
- Penticton Indian Band
- Peters First Nation
- Popkum First Nation
- Scia'new First Nation
- Scowlitz First Nation
- Seabird Island Band
- Semiahmoo First Nation
- Shackan Indian Band
- Shxw'ow'hamel First Nation
- Shxwha:y Village
- Simpcw First Nation
- Siska Indian Band
- Skawahlook First Nation
- Skeetchestn Indian Band
- Skowkale First Nation
- Skuppah Indian Band
- Skwah First Nation
- Snaw-Naw-As/Nanoose First Nation
- Snuneymuxw First Nation
- Songhees Nation
- Soowahlie Indian Band
- Spuzzum First Nation
- Squamish Nation
- Squiala First Nation
- Stz'uminus First Nation
- Semá:th First Nation
- Tk'emlups te Secwepemc
- Tsartlip First Nation



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- Tsawout First Nation
- Tsawwassen First Nation
- Tseycum First Nation
- Tsleil-Waututh Nation
- Tzeachten First Nation
- Union Bar First Nation
- Upper Nicola Band
- Upper Similkameen Indian Band
- Westbank First Nation
- Whispering Pines
- Yakweakwioose First Nation
- Yale First Nation

Document Owner: Ken McLernon
Subject Matter Expert: Ken McLernon

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APPENDIX B: ENGAGEMENT AUDIENCES – POTENTIALLY AFFECTED BC COASTAL LOCAL GOVERNMENTS

Trans Mountain engages with potentially affected BC Coastal Local Governments on the topic of research. This includes the following entities and the local governments within them that border the ocean:

- Alberni-Clayoquot Regional District
- Capital Regional District
- Cowichan Valley Regional District
- Islands Trust
- Metro Vancouver Regional District
- Nanaimo Regional District
- Squamish-Lillooet Regional District
- Sunshine Coast Regional District

APPENDIX B RESEARCH TOPICS BY PAST PROJECTS²

	Comparison of Behaviour of Spilled Oils	Seabed Cleanup & Assessment (uSCAT)	Gainford Studies	Salish Sea Oil Spill Trajectory	Oil Mineral Aggregate Formation
Physical and Chemical Properties of Oil and other Products shipped from Westridge Marine Terminal	Yes	Yes	Yes	Yes	Yes
Product Weathering	Yes	No	Yes	Yes	Yes
Dispersion and oil/sediment interactions	Yes	No	Yes	Yes	Yes
Product Submergence	Yes	Yes	Yes	No	Yes
Product behaviour and cleanup following in-situ burning	No	No	Yes	No	No
Cleanup and remediation options for sediments and shorelines	No	Yes	Yes	Yes	No

² Note: The Shoreline Treatment Decision Support Tool has not been included in table, as it does not specifically study the above topics.

APPENDIX C AGENCIES³

BC Ministry of Environment (BC MOE)

BC Energy Regulator (BCER) *(formerly Oil & Gas Commission [BC OGC])*

Canada Energy Regulator (CER)

Canadian Coast Guard (CCG)

Environment & Climate Change Canada (ECCC)

Ministry of Energy, Mines & Low Carbon Innovation (EMLI) *(formerly Ministry of Natural Gas and Development [MNGD])*

Natural Resources Canada (NRCan)

³ List of agencies per BC EAO Condition 35.

APPENDIX D INDIGENOUS GROUPS⁴

Adams Lake Indian Band	Peters First Nation
Aitchelitz First Nation	Popkum First Nation
Ashcroft Indian Band	Scia'new First Nation
Boston Bar First Nation	Scowlitz First Nation
Canim Lake Band	Seabird Island Band
Chawathil First Nation	Semiahmoo First Nation
Cheam First Nation	Shackan Indian Band
Coldwater Indian Band	Shxw'ow'hamel First Nation
Cook's Ferry Indian Band	Shxwha:y Village
Cowichan Tribes	Simpcw First Nation
Ditidaht First Nation	Siska Indian Band
Esquimalt Nation	Skawahlook First Nation
Halalt First Nation	Skeetchestn Indian Band
Hwilitsum First Nation	Skowkale First Nation
Katzie First Nation	Skwah First Nation
Kwantlen First Nation	Snaw-Naw-As/Nanoose First Nation
Kwaw-kwaw-Apilt First Nation	Snuneymuxw First Nation
Kwikwetlem First Nation	Songhees Nation
Lake Cowichan First Nation	Soowahlie Indian Band
Leq'á:mel First Nation	Spuzzum First Nation
Lheidli-T'enneh First Nation	Squamish Nation
Lhtako Dene Nation	Squiala First Nation
Little Shuswap Lake Band	Stz'uminus First Nation
Lower Nicola Indian Band	Semá:th First Nation
Lower Similkameen Indian Band	Tk'emlups te Secwepemc
Lyackson First Nation	Tsartlip First Nation
Maa Nulth First Nations	Tsawout First Nation
Malahat First Nation	Tsawwassen First Nation
Matsqui First Nation	Tseycum First Nation
Musqueam Indian Band	Tsleil-Waututh Nation
Neskonlith Indian Band	T'sou-ke First Nation
Nlaka'pamux Nation Tribal Council ⁵	Tzeachten First Nation
Nooaitch Indian Band	Union Bar First Nation
Okanagan Indian Band	Upper Nicola Band
Pacheedaht First Nation	Upper Similkameen Indian Band
Pauquachin First Nation	Westbank First Nation
Penelakut Tribe	Whispering Pines
Penticton Indian Band	Yakweakwoose First Nation
	Yale First Nation

⁴ List of Indigenous groups per Schedule B Table of Conditions for an Environmental Assessment Certificate.

⁵ Representing Boothroyd Indian Band, Lytton First Nation, Oregon Jack Creek Band, and Skuppah Indian Band.

APPENDIX E COASTAL LOCAL GOVERNMENTS⁶

Alberni-Clayoquot Regional District

City of Port Alberni

District of Tofino

District of Ucluelet

Capital Regional District

City of Colwood

City of Langford

City of Victoria

District of Central Saanich

District of Highlands

District of Metchosin

District of North Saanich

District of Oak Bay

District of Saanich

District of Sooke

Town of Sidney

Town of View Royal

Township of Esquimalt

Cowichan Valley Regional District

City of Duncan

District of North Cowichan

Town of Ladysmith

Islands Trust Area

Bowen Island Municipality

Islands Trust

Metro Vancouver Regional District

City of Burnaby

City of North Vancouver

City of Port Moody

City of Richmond

City of Surrey

City of Vancouver

City of White Rock

Corporation of Delta

District of North Vancouver

District of West Vancouver

University Endowment Lands

Village of Anmore

Village of Belcarra

Village of Lions Bay

Nanaimo Regional District

City of Nanaimo

City of Parksville

District of Lantzville

Town of Qualicum Beach

Squamish-Lillooet Regional District

District of Squamish

Sunshine Coast Regional District

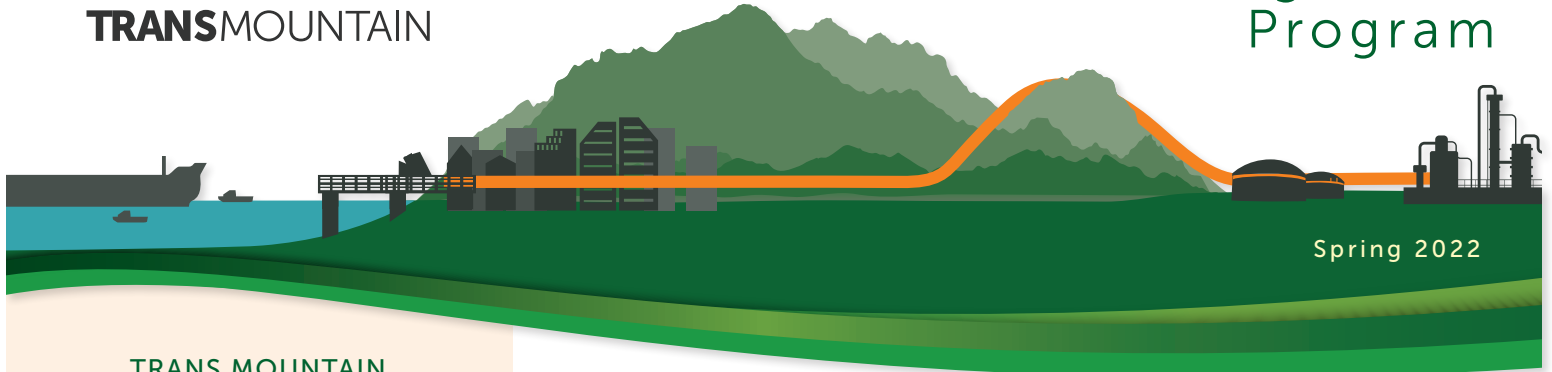
District of Sechelt

Sechelt Indian Government District

Town of Gibsons

⁶ List of Coastal Local Governments per Reconsideration of Environmental Assessment Certificate.

APPENDIX F 2018 AND 2022 NEWSLETTERS



TRANSMOUNTAIN
VALUES and
ENCOURAGES INPUT
for CONSIDERATION
ON ITS EMERGENCY
MANAGEMENT PROGRAM.



Our emergency response plans are available online at transmountain.com/emergency-response-plans.

If you would like to provide feedback or discuss potential research initiatives, please contact:
Emergency_Management@transmountain.com

TRANSMOUNTAIN FINANCIAL CONTRIBUTIONS

More than **\$2 MILLION** has been allocated thus far **for research** on the fate and behaviour of bitumen.

RESEARCH INITIATIVES

Trans Mountain's Emergency Management (EM) Program comprises a comprehensive set of standards and procedures based on a system of continual improvement.

AVENUES TO IDENTIFY IMPROVEMENTS INCLUDE, but are not limited to:

- Inputs for consideration from Indigenous groups and stakeholders
- Canada Energy Regulator (CER) and British Columbia Environmental Assessment Office (BC EAO) condition requirements
- New technologies and research findings

The Certificate granted by the BC EAO for the Trans Mountain Expansion Project (TMEP) was accompanied by several Conditions. As part of the recent provincial reconsideration process, BC EAO amended the scope of consultation for Condition 35 - Fate and Behaviour of Bitumen Research, by broadening the list of stakeholders to include potentially affected coastal local governments.

Trans Mountain will work with spill responders to support the incorporation of the research results into its emergency preparedness plans.

The Condition requires Trans Mountain to report how it is incorporating any applicable research results into its emergency preparedness and response plans; and

that Trans Mountain will work with spill responders to support the incorporation of the research results into its emergency preparedness plans and programs.

The Condition includes

research topics on the different physical and chemical properties of the oil (including blends) and other products intended to be shipped from Westridge Marine Terminal, product weathering, dispersion and oil/sediment interactions, product submergence, product behaviour and cleanup following in-situ burning, and cleanup remediation options for sediments and shorelines.





TRANS MOUNTAIN IS SUPPORTING A
NEW RESEARCH PROGRAM
 to complement the **BC EAO Condition 35**
 and to **IMPROVE**
 incident response.

**SUBMERGED OIL
 DETECTION**
 Joint Industry Project

Trans Mountain is supporting a new, joint-industry project being managed by C-FER Technologies. The goal of the project is to minimize the environmental impact of hydrocarbon releases into waterways by understanding the factors that affect the performance of various leak detection technologies.

The project is being conducted in five phases with the first two already underway:

- Define technology requirements
- Review technologies
- Test facility design and setup
- Technology testing
- Analysis and reporting

A Steering Committee has been established to provide input on performance requirements and details on typical application environments in which these technologies may be deployed.

The results of this project have the potential to enhance non-floating oil monitoring and emergency response plans.



TRANSMOUNTAIN



Trans Mountain will assess the findings from these studies to **IDENTIFY OPPORTUNITIES** to **IMPROVE** incident response strategies.

ONGOING Research

Sustainable Development – Experimental Lakes Area

Trans Mountain is supporting the International Institute for Sustainable Development – Experimental Lakes Area Program. This multi-year industry and government collaborative program is examining the fate and behaviour of diluted bitumen and conventional heavy crude oil in a freshwater environment.

This program is being conducted in three stages, with two already completed:

1. Establishment of land-based microcosms to examine the chemical and physical behaviour of diluted bitumen in freshwater
2. Re-creation of a controlled oil spill to determine if degradation is different for
3. Comparison of cleanup methods



Emergency and spill response booms specifically selected for water-based spill containment and recovery



Example of equipment deployed at large river Control Point

RECENTLY COMPLETED Research

Product Acceptance Standard

Trans Mountain supported an independent, science-based multimillion-dollar study commissioned by the Canadian Energy Pipeline Association (CEPA) and the Canadian Association of Petroleum Producers (CAPP). The study evaluated and compared the physical and chemical properties of various types of crude oil under different environmental conditions.

The findings of the study concluded that both conventional and oilsand-derived products tested remain floating in the marine environment for extended periods of time and diluted bitumens do not separate into their original bitumen and diluent after they spill because the hydrocarbons in both are infinitely soluble to each other.

The findings of the study led to the development of fact sheets on oil properties and behaviour under a range of environmental conditions. Trans Mountain has enhanced its Non-Floating Oil Assessment and Response Plan (Plan) by incorporating these fact sheets to help guide initial response actions and assist responders to determine the most effective countermeasure.

The Plan can be found on the Trans Mountain website at transmountain.com/emergency-response-plans.

Underwater Seabed Cleanup and Assessment Technique Guide

Trans Mountain, together with Western Canada Marine Response Organization (WCMRC), Canadian Coast Guard (CCG), Natural Resources Canada (NRCan) and Fisheries and Oceans Canada (DFO), supported the development of an Underwater Seabed Cleanup and Assessment Technique (uSCAT) Guide.

The uSCAT Guide identifies standardized strategies for the detection and assessment of nearshore non-floating oil in varying environments. In addition, the uSCAT Guide provides methods for recording, storing and processing response data.

Trans Mountain has enhanced its Non-Floating Oil Assessment and Response Plan by referencing the uSCAT Guide to support planning, decision-making and operational response to nearshore non-floating oil. The uSCAT Guide is accessible via Trans Mountain's Non-Floating Oil Assessment and Response Plan at transmountain.com/emergency-response-plans. Alternatively, it can be found online at uscata.ca.

Trans Mountain has enhanced its Non-Floating Oil Assessment and Response Plan by incorporating fact sheets to help guide initial response.



Responders testing water-based spill containment and recovery techniques



Responders testing water-based spill containment and recovery techniques for oil at risk of becoming non-floating



Responders verifying the contents of Trans Mountain's emergency response trailers

Other COMPLETED Research

As a proponent of advancing spill response and recovery technology, Trans Mountain has supported a number of research studies to better understand the behaviour of oil and the performance of oil recovery technology.

In 2012, Trans Mountain, together with WCMRC, completed field-scale research that evaluated the fate and behaviour of representative samples of diluted bitumen discharged into a water environment and subjected to various conditions of weathering. Referred to as the Gainford Studies, the project also assessed the performance of various types of oil spill recovery equipment and found that spilled diluted bitumen can be successfully removed from the surface of the water using traditional mechanical equipment.

Trans Mountain added a non-floating oil trailer to its inventory of spill response equipment.

Trans Mountain supported an investigation in 2016 to better understand the potential interaction between oil and sediment in the Lower Fraser River and the Salish Sea. The conclusions demonstrated a low potential for oil and sediment particles to interact and then aggregate together as oil mineral aggregate (OMA) due to the natural conditions in the Lower Fraser River and Salish Sea. This aligns with recent work conducted by other researchers, indicating the unlikelihood for OMAs to form in coastal BC waters.

In 2016, Trans Mountain also supported an evaluation that performed modelling of spilled

hydrocarbon fate and behaviour, and the associated effects at five representative sites along the shipping route in the Salish Sea. The findings concluded that due to variables, including wind and tides, at modelled sites, hydrocarbon does not migrate in a uniform pattern and a single model cannot be predictive of a real outcome at a particular site.

The results of these studies were considered during the development of the Trans Mountain Non-Floating Oil Assessment and Response Plan, which is designed to provide guidance for the initial spill assessment and

response actions to spilled oil that is at risk of or has become non-floating in an inland water environment. The Plan is available online at transmountain.com/emergency-response-plans.

In addition, Trans Mountain added a non-floating oil trailer to its inventory of spill response equipment. The trailer contains emergency and spill response equipment specifically selected for water-based spill containment and recovery, including dewatering bags, underwater viewing boxes, silt fencing and an aqua dam.

TRANS MOUNTAIN VALUES and ENCOURAGES INPUT for CONSIDERATION ON ITS EMERGENCY MANAGEMENT PROGRAM.

If you would like to provide feedback or discuss research initiatives, please email:

Emergency_Management@transmountain.com

We welcome and encourage your feedback about our Emergency Management newsletter:



COMMITTED TO SAFETY SINCE 1953.

emergency_management@transmountain.com | 1.866.268.3001

transmountain.com



TRANS MOUNTAIN EXPANSION PROJECT

KINDER MORGAN CANADA EMERGENCY MANAGEMENT PROGRAM: Research Initiatives

The Kinder Morgan Canada Inc. (KMC) Emergency Management (EM) Program is based on a system of continual improvement. Avenues to identify improvements include:

- Natural evolution of industry Emergency Management practices
- Feedback from Operations staff and emergency exercises
- Input for consideration from Aboriginal communities and stakeholders
- Regulatory changes
- National Energy Board (NEB) and British Columbia Environmental Assessment Office (BC EAO) condition requirements
- New technologies and research findings

Trans Mountain emergency response plans and strategies currently meet, and often exceed Regulatory requirements. Research findings are directed towards further improvements.



BC EAO Condition 35 – Fate and Behaviour of Bitumen Research

Trans Mountain must provide a report regarding the current and future research programs it is leading, jointly-leading, supporting or otherwise involved in regarding the behaviour and recovery of heavy oils spilled in fresh water and the marine aquatic environment.

The condition includes potential research topics on the different physical and chemical properties of the oil and other products intended to be shipped from the Westridge Marine Terminal, product weathering, dispersion and oil/sediment interactions, product submergence, product behaviour and cleanup following in-situ burning, and cleanup and remediation options for sediments and shoreline. Additionally, the condition requires Trans Mountain to report how it is incorporating any applicable research results into its emergency preparedness and

response plans; and that Trans Mountain will work with spill responders to support the incorporation of the results of the research into its emergency preparedness plans and programs.

Trans Mountain must provide the report to Aboriginal groups and to the BC Environment Assessment Office (BC EAO), Ministry of Environment (MoE), Ministry of Natural Gas Development (MNGD) and Oil and Gas Commission (OGC); and federally, the Environment and Climate Change Canada (ECCC), National Energy Board (NEB) and the Canadian Coast Guard (CCG), prior to the commencement of Project operations and must provide progress updates one year and five years, after commencement of operations.

Trans Mountain is currently conducting and funding research in support of BC EAO Condition 35 and to improve spill response. This includes:

National study to compare the Fate and Behaviour of Crude Oils on Water

An independent, science-based multi-million-dollar study was commissioned by the Canadian Energy Pipeline Association (CEPA) and the Canadian Association of Petroleum Producers (CAPP). The study is designed to evaluate and compare the physical and chemical properties of various types of crude oil that move in North America. More than 10 types of crude oil, including several diluted bitumen products are undergoing a number of tests to determine how the fresh and weathered oils behave in various marine, estuarine and freshwater settings, under different environmental conditions.

A scientific advisory committee was established to provide the technical knowledge and guidance necessary to facilitate the study. The committee members are from Environment and Climate Change Canada, Fisheries and Oceans Canada, the National Energy Board, Natural Resources Canada and include a world-renowned independent spill response expert.

The study is in progress and results will be publicly available at the end of 2018.

Examining the potential effects of controlled spills of diluted bitumen and conventional heavy crude oil

Trans Mountain is supporting the International Institute for Sustainable Development-Experimental Lakes Area Program. This unique multi-year industry and government collaborative program is examining the fate and behavior of diluted bitumen and conventional heavy crude oil in a freshwater shoreline environment. Baseline chemical and biological information was collected in 2017 for a natural lake study site using an actual Canadian lake.

In 2018, the International Institute for Sustainable Development will be conducting a controlled spill of oil to quantify the efficiency of immediate product recovery and further analysis of residual oil constituents. Potential impacts will be evaluated for 16 weeks. The information from this portion of the project will be used to determine if degradation is significantly different for diluted bitumen and conventional heavy crude oil, and if wave energy has a significant effect on oil degradation rates in the freshwater shoreline environment. The program will also compare cleanup methods for the oil spilled.

A scientific advisory committee is expected to be established for this project in 2018; invitations to participate will be extended to ECCC, DFO and the NEB among others.

ENHANCEMENT OF THE EMERGENCY MANAGEMENT PROGRAM

Trans Mountain will assess the findings from all the stated studies to identify opportunities to improve spill response strategies.

Findings from the Spill Response Technology Review Study has already led to improvements in the KMC Emergency Management Program and response strategies, including, however not limited to, the purchase of specialized equipment and the development of a Sunken and Submerged Oil Plan.



Underwater Seabed Cleanup and Assessment Technique Guide

Support was provided by Trans Mountain for the development of an Underwater Seabed Cleanup and Assessment Technique Guide (uSCAT), together with Western Canada Marine Response Corporation (WCMRC), CCG, NRCan and DFO.

The guide will specify common language, identify strategies for searching for sunken oil and describe techniques for documenting and communicating its distribution.

As part of this research, an uSCAT science advisory committee was established including representatives from ECCC, DFO, CCG, NRCan and independent spill experts to provide guidance and feedback on the direction of this initiative.

Trans Mountain Financial Contributions

Trans Mountain has allocated more than \$2 million dollars thus far to research into the fate and behaviour of bitumen.

Spill Response Technology Review Study

Trans Mountain participated in a joint industry project including the governments of British Columbia (BC Oil and Gas Commission) and Alberta to independently evaluate and review current inland spill response technologies focusing on diluted bitumen. The purpose of the Inland Spill Response Joint Industry Program was to conduct a comprehensive review of the current technology that exists for inland spill response oil recovery; apply the existing technology to four scenarios; identify suitable technologies; and identify gaps in the existing current technology. The review focused on diluted bitumen.

The study was completed in 2017.

The intent of further research is to add to the pool of knowledge about oil fate and behaviour that can be used to support decision-making during a response and to improve oil spill response overall.



Other Completed Research

Salish Sea Oil Spill Trajectory

Trans Mountain supported the evaluation of spilled hydrocarbon fate and behavior, and the associated effects at five representative sites along the shipping route in the Salish Sea. Modelling at these sites predicted spill trajectories, probability of shoreline oiling and a number of additional variables, based on measured crude oil properties and more than 360 simulations. The modelling considered season-specific behaviour (wind direction and speed, temperature, etc.), trajectories and oil fate.

The modelling demonstrated that a single spill scenario evaluation should not be assumed, nor be expected, to predict actual outcomes at a particular site, or for particular resources of interest. From a practical perspective, the models indicated where spilled oil could go in the event of an accident. WCMRC used the findings to decide on the planning standards for selecting the location of new response bases and for equipment with improved response times.

Oil Mineral Aggregates Formation Mechanisms for the Salish Sea and the Lower Fraser River

Building upon the research and observations characterizing the behavior of diluted bitumen in aquatic environments, Trans Mountain supported an investigation to better understand the potential interaction between oil and sediment, in the Lower Fraser River and the Salish Sea. The research findings were presented at the Arctic and Marine Oilspill Program (AMOP) Technical Seminar, Environment and Climate Change Canada in Ottawa, Ontario in 2016.

The research outcomes showed the results were aligned with previous studies, describing the conditions required for oil mineral aggregates to

form. Findings regarding oil behaviour on water, particularly the factors influencing the submergence and sinking of oil, influenced the selection and design of response strategies in Trans Mountain's response plans. The findings were shared with WCMRC for consideration in its enhancement of response plans and in the development of its Geographic Response Strategies (GRS).

Gainford Studies

Trans Mountain, together with WCMRC, completed field scale research in 2012. The team evaluated the fate and behavior of representative samples of dilbit discharged into a water environment similar to that of Burrard Inlet, BC and subjected it to various conditions of weathering. The study also assessed the performance of the equipment currently stockpiled by North American oil spill recovery organizations, including WCMRC, and found that spilled diluted bitumen can be successfully removed from the surface of the water using traditional mechanical response equipment.

Research conclusions published in 2016 by Biochemistry PhD, Dr. Heather Dettman of Natural Resources Canada's CanmetENERGY Laboratory in Devon, Alberta supports the results from Gainford. Dr. Dettman observed that diluted bitumen floats when exposed to water at temperatures up to 25 degrees C, and displays similar behaviour as other heavy crude oils when exposed to fresh water. In the unlikely event of a spill, it is amenable to conventional recovery measures such as the use of booming and skimmers.


For more information about research or other aspects of the Trans Mountain Emergency Management Program, please contact:
Jamie Kereliuk, Director, Emergency Management
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KINDER MORGAN
CANADA

APPENDIX G REPORT CONSULTATION

The list below includes those agencies, Indigenous groups, and Coastal Local Governments invited to review and provide comment on the Report. The parties who replied or acknowledged receipt, and noted they had no comments or concerns, are reflected below.

Agencies

Agency	Provided Comment or Indicated no Issues/Concerns	Received Written Response to Comments
BC Ministry of Environment (BC MOE)	No	Not Applicable
BC Energy Regulator (BCER)*	No	Not Applicable
Canada Energy Regulator (CER)	Acknowledged; No Comments/Concerns	No
Canadian Coast Guard (CCG)	No	Not Applicable
Environment & Climate Change Canada (ECCC)	Acknowledged; No Comments/Concerns	No
Ministry of Energy, Mines & Low Carbon Innovation (EMLI)	Acknowledged; No Comments/Concerns	No

*Formally BC Oil and Gas Commission (BC OGC).

Indigenous Groups

Indigenous Group	Provided Comment or Indicated no Issues/Concerns	Received Written Response to Comments
Adams Lake Indian Band	No	Not Applicable
Aitchelitz First Nation	No	Not Applicable
Ashcroft Indian Band	No	Not Applicable
Boston Bar First Nation	No	Not Applicable
Canim Lake Band	No	Not Applicable
Chawathil First Nation	No	Not Applicable
Cheam First Nation	No	Not Applicable
Coldwater Indian Band	No	Not Applicable
Cook's Ferry Indian Band	No	Not Applicable
Cowichan Tribes	No	Not Applicable
Ditidaht First Nation	No	Not Applicable
Esquimalt Nation	No	Not Applicable
Halalt First Nation	No	Not Applicable
Hwlitsum First Nation	No	Not Applicable
Katzie First Nation	No	Not Applicable
Kwantlen First Nation	No	Not Applicable

Indigenous Group	Provided Comment or Indicated no Issues/Concerns	Received Written Response to Comments
Kwaw-kwaw-Apilt First Nation	No	Not Applicable
Kwikwetlem First Nation	No	Not Applicable
Lake Cowichan First Nation	No	Not Applicable
Leq'á:mel First Nation	No	Not Applicable
Lheidli-T'enneh First Nation	No	Not Applicable
Lhtako Dene Nation	No	Not Applicable
Little Shuswap Lake Band	No	Not Applicable
Lower Nicola Indian Band	No	Not Applicable
Lower Similkameen Indian Band	No	Not Applicable
Lyackson First Nation	No	Not Applicable
Maa Nulth First Nations	No	Not Applicable
Malahat First Nation	Provided Comment	Yes
Matsqui First Nation	No	Not Applicable
Musqueam Indian Band	No	Not Applicable
Neskonlith Indian Band	No	Not Applicable
Nlaka'pamux Nation Tribal Council ⁷	Provided Comment	Yes
Nooaitch Indian Band	No	Not Applicable
Okanagan Indian Band	No	Not Applicable
Pacheedaht First Nation	No	Not Applicable
Pauquachin First Nation	No	Not Applicable
Penelakut Tribe	No	Not Applicable
Penticton Indian Band	No	Not Applicable
Peters First Nation	No	Not Applicable
Popkum First Nation	No	Not Applicable
Scia'new First Nation	No	Not Applicable
Scowlitz First Nation	No	Not Applicable
Seabird Island Band	Acknowledged; No Comments/Concerns	No
Semiahmoo First Nation	No	Not Applicable
Shackan Indian Band	No	Not Applicable
Shxw'ow'hamel First Nation	No	Not Applicable
Shxw'ha:y Village	No	Not Applicable
Simpco First Nation	No	Not Applicable

⁷ Representing Boothroyd Indian Band, Lytton First Nation, Oregon Jack Creek Band, and Skuppah Indian Band.

Indigenous Group	Provided Comment or Indicated no Issues/Concerns	Received Written Response to Comments
Siska Indian Band	No	Not Applicable
Skawahlook First Nation	No	Not Applicable
Skeetchestn Indian Band	No	Not Applicable
Skowkale First Nation	No	Not Applicable
Skwah First Nation	No	Not Applicable
Snaw-Naw-As/Nanoose First Nation	No	Not Applicable
Snuneymuxw First Nation	No	Not Applicable
Songhees Nation	No	Not Applicable
Soowahlie Indian Band	No	Not Applicable
Spuzzum First Nation	No	Not Applicable
Squamish Nation	No	Not Applicable
Squiala First Nation	No	Not Applicable
Stz'uminus First Nation	No	Not Applicable
Semá:th First Nation	No	Not Applicable
Tk'emlups te Secwepemc	No	Not Applicable
Tsartlip First Nation	No	Not Applicable
Tsawout First Nation	No	Not Applicable
Tsawwassen First Nation	No	Not Applicable
Tseycum First Nation	Provided Comment	Yes
Tsleil-Waututh Nation	Provided Comment	Yes
T'sou-ke First Nation	No	Not Applicable
Tzeachten First Nation	No	Not Applicable
Union Bar First Nation	No	Not Applicable
Upper Nicola Band	No	Not Applicable
Upper Similkameen Indian Band	No	Not Applicable
Westbank First Nation	No	Not Applicable
Whispering Pines	No	Not Applicable
Yakwekwioose First Nation	No	Not Applicable
Yale First Nation	No	Not Applicable

Coastal Local Governments

Coastal Local Government	Provided Comment or Indicated no Issues/Concerns	Received Written Response to Comments
Alberni-Clayoquot Regional District	No	Not Applicable
City of Port Alberni	No	Not Applicable
District of Tofino	No	Not Applicable
District of Ucluelet	No	Not Applicable
Capital Regional District	No	Not Applicable
City of Colwood	No	Not Applicable
City of Langford	No	Not Applicable
City of Victoria	No	Not Applicable
District of Central Saanich	No	Not Applicable
District of Highlands	No	Not Applicable
District of Metchosin	Provided Comment	Yes
District of North Saanich	No	Not Applicable
District of Oak Bay	No	Not Applicable
District of Saanich	No	Not Applicable
District of Sooke	No	Not Applicable
Town of Sidney	No	Not Applicable
Town of View Royal	No	Not Applicable
Township of Esquimalt	No	Not Applicable
Cowichan Valley Regional District	No	Not Applicable
City of Duncan	No	Not Applicable
District of North Cowichan	Acknowledged; No Comments/Concerns	No
Town of Ladysmith	No	Not Applicable
Islands Trust Area	No	Not Applicable
Bowen Island Municipality	Provided Comment	Yes
Islands Trust	Provided Comment	Yes
Metro Vancouver Regional District	No	Not Applicable
City of Burnaby	No	Not Applicable
City of North Vancouver	No	Not Applicable
City of Port Moody	No	Not Applicable

Coastal Local Government	Provided Comment or Indicated no Issues/Concerns	Received Written Response to Comments
City of Richmond	No	Not Applicable
City of Surrey	No	Not Applicable
City of Vancouver	Provided Comment	Yes
City of White Rock	No	Not Applicable
Corporation of Delta	No	Not Applicable
District of North Vancouver	Provided Comment	Yes
District of West Vancouver	No	Not Applicable
University Endowment Lands	No	Not Applicable
Village of Anmore	No	Not Applicable
Village of Belcarra	No	Not Applicable
Village of Lions Bay	No	Not Applicable
Nanaimo Regional District	No	Not Applicable
City of Nanaimo	No	Not Applicable
City of Parksville	No	Not Applicable
District of Lantzville	No	Not Applicable
Town of Qualicum Beach	No	Not Applicable
Squamish-Lillooet Regional District	No	Not Applicable
District of Squamish	No	Not Applicable
Sunshine Coast Regional District	No	Not Applicable
District of Sechelt	No	Not Applicable
Sechelt Indian Government District	No	Not Applicable
Town of Gibsons	No	Not Applicable



TRANSMOUNTAIN CONSTRUCTION NOTICE

Westridge Marine Terminal Construction Update **Berth 1 In Service**

Summer 2023

You are receiving this notice to ensure that you are kept informed of construction activity at Trans Mountain's Westridge Marine Terminal (WMT) as part of the Trans Mountain Expansion Project (the Project). Trans Mountain continues in-water and foreshore construction at WMT including pile driving for marine dock structures, electrical and utility work, installation and commissioning of vessel loading equipment and emergency response enhancements.

BERTH 1 OPERATIONS

With the construction of WMT 90% complete, Trans Mountain is bringing some components of the newly constructed facilities into service to support the continued operation of the existing Line 1. At this time, Trans Mountain is going to relocate the current vessel operations at WMT from the existing berth to the newly constructed Berth 1. This also includes the existing jet fuel offloading operations. Relocation of vessel operations to Berth 1 shall enable the continued construction of Berth 3 while also continuing the safe loading of tankers at WMT (see page 3 layout image).

Trans Mountain anticipates that Berth 1 will be in service from the end of June to early July and ships will start calling on Berth 1 shortly thereafter, based on existing pipeline schedules.

During the two-week commissioning period of Berth 1, additional noise may be generated that will sound similar to the deflation of a car tire and there may be some odour of crude oil but will always remain within safe limits (continuous air monitoring will be in place). Trans Mountain will continue to abide by all noise, lighting and environmental requirements outlined in the Vancouver Fraser Port Authority (the port authority) permit #19-162.

In late March 2023, Trans Mountain filed with the Canada Energy Regulator (CER) Leave to Open (LTO), which includes confirmation of testing and commissioning of assets that will be coming into service (CER Filing IDs [C23797](#), [C23746](#)). Trans Mountain has also satisfied all applicable "prior to operation" conditions for the in service of Berth 1 while establishing new systems and operating plans, including updated emergency response plans, an oil pollution prevention plan, new fire suppression systems, oil spill response assets and an expanded skilled workforce.

As the construction of Line 2 and the new Westridge Delivery Lines are not yet complete, the start of Berth 1 in service will not result in an increase in the volume of product or number of tankers calling at WMT, nor does this constitute the start of post-Project operations.

CONSTRUCTION ACTIVITIES

Following Berth 1 in service, the construction activities at WMT that will continue include:

- The installation of catwalks, mooring equipment and platforms to support the completion of Berth 3, including intermittent in-water vibratory and impact pile driving to install 12 piles.
- The removal of the office trestle on the west side of the terminal.
- Repositioning of the west shoreline anchor of the construction safety boom.



TRANSMOUNTAIN CONSTRUCTION NOTICE

EXISTING BERTH – REMOVAL FROM SERVICE

Subject to permit approval, in time the existing berth will be taken out of service, decommissioned and removed. This work will be reviewed and/or permitted by jurisdictional authorities that include the CER (under Section 45 of the Onshore Pipeline Regulations, SOR/99-294), the VFPA and DFO.

WHAT YOU MAY NOTICE

- Deep-sea vessels calling on the newly constructed Berth 1.
- Intermittent noise and increased vibration as pile driving activities resume on the eastern side of WMT.
- Additional lighting directed within the work site, on Berth 1, and at the main access points.

HOURS OF WORK*

The port authority approved a six-month extension to a limited scope of construction activities overnight at WMT plus a limited scope of work that will occur on Sundays. This extension permits the continuation of activities at WMT previously approved to occur 24 hours per day, Monday to Saturday. Some essential work will also occur on Sundays between 8:00 am and 5:00 pm and a limited number of Sunday nights from 5:00 pm to 7:00 am. The six-month extension is effective March 1, 2023, until September 1, 2023.

General construction activities related to the Project, including vibratory or impact pile driving, currently take place during the regular construction hours of 7:00 am to 8:00 pm, Monday to Saturday. Sunday and night work **will not** include pile driving operations; those activities will continue to occur only during daytime regular construction hours.

All work will adhere to the requirements and conditions originally outlined in port authority permit #19-162 and amendments. This includes abiding by all noise, lighting and environmental requirements included in the permit as well as the WMT Environmental Protection Plan (CER Filing ID [A6G2L1](#)) and Noise Management Plan (CER Filing ID [A7I3K1](#)). All emergency plans and resources will be maintained through this work.

PROPOSED MITIGATIONS TO MINIMIZE DISTURBANCE

Trans Mountain continues to implement mitigation measures to minimize potential disturbance from construction activities:

- Continuous air monitoring during the two-week commissioning period of Berth 1.
- Use of directional lighting to limit light pollution in the surrounding area.
- Continuous noise monitoring and deployment of noise mitigations as per the noise management plan. This includes the previously installed 12' sound wall at WMT to minimize the effects of drilling operations on the residential neighbourhood.
- Offsite parking with shuttle transportation to minimize vehicle traffic accessing the site.

**Dates are subject to change and commencement of work is subject to necessary approvals and permits*

To view a detailed map of this area and sign up for construction updates
visit transmountain.com/map.

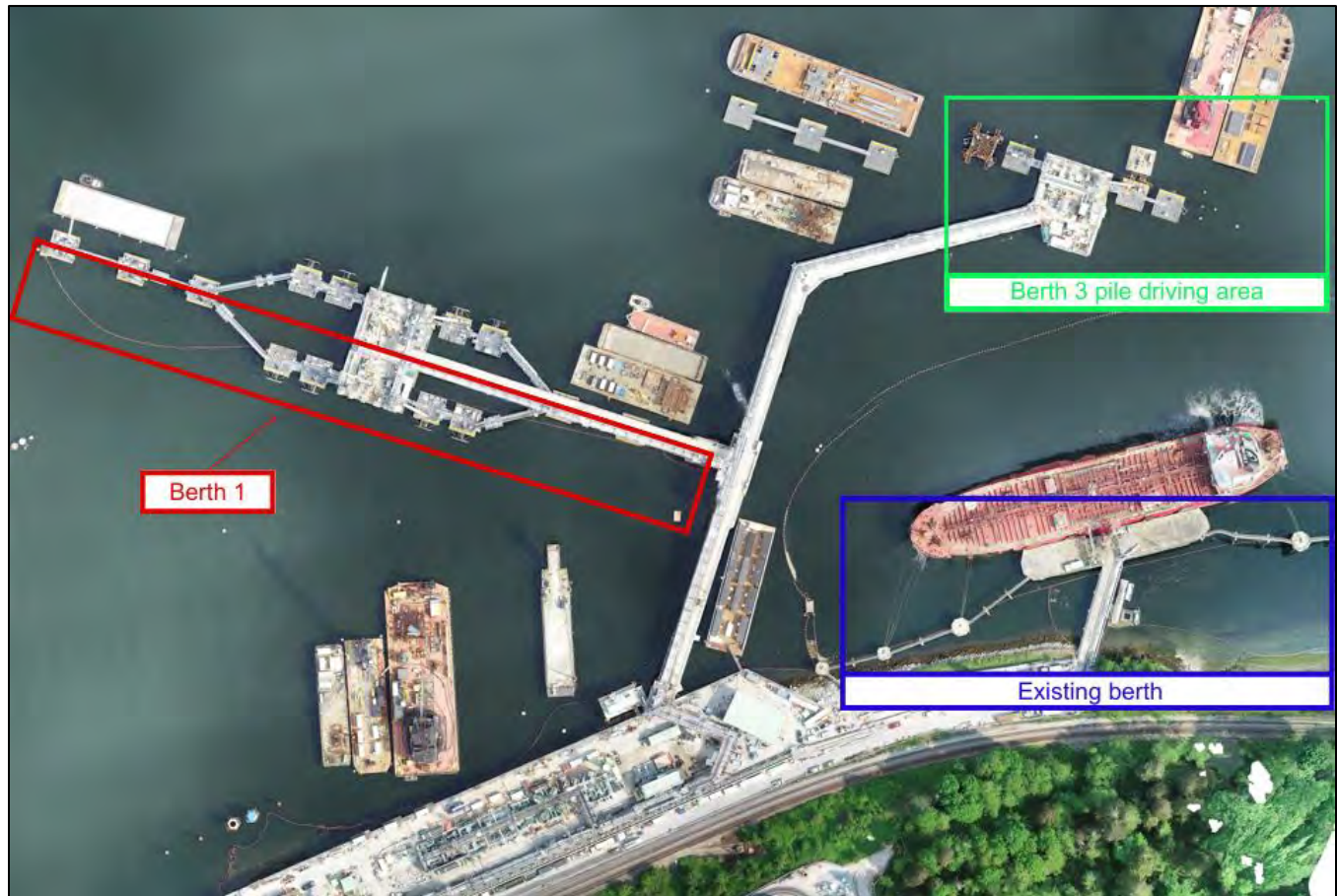
For more information or questions about the Trans Mountain Expansion Project
contact us at info@transmountain.com or **1.866.514.6700**.



TRANSMOUNTAIN CONSTRUCTION NOTICE

SITE LOCATION

Figure 1: Location of Activity After Berth 1 In Service





OFFICE OF THE MAYOR

FILE: 01-0410-05

June 16, 2023

The Honourable Mike Farnworth
Minister of Public Safety and Solicitor General
Via Email: PSSG.Minister@gov.bc.ca

Dear Minister Farnworth:

Re: Recent Decision to Reduce the Role of Highway Patrol In Responding to Traffic Collisions on Numbered Provincial Highways

I write today to express concerns on behalf of the City of Mission about the recent decision to reduce the role of Highway Patrol in responding to traffic collisions on numbered provincial highways.

We have three concerns. First, we believe the RCMP has made this decision without adequately consulting Fraser Valley and Metro Vancouver municipalities. Second, we believe that this decision will have a negative impact on our community policing capacity, reducing safety, and increasing detachment workloads which are already stressed. Finally, we are concerned that this decision will negatively impact our ability to budget for our policing services.

The decision-making process on this matter did not achieve the standard we expect from the RCMP. Municipalities first heard about this decision via an RCMP-CAO Zoom call in March 2023, with no official recognition in writing until May 16 of this year. According to Chief Superintendent Turton, the decision received support from the Ministry of Public Safety and Solicitor General in February of this year, even though nobody at the municipal level had any opportunity to give input. As you have heard from Mission, we believe there should be more collaboration in strategic and capital policing decisions. This decision offered no collaboration whatsoever, despite the fact it will impact our budget and community safety.

In her remarks at the Mayors' Forum on May 23, C/Supt. Turton advised that the RCMP felt it was complying with its responsibility for consultation by giving six months' notice. Her remarks were met with considerable alarm from the Mayors in attendance. Without more time or an opportunity to plan together, local governments are left guessing about the impact on our municipal resources and the best way to adjust to these changes. Many expressed the very real

concern that an incident on a local highway could draw away the members of a detachment for 12 or more hours, leaving no one to respond to public safety matters in their communities.

Mayors and CAOs are still awaiting a fulsome description of how local detachments and BCHP will partner with us. To-date, we have only been assured that BCHP will assist "when we can."

Further, C/Supt. Turton's May 16th letter and May 23rd comments alluded to the recruitment benefits of this policy "re-alignment." She stated that BCHP candidates want to work on proactive traffic enforcement matters, and that collision response is a deterrent to recruitment. Mission believes strongly that this policy change will have the effect of transferring the burden to our local members, worsening detachment morale and making it harder to retain officers. They too need an opportunity to work proactively. They too have concerns about workload.

C/Supt. Turton also indicated that the province's recent decision to add \$230 million for the recruitment of provincial officers would help to offset this realignment. As you know, Mission has been advocating for additional provincial officers since 2008. While we appreciate these dollars for the recruitment of new provincial officers, it is not accurate to describe them as a remedy to any reduced capacity of BCHP.

In the last few years, local governments have struggled to keep their policing budgets at a sustainable level. As we grow, we aim to maintain a ratio of 1 member per 750 citizens, but that has become increasingly difficult given the budgetary pressures caused by the first RCMP collective agreement, body-worn cameras, body armour and costs associated with 9-1-1. Mission has seen RCMP members asked to broaden their scope of work in areas such as Situation Tables, homelessness outreach, and secondment to areas threatened by wildfire. We have been advised to expect a significant increase in the next IHIT budget and to prepare for the next round of collective bargaining. While all these items create budgetary pressures, they can at least be described as "value additions." The realignment of BCHP services stands alone because it will likely cost cities more while reducing levels of service.

According to C/Supt. Turton, the current service delivery model has existed for at least twelve years. Here in Mission, we believe that changing a relationship of that duration deserves careful consideration by all stakeholders. For these reasons, we call upon PSSG to ensure the following:

1. That the effective date of September 1, 2023, be delayed so that local municipalities, local police services, and the RCMP Lower Mainland District can adequately plan for a safe transition.
2. That BCHP and local detachments work together to achieve a clear and mutual understanding of their roles, the conditions for shared work, and a phased schedule for these changes to occur.
3. That a clear method and timeline for assessing the new model is included in our collective planning, with resources for adjusting to any challenges along the way.

Mission has been served well by the RCMP and we remain dedicated to working with them to provide quality policing in our community. To do so, we must ensure that local voices are heard in decisions about policing policy and funding. I fear that this recent decision will have a deleterious effect on our relationship with the RCMP unless you intervene to ensure that there is an equitable and collaborative dialogue involving all parties.

Sincerely,



PAUL HORN
MAYOR

Cc. Doug Scott, Deputy Solicitor General pssg.correspondence@gov.bc.ca
Chief Superintendent Holly Turton, OIC BC Highway Patrol E_BCHP_OICOffice@rcmp-grc.gc.ca
Inspector Ted Lewko, Officer in Charge, Mission RCMP Detachment
Pam Alexis, MLA, Abbotsford-Mission, Minister of Agriculture and Food Pam.Alexis.MLA@leg.bc.ca
Bob D'Eith, MLA, Maple Ridge-Mission D'Eith.MLA, Bob Bob.Deith.MLA@leg.bc.ca
Brad Vis, MP, Mission-Matsqui-Fraser Canyon Brad.Vis@parl.gc.ca
Metro Vancouver and FVRD Mayors
Metro Vancouver and FVRD Board Chairs
Jennifer Kinneman, Chief Administrative Officer, FVRD
Jerry Dobrovolny, Commissioner / Chief Administrative Officer, Metro Vancouver
c/o Maureen.trainor@metrovancover.org
City of Mission Council

From: [REDACTED] (Severed portions are shaded)
Sent: Monday, June 19, 2023 11:35 AM
To: Jamie Ross <jross@belcarra.ca>; Carolina Clark <cclark@belcarra.ca>; Joe Elworthy <jelworthy@belcarra.ca>; Janet Ruzycski <jruzycki@belcarra.ca>; Liisa Wilder <lwilder@belcarra.ca>
Cc: Paula Richardson <prichardson@belcarra.ca>
Subject: Tree Trimming/mapping request and query

Dear Mayor Ross and Council,

I am writing on behalf of ourselves and two neighbours regarding our joint requests to trim up and potentially remove trees along the waterfront on Marine Avenue directly adjacent to our respective properties.

We had started this process last summer. There has been very little progress to date as our questions regarding operationalization of the relevant by-law seems to result in circular conversations that return to Belcarra's rigid interpretation of it, such that, once we tallied the relevant quotes for the professional oversight noted in the by-law, would result in us paying possibly in the neighbourhood of \$15,000.00 for a trim up *request*.

We made a \$200.00 payment for the tree cutting/trimming application in August of 2022, and approaching a year later have not been able to have the conversation requested to consider alternative ways of interpreting this by-law - ones that would respect the environmental safeguards but within reasonable financial costs to the applicant (and within a reasonable timeframe).

There was a happenstance meeting with Stewart Novak that resulted in him being made aware of some dead trees that posed a fall-hazard, and it appears that some of these were then cut down via a Village request. That was a good start. When discussion of alternative interpretations for the by-law "requirements" was requested, we were told we could re-submit a new request, with no invitation to chat about where the issues lay. We are simply seeking a conversation to explore how/whether the existing by-law might be able to work given we were told this was the first iteration of operationalizing it.

Our request now, almost a year on, is to have a considered conversation about the challenges (and potential solutions) related to this "new" by-law and how the Village has interpreted it. We understand it was intended to facilitate such requests but in fact, as it is currently being interpreted, may be making such requests prohibitively complicated and expensive.

We understand that a Strategic Plan for the Village is moving forward, and we wonder if 'tree mapping' for this area is (or can be) included in the Plan?

In conclusion, we (Johnston, Broberg, and Reynolds) wish, specifically now that several hazardous trees have been addressed, to improve our view corridors to the water, through the removal of a small number of messy deciduous trees, and the limbing up of a number of coniferous trees. This would also see a clean-up of ground fuel in the same area, reducing fire risk along the foreshore. This has been (and continues to be done) along the northern section of Marine Avenue seemingly unfettered.

Thank you for your consideration of this request and we look forward to hearing back from you soon.

V/R,

Joel Johnston

Belcarra, British Columbia, CANADA

DISCLAIMER:

This message is intended only for the use of the individual or entity to which it is addressed, and may contain information that is privileged, confidential, and exempt from disclosure under applicable law. It may be used by the intended recipient only for the purpose for which it was transmitted. If the reader of this message is not the named addressee, or the employee or agent responsible for delivering the message to the intended recipient, you are not authorized to read, print, retain, copy or disseminate this message or any part of it and you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and return the original message to us at the above e-mail address.

Below is some of the relevant correspondence from the past year for background/context for you:

We received this from Stewart in October 2022:

Freedom of Information &
Protection of Privacy Act
Section 22(1)

Hi Nancy

(Severed portions are shaded)

Re Municipal Tree Cutting Permit Application, [REDACTED] Marine Avenue, received August 24, 2022.

We have completed an initial review of your application request, however due to the request being on the Marine Avenue Foreshore, the conditions of Schedule B in Bylaw 589, 2021, Managing Trees, Views & Landscapes apply:

Schedule B:

Locations.

1. Marine Avenue Foreshore: Land between the road shoulder and high tide is considered sensitive and has the potential to impact marine life. An assessment from a QEP (Qualified Environmental Professional) will be required for tree cutting permits, considered by the Public Works Manager to be significant in the area prior to permit approvals.

In order to finalize the review of your permit application, an assessment and report from a Qualified Environmental Professional is required to be submitted to the Manager of Public Works for review and acceptance.

Specific issues in question are:

1. Impact assessment on the marine plant life and Crustaceans.
2. Slope stability and erosion.

A certified ASTTBC technologist, environmental engineer, or anyone qualified as defined in the Riparian Act Regulations is acceptable for the scope of work.

Thank you for working with us and we look forward to reviewing the submitted report. ***

Riparian Areas Protection Regulation of British Columbia

Qualified Environmental Professionals

21 (2) An individual may serve as a qualified environmental professional for the purposes of carrying out part of an assessment under this regulation if

- (a) the individual is registered under the [*Professional Governance Act*](#) as any of the following professionals:
 - (i) an agrologist;
 - (ii) an applied science technologist or certified technician;
 - (iii) a registered professional biologist or registered biology technologist;
 - (iv) a professional engineer or professional engineering licensee;
 - (v) a professional forester or registered forest technologist;
 - (vi) a professional geoscientist or professional geoscience licensee,
- (b) the individual is in good standing with the regulatory body under that Act for the individual's profession, and
- (c) when carrying out that part of the assessment, the individual is acting
 - (i) within the individual's area of expertise,
 - (ii) within the scope of professional practice for the individual's profession, and
 - (iii) under the code of ethics of the regulatory body referred to in paragraph (b) and is subject to disciplinary action by that regulatory body.

The Province of B.C.'s Ministry of Environment defines a QEP as:

"A qualified environmental professional (QEP) is an applied scientist or technologist who is registered and in good standing with an appropriate B.C. professional organization constituted under an Act. The QEP must be acting under that association's code of ethics, and subject to the organization's disciplinary action.

A qualified environmental professional could be a professional Biologist, Agrologist, Forester, Geoscientist, Engineer, or Technologist.

Qualified environmental professionals can conduct assessments as individuals or together with other qualified environmental professionals. They must have an area of expertise that is recognized in the assessment methods as one that is acceptable for the purpose of providing all or part of an assessment report for the particular development proposal that is being assessed. They will only be considered a qualified environmental professional for that portion of the assessment that is within their area of expertise, as identified in the assessment methodology."

Kind regards,

Stewart Novak

We then found ourselves on a path to engage all kinds of specially skilled professionals to address the multitude of identified issues by Stewart. That led to this:

Table 1 – [REDACTED] Marine Drive Environmental Consulting Services Proposal (Blue Lines Environmental Consulting)

Project Task	Staff	Rate	Unit	Fees
Background Document/Desktop Review	Senior Environmental Specialist	\$150	2	\$300
Base Mapping/Terrain Modeling		\$150	4	\$600
Field Assessment		\$150	6	\$900
GIS Mapping & Analysis		\$150	4	\$600
Environmental Assessment Reporting & Restoration/Offsetting Plans		\$150	8	\$1,200
DFO Request for Project Review		\$150	4	\$600
Meetings/Consultation (municipal & DFO)		\$150	2	\$300
Project Administration		\$150	1	\$150
ISA Certified Arborist - Sub Consultant	DHC Arborist/RPF	-	-	\$1,740
Disbursements				
Vehicle Use		\$0.65	80	\$52
GNSS receiver & data collector		\$125	1	\$125
Sub-Total:				\$6,567
GST:				\$328
Project Budget				\$6,895

With respect to the overall budget, once the initial field assessments are completed, the scope may change somewhat as the feasibility of tree removals as hazard trees will hinge on the arborists assessment. If the scope evolves to a more typical pruning or trimming to provide views, then I expect costs could be reduced. This cost estimate assumes some full trees will require hazard mitigation and thus trigger requirements for a formal restoration/enhancement planting effort pursuant and the more substantial environmental assessment and reporting requirements but should provide an 'upset cost' for the project.

To which Nancy replied in October, 2022:

Hello Stewart,

Below (ABOVE) is the estimated cost of fulfilling the first step (according to the yet untested by-law) of our request to trim and clear select trees along Marine Ave. We would anticipate another \$5-7K for the actual trimming and removal should we be "successful" - so all-in, around \$15,000.00. I cannot believe that the Village would expect every request for trimming along Marine Ave's foreshore to bear this initial QEP cost, or to have similar studies repeated for each request. It may be that a generalizable report that would guide the decisions going forward could be solicited by the Village for its use for all such requests along the Marine Ave foreshore. Can we book a time to chat with you further about what seems to be a very prohibitive by-law as it is currently framed and to explore other possibilities that would better honour the intent of the by-law? Many thanks, Nancy

From: Ian Devlin [REDACTED]

(Severed portions are shaded)

Sent: Tuesday, June 20, 2023 10:58 AM

To: Jamie Ross <jross@belcarra.ca>; Carolina Clark <cclark@belcarra.ca>; Joe Elworthy <jelworthy@belcarra.ca>; Janet Ruzycski <jruzycki@belcarra.ca>; Liisa Wilder <lwilder@belcarra.ca>

Cc: Paula Richardson <prichardson@belcarra.ca>; Stewart Novak <snovak@belcarra.ca>

Subject: Council Discussion on Financial Plan Amendment

I wonder where this council is going with last night's council meeting Financial Plan Amendment showing the first two items that deal with our water system for fire fighting. The first item deals with chlorination system \$5,000 and the second deals with "Design options & budgets for increasing water capacity & efficiency", (\$30,000)

What is Council expecting for the spending of \$35,000 of Belcarra resident money? We already know the following facts:

- 1) our contract from District of North Vancouver is to supply water is fixed rate at 20 litres/second.
- 2) Tatlow tank is our fixed volume for storage and we are waiting for the life expectancy study to be completed, but fully expect that it should still have half of the 50 years (25 years) life expectancy left.
- 3) Our SCADA system that allows for external control of the water system and levels in the Tatlow tank, has been upgraded and allows for remote control of water valves during fire events. This provided our Fire Department to control water use at the scene by our designated village staff, either remotely or on scene.
- 4) The engineering company has already made a presentation to Council indicating bigger, higher tank to supply more water for fire fighting. Costs and timing makes this clearly a non-starter solution to gaining more water for fire fighting, unless we will be providing the fire flow of 90 litres/second for 2 hours because of the Village Hall being "industrial".

I would also like to remind Council that the current bylaw indicates that the Belcarra fire flow is 30 litres per second for 1 hour and that has been accepted by FUS as being minimal flow.

- 5) the modelling study that this same engineering company has presented to Council has documented some recommendations that 83% of our fire hydrants cannot provide the necessary fire flows.

Without more specific direction where does Council expect this engineering firm to focus their study report? There have been discussions at council meetings on installing sprinklers in our village hall to avoid the requirement for a fire flow of 90 Litres/second for 2 hours (which is completely not possible with our fixed volume in Tatlow tank). This sprinkler system is not included in the Financial Plan Amendment.

What is expected from the expenditure of \$30,000 when the objective is stated as "Design options & budgets for increasing water capacity & efficiency"? The only option to meet that increasing water capacity is to have a full Tatlow tank on standby for fire fighting and that will require a chlorination system to allow our water operators to maintain the quality of our municipal potable water supply.

I was going to wait until staff provide answers to our last two questions, but this council seems to be ready to spend \$30,000 and not have those answers.

I suggest that our Village should spend the total of \$35,000 on dealing with a functioning chlorination system that will allow for our Tatlow tank to be filled to its maximum and still maintain the required chlorinated levels for our municipal drinking water supply.

My recommendation is that the engineering firm focus their attention on the design and perhaps install the chlorination system. Save money to deal with the future issues identified in their recent Modelling Study, regarding dead end lines and increasing system pressures to provide low pressure hydrants with increased flows.

There you have my “free” engineering assessment.

I would welcome a reply from Council and a discussion with Stewart as our discussion was interrupted last night after the Council meeting.

Cheers

IAN Devlin P.Eng. (Retired)

Sent from my iPad

From: Ralph Drew <[REDACTED]>
Sent: Friday, June 23, 2023 10:43 AM
To: Jamie Ross <jross@belcarra.ca>; Carolina Clark <cclark@belcarra.ca>; Liisa Wilder <lwilder@belcarra.ca>; Janet Ruzyski <jruzycki@belcarra.ca>; Joe Elworthy <jelworthy@belcarra.ca>
Cc: Paula Richardson <prichardson@belcarra.ca>; Stewart Novak <snovak@belcarra.ca>
Subject: Water Main Flushing

Belcarra Council,

I am concerned about the recent characterization of Belcarra's program of "**water main flushing**" as "water dumping" which implies unnecessary water wastage... Such a characterization is incorrect and misleading...

Every municipal drinking water system utilizes a program of "water main flushing" as an essential part of water system maintenance... The following is a quotation from the **Capital Regional District** regarding their water main flushing program:

Why do we flush our water mains?

Water main flushing program is a technique used to clean water distribution pipes and reservoirs of sediments that build-up over time. This is accomplished by strategic manipulation of fire hydrants and valves to force water at high velocities through the system from previously flushed sections (source to extremities). The flushing program is conducted yearly and also provides the following system benefits:

- ⇒ Improved water quality.
- ⇒ Improved system hydraulic capacity.
- ⇒ Improved system operation by identifying weak or problem areas.
- ⇒ Improved/restored chlorine residual.
- ⇒ Increased life of system components; including, pressure reducing valves, line valves, pumps, etc.

The volume of potable water utilized for water main flushing is a necessary operating cost of the municipal drinking water system and should never be characterized as wastage...

Council may want to consider the value of "educating" Belcarra's residents regarding the importance of water main flushing...

Regards,
Ralph Drew

JUN 26 2023

9.11

June 26, 2023

Dear Mayor and Council,

Freedom of Information &
Protection of Privacy Act
Section 22(1)

(Severed portions are shaded)

I am writing to support the concerns of my neighbors regarding the run-off that has affected our properties for over 50 years now. Since the [redacted] house was built and a ditch was dug across my lot to divert the run off from flowing into their backyard or down to [redacted] - where [redacted] was concerned about his well - there has been ever increasing volumes of run off to deal with. Development, deforestation of the upland lots, heavier traffic flow, the situation of the postal boxes and bus stop have each had an effect, and climate change has brought us atmospheric rivers. The ditch which has been dug ever deeper across my ^{front} yard has made it unusable. If a deluge results in the flow not making 'the bend', [redacted] front yard is flooded. Every previous owner has complained of the consequences of this 'dix'. [redacted] fought the erosion of her driveway for years. It continues for the [redacted]. This is not a stream, spring or 'natural waterway' of any kind. It is run-off and it contains ever more pollutants and toxins from the road above. Please proceed with the improvements to the Bedwell Bay Rd - Kelly Ave drainage plan as soon as possible.

Gwen Chute
[redacted] Belcarra



Office of the Chair
Tel. 604-432-6215 or via Email
CAOAdministration@metrovanancouver.org

June 27, 2023

File: CR-12-01
Ref: RD 2023 Jun 2

Mayor Jamie Ross and Council
Village of Belcarra
4084 Bedwell Bay Road
Belcarra, BC V3H 4P8
VIA EMAIL: jross@belcarra.ca

Dear Mayor Jamie Ross and Council:

**Proposed Land Use Designation Amendment to Metro 2050
Township of Langley – 23699 and 23737 Fraser Highway**

The Township of Langley is requesting a Type 2 Amendment to *Metro 2050*, the regional growth strategy, for two properties located at 23699 and 23737 Fraser Highway, totaling 4.12 hectares. The proposed regional land use designation amendment would redesignate the site from Rural to Industrial to permanently allow for industrial uses granted under a temporary use permit set to expire in May 2024, as well as allow for additional industrial uses subject to meeting certain development prerequisites.

At its June 2, 2023 regular meeting, the Board of Directors of the Metro Vancouver Regional District (MVRD) adopted the following resolution:

That the MVRD Board:

- a. initiate the regional growth strategy amendment process for the Township of Langley's requested regional land use designation amendment from Rural to Industrial for the lands located at 23699 and 23737 Fraser Highway;*
- b. give first, second, and third readings to "Metro Vancouver Regional District Regional Growth Strategy Amendment Bylaw No. 1365, 2023"; and*
- c. direct staff to notify affected local governments as per section 6.4.2 of Metro 2050.*

As required by both the *Local Government Act* and *Metro 2050*, the regional growth strategy amendment process requires a minimum 45-day notification period to allow all affected local governments and members of the public to provide comment on the proposed amendment. Following the comment period, the MVRD Board will review all comments received and consider adoption of the amendment bylaw.

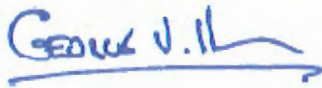
59956437

The proposed amendment is a Type 2 amendment to *Metro 2050*, which requires that the public be provided with engagement opportunities as outlined in Section 6.4.4 in *Metro 2050* and that the amendment bylaw be passed by the MVRD Board by a two-thirds weighted vote. For more information on regional growth strategy amendment procedures, please refer to Sections 6.3 and 6.4 in *Metro 2050*. A Metro Vancouver staff report providing background information and an assessment of the proposed amendment regarding its consistency with *Metro 2050* is enclosed.

You are invited to provide written comments on the proposed amendment. Please provide your comments **by September 8, 2023**.

If you have any questions with respect to the proposed amendment, please contact Jonathan Cote, Deputy General Manager, Regional Planning and Housing Development, by phone at 604-432-6391 or by email at jonathan.cote@metrovancover.org.

Yours sincerely,



George V. Harvie
Chair, Metro Vancouver Board

GVH/JWD/hm

cc: Paula Richardson, Chief Administrative Officer, Village of Belcarra
Jerry W. Dobrowolny, Commissioner/Chief Administrative Officer, Metro Vancouver
Heather McNell, Deputy Chief Administrative Officer, Policy and Planning, Metro Vancouver
Jonathan Cote, Deputy General Manager, Regional Planning & Housing Development, Metro Vancouver

Encl: [Metro 2050 Amendment Request - Township of Langley \(23699 and 23737 Fraser Highway\)](#)

59956437

From: Kellett, Leslie <Leslie.Kellett@princegeorge.ca>

Sent: Wednesday, June 28, 2023 2:47 PM

Subject: City of Prince George Resolution Submission to 2023 UBCM Convention

Good afternoon, Mayor and Council,

At the June 26, 2023 regular council meeting, City of Prince George Council approved submitting a resolution to the 2023 UBCM Convention regarding "Reimbursing Local Governments for Medical Services Provided by Local Government Fire and Rescue Services" and further resolved to share this resolution with UBCM member municipalities.

We appreciate your consideration to support this resolution at the 2023 UBCM Convention.

Sincerely,



LESLIE KELLETT

Deputy Corporate Officer

5th Floor, 1100 Patricia Blvd., Prince George, B.C. V2L 3V9

p: 250.561.7655 | f: 250.561.0183

leslie.kellett@princegeorge.ca

www.princegeorge.ca

Reimbursing Local Governments for Medical Services Provided by Local Government Fire and Rescue Service

WHEREAS communities across British Columbia are facing a significant increase in calls to respond to emergency medical incidents;

AND WHEREAS local governments provide for their fire departments to support prehospital patient care in their community by providing emergency medical services that assist the Provincial Government's BC Ambulance Service;

AND WHEREAS the costs associated with supporting prehospital care by local government fire departments has increased significantly in relation to response hours and increased use of first aid and other medical supplies and that such costs are funded solely through local government property taxation;

THEREFORE BE IT RESOLVED that the Provincial Government develop a funding model to compensate local governments who provide emergency medical services through their fire and rescue services fulfilling the responsibility of the provincial government with consideration given to community population and the fire department's authorized level of emergency medical response.