



## VILLAGE OF LIONS BAY

**REGULAR COUNCIL MEETING  
OF THE VILLAGE OF LIONS BAY  
HELD ON TUESDAY, JUNE 20, 2023, AT 6:00 PM  
COUNCIL CHAMBERS, 400 CENTRE ROAD, LIONS BAY  
AND VIA ZOOM VIDEO CONFERENCE**

Zoom Invite Link: <https://us02web.zoom.us/j/2780145720>  
To join via phone, dial 778-907-2071 | Meeting ID: 278 014 5720

---

We are privileged to be meeting and doing work on behalf of the residents of Lions Bay on the traditional unceded territory of the Squamish and Musqueam Nations.

### AGENDA

**1. Call to Order**

**2. Closure of Council Meeting (6:00 PM)**

Proposed topics for discussion in the absence of the public:

- A. Labour
- B. Legal

THAT the meeting be closed to the public on the basis of matters to be considered under the following sections of the *Community Charter* and where required, the Council does consider that the matters could reasonably be expected to harm the interests of the municipality if they were held in public:

**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:

- (c) labour relations or other employee relations;
- (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;
- (f) law enforcement, if the council considers that disclosure could reasonably be expected to harm the conduct of an investigation under or enforcement of an enactment;
- (g) litigation or potential litigation affecting the municipality;
- (k) negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and

that, in the view of the council, could reasonably be expected to harm the interests of the municipality if they were held in public;  
 (n) the consideration of whether a council meeting should be closed under a provision of this subsection or subsection (2);

*Council will reconvene the open meeting at 7 pm to consider the balance of the Agenda*

**3. Reporting out from Closed portion of Meeting**

**4. Adoption of Agenda**

**5. Public Participation (2 minutes per person totalling 10 minutes maximum)**

**6. Delegations (10 minutes maximum)**

**7. Review and Approval of Minutes of Prior Meetings**

- A. Special Council Meeting – November 24, 2022 (page 5)
- B. Special Council Meeting – November 30, 2022 (page 9)
- C. Special Council Meeting – December 8, 2022 (page 12)
- D. Regular Council Meeting – June 6, 2023 (page 14)

**8. Business Arising from the Minutes**

**9. Unfinished Business**

- A. Follow-Up Action Items from Previous Meetings

VILLAGE OF LIONS BAY FOLLOW-UP ACTION ITEM LIST				
ACTION NO.	DATE	ITEM/ACTION/DESCRIPTION	PERSON	STATUS
265	Feb 21, 2023	Follow up with Ministry regarding Vacancy Tax and Report back to Council	Councillor Reuter	On-Going
280	June 6, 2023	Action item list is updated regularly	A/MC, Marina Blagodarov	Complete
281	June 6, 2023	Look into reconstruction of speed bumps on Bayview Road near the Lions Bay Elementary School	PWM, Karl Buhr	On-Going
282	June 6, 2023	Hiring seasonal/summer staff	Council	For Discussion
Next # 283				

## 10. Reports

### A. Staff

- i. Public Works Manager, Karl Buhr – Stop Signage at Railway Crossing  
(page 22)

*Recommendation:*

THAT Council direct staff to remove Stop signs at three rail crossings, and institute signage, road marking and vegetation maintenance as outlined in the ISL Engineering memo “Traffic Operations Review Near Three Rail Crossings” dated Jan. 16, 2023.

- ii. Public Works Manager, Karl Buhr – Disaster Mitigation Adaptation Fund

### B. Mayor

- i. Rain barrels and rain storage tanks
- ii. Fire Smart Initiatives
- iii. Following the Guidance of Provincial Best Practices
- iv. Additional temporary help
- v. Appointing Village Council

### C. Council

- i. Renewable Diesel Request for Further Research (page 44)

*Recommendation:*

THAT the Climate Action Committee recommends to Council THAT Council directs staff to work with the committee to procure quotes on clean energy alternatives.

- ii. Code of Conduct (for information) (page 76)

### D. Committees

- i. Lions Bay Beach Park Advisory Committee

*Recommendation:*

THAT Council appoints Councillor Cunliffe to be added to the committee.

### E. Emergency Services

## 11. Resolutions

### A. Canada Day Fireworks

*Recommendation:*

BE IT RESOLVED THAT as Authority Having Jurisdiction, and being advised by the Fire Chief that it may so do, Council will duly override the current Coastal Fire Centre fire ban in respect of the public fireworks display at Lions Bay Beach Park on July 1, Canada Day, on grounds that;

THAT the display will be under the control of the Lions Bay Fire Rescue department, which is capable of handling all exigencies, including but not limited to having suitable equipment to hand; and

THAT spectators will be kept a safe distance from firework takeoff and landing zones, by barrier; and  
THAT staff will communicate this resolution in the Village Updates of June 23 and 30 to alleviate public misgivings in light of the fire ban.

E. Canada Day Event

*Recommendation:*

THAT Lions Bay parking regulations be suspended near the vicinity of the venues on Canada Day, subject to safety considerations for emergency vehicles to operate, such as in front of fire hydrants, at the fire hall or in cul-de-sacs; and  
THAT the Canada Day Event and its associated activities be exempted from the provisions of Noise Bylaw No. 283, 1998, as amended, pursuant to section 6 (m) thereof, up to 12 midnight; and  
THAT the Lions Bay Beach Park remain open until 12 midnight.

**12. Bylaws**

**13. Correspondence**

A. List of Correspondence to June 22, 2023 (*page 79*)

THAT the following actions be taken with respect to the correspondence.

**14. New Business**

**15. Public Questions and Comments (2 minutes on any topic discussed in this meeting)**

**16. Resumption of Closed Council Meeting (continuation, if applicable)**

THAT the meeting be closed to the public on the basis of the matters noted in Item 2 of this Agenda.

**17. Reporting out from Closed Meeting (if applicable)**

**18. Adjournment**



## VILLAGE OF LIONS BAY

**SPECIAL MEETING OF THE COUNCIL  
OF THE VILLAGE OF LIONS BAY  
HELD ON THURSDAY, NOVEMBER 24, 2022 at 5:00 PM  
COUNCIL CHAMBERS, 400 CENTRE ROAD, LIONS BAY  
AND VIA ZOOM VIDEO CONFERENCE**

---

### MINUTES

In Attendance:

Council: Mayor Ken Berry  
Councillor Michael Broughton  
Councillor Neville Abbott (via video conference)  
Councillor Norm Barmeier (via video conference beginning at 5:06 pm)  
Councillor Marcus Reuter (via video conference)

Staff: Chief Administrative Officer Peter DeJong  
Chief Financial Officer Pamela Rooke  
Public Works Manager Nai Jaffer (via video conference)

Public: 1

**1. Call to Order**

The meeting was called to order at 5:01 pm

**2. Adoption of Agenda**

Moved/Seconded

THAT the section 90(1)(b) and (c) be added as grounds for closing the meeting;  
THAT a proposed resolution be added under Item 6Bi regarding the Lions Bay Beach Park Advisory Committee;  
THAT Item 7 be expanded to focus on the recent meeting between Councillors Barmeier and Broughton and Town Hall facilitator Susan Davis and next steps required; and  
THAT provision be made for Council to return to the Closed portion of the meeting after the Open meeting.

**CARRIED**

**3. Closed Council Meeting (5 PM)**

Proposed topics for discussion in the absence of the public:

A. Consideration of contractual matters pertaining to the bridge rehabilitation at 325 Bayview Road

Moved/Seconded

THAT the meeting be closed to the public on the basis of matters to be considered under the following sections of the *Community Charter* and where required, the Council does consider that the matters could reasonably be expected to harm the interests of the municipality if they were held in public:

**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:

- (b) personal information about an identifiable individual who is being considered for a municipal award or honour, or who has offered to provide a gift to the municipality on condition of anonymity;
- (c) labour relations or other employee relations;
- (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;
- (j) information that is prohibited, or information that if it were presented in a document would be prohibited, from disclosure under section 21 of the *Freedom of Information and Protection of Privacy Act*;
- (n) the consideration of whether a council meeting should be closed under a provision of this subsection or subsection (2);
- (o) the consideration of whether the authority under section 91 [*other persons attending closed meetings*] should be exercised in relation to a council meeting.

**CARRIED**

*The meeting was closed to the public at 5:05 pm.*

*The meeting was re-opened to the public at 6:10 pm*

**4. Reporting Out from Closed Portion of Meeting (if applicable)**

Council reported out that it has approved an additional \$136,127 for the driveway bridge project at 325 Bayview Road for a maximum project cost of up to \$425,000, including contingency.

**5. Public Participation (2 minutes per person totalling 10 minutes maximum)**

None

**6. Reports**

A. Staff

- i. CAO Request for Decision – 325 Bayview Road Municipal Driveway Bridge (Page 3)

*Recommendation:*

THAT Council authorizes an additional \$129,127 to come from surplus to cover the cost of Change Order 2 for the driveway bridge rehabilitation at 325 Bayview Road as identified in this report;

AND THAT Council direct staff to seek further Council direction should the total costs of the contract, engineering and project management, and contingency exceed \$425,000.

***This matter was concluded in the Closed portion of the meeting and reported out as noted above.***

B. Mayor

- i. Resolution: THAT the Lions Bay Beach Park Advisory Committee be re-established with two Council members acting as Chair and Co-Chair and up to ten resident members; and THAT residents be invited to apply to the Committee by way of the Village Update.

- Discussion took place regarding the number of potential people who may be interested in sitting on the committee and the need to have a good demographic cross-section of the Village;
- Need to have structure for committee
- Councillors Broughton and Barmeier recommended for Chair and Co-Chair

Moved/Seconded

THAT the Lions Bay Beach Park Advisory Committee be re-established with two Council members acting as Chair and Co-Chair and up to ten resident members; and

THAT residents be invited to apply to the Committee by way of the Village Update.

**CARRIED**

Moved/Seconded

THAT Councillors Broughton and Barmeier be appointed as Chair and Co-Chair respectively to the reconstituted Lions Bay Beach Park Advisory Committee with Terms of Reference to follow.

**CARRIED**

C. Council  
 None

- 7. **Confirmation of Details re. Town Hall for the Lions Bay Beach Park Revitalization Project** - Discussion re. meeting between Councillors Barmeier and Broughton and Town Hall facilitator Susan Davis and next steps
  - S. Davis provided thoughts about clearly communicating Council’s intent with respect to the Town Hall
  - Suggestion to consider a weekend – concerns re. getting too close to Christmas
  - Need for suitable agenda and presentation materials on design and scope of project
  - Consideration of enlisting assistance from project manager for Town Hall and landscape architect consultants for presentation materials (CAO to provide contracts re. hourly rates)

Moved/Seconded

THAT Susan Davis be appointed as facilitator for the Lions Bay Beach Park Revitalization Project Town Hall; and

THAT she be enabled to reach out to PMG and Core along with Councillors Broughton and Barmeier and CAO DeJong to flesh out information and details necessary to ensure the successful delivery of the Town Hall.

**CARRIED**

- 8. **Public Questions & Comments (2 minutes on any topic discussed in this meeting)**  
None

- 9. **Continuation of Closed Meeting**  
*The meeting was closed to the public at 7:08 pm on the same basis as at the beginning of the meeting and all staff departed at 7:08 pm.*

- 10. **Reporting Out from Closed Meeting (if applicable)**

- 11. **Adjournment**  
Moved/Seconded  
THAT the meeting be adjourned.

**CARRIED**

*The meeting was adjourned generally at 7:30 pm.*

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Corporate Officer

Date Adopted by Council:	
--------------------------	--





## VILLAGE OF LIONS BAY

**SPECIAL MEETING OF THE COUNCIL  
OF THE VILLAGE OF LIONS BAY  
HELD ON WEDNESDAY, NOVEMBER 30, 2022 at 7:00 PM  
COUNCIL CHAMBERS, 400 CENTRE ROAD, LIONS BAY  
AND VIA ZOOM VIDEO CONFERENCE**

---

### MINUTES

In Attendance:

Council: Mayor Ken Berry  
Councillor Michael Broughton  
Councillor Neville Abbott  
Councillor Marcus Reuter  
Councillor Norm Barmeier (via audio conference)

Staff: Chief Administrative Officer Peter DeJong (Recorder, via video conference)

Public: 2

**1. Call to Order**

The meeting was called to order at 7:02 pm

**2. Adoption of Agenda**

Moved/Seconded

THAT the Agenda be approved as circulated.

**CARRIED**

**3. Public Participation**

None

**4. Reports**

A. Council

Verbal Update from Councillors Broughton and Barmeier re. organizational details for Town Hall and consideration of increased budget for presentation materials and possibly attendance by one of the beach park consultants. Discussion:

- Zoom meeting with Councillors, facilitator, consultants and CAO on November 29, 2022 had consensus on inclusion of consultants and materials and decision to ask Council for additional funding

- Additional conversation between Clr. Broughton and facilitator after Zoom meeting - Clr. Barmeier unaware of further conversation
- Clr. Broughton and facilitator concluded consultants not required for Town Hall – will advise if any presentation materials are required
- Looking into power point presentation for Town Hall

**5. Closed Council Meeting**

Proposed topics for discussion in the absence of the public:

Moved/Seconded

THAT the meeting be closed to the public on the basis of matters to be considered under the following sections of the *Community Charter* and where required, the Council does consider that the matters could reasonably be expected to harm the interests of the municipality if they were held in public:

**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:

- (a) personal information about an identifiable individual who holds or is being considered for a position as an officer, employee or agent of the municipality or another position appointed by the municipality;
- (n) the consideration of whether a council meeting should be closed under a provision of this subsection or subsection (2);

*\*Council does not anticipate reconvening the open meeting other than to report out, if applicable, and adjourn the meeting*

**CARRIED**

*The meeting was closed to the public at 7:22 pm and the CAO departed the meeting.  
 The meeting was re-opened to the public at 10:12 pm*

**6. Reporting Out from Closed Portion of Meeting (if applicable)**

**7. Public Questions and Comments**

None

**8. Adjournment**

Moved/Seconded

THAT the meeting be adjourned.

**CARRIED**

*The meeting was adjourned generally at 10:12 pm.*

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
CAO

Date Adopted by Council:	
--------------------------	--



## VILLAGE OF LIONS BAY

**SPECIAL MEETING OF THE COUNCIL  
OF THE VILLAGE OF LIONS BAY  
HELD ON THURSDAY, DECEMBER 8, 2022 at 5:00 PM  
COUNCIL CHAMBERS, 400 CENTRE ROAD, LIONS BAY  
AND VIA ZOOM VIDEO CONFERENCE**

---

### MINUTES

In Attendance:

Council: Mayor Ken Berry  
Councillor Michael Broughton  
Councillor Neville Abbott  
Councillor Marcus Reuter

Staff: Chief Administrative Officer Peter DeJong (Recorder)

Public: 2

**1. Call to Order**

The meeting was called to order at 5:01 pm

**2. Adoption of Agenda**

Moved/Seconded

THAT the Agenda be approved as circulated.

**CARRIED**

**3. Public Participation**

None

**4. Closed Council Meeting**

Proposed topics for discussion in the absence of the public:

Moved/Seconded

THAT the meeting be closed to the public on the basis of matters to be considered under the following sections of the *Community Charter* and where required, the Council does consider that the matters could reasonably be expected to harm the interests of the municipality if they were held in public:

**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:

- (a) personal information about an identifiable individual who holds or is being considered for a position as an officer, employee or agent of the municipality or another position appointed by the municipality;
- (n) the consideration of whether a council meeting should be closed under a provision of this subsection or subsection (2);

**CARRIED**

*The meeting was closed to the public at 5:03 pm and the CAO departed the meeting.  
The meeting was re-opened to the public at 6:02 pm*

**5. Reporting Out from Closed Portion of Meeting (if applicable)**

None

**6. Public Questions and Comments**

None

**7. Adjournment**

**Moved/Seconded**

THAT the meeting be adjourned.

**CARRIED**

*The meeting was adjourned generally at 6:02 pm.*

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
CAO

Date Adopted by Council:	
--------------------------	--



## VILLAGE OF LIONS BAY

**REGULAR MEETING OF THE COUNCIL  
OF THE VILLAGE OF LIONS BAY  
HELD ON TUESDAY, JUNE 6, 2023 at 6:00 PM  
COUNCIL CHAMBERS, 400 CENTRE ROAD, LIONS BAY  
AND VIA ZOOM VIDEO CONFERENCE**

---

### MINUTES

In Attendance: Mayor Ken Berry  
Councillor Neville Abbott  
Councillor Michael Broughton  
Councillor Jaime Cunliffe  
Councillor Marcus Reuter (via videoconference)

Also Present: Marina Blagodarov, Acting Municipal Coordinator  
Karl Buhr, Public Works Manager  
Deanna Campbell, Consultant (via videoconference)  
Joe Chirkoff, Controller (via videoconference)  
Randy Diehl, Owner, Consultant (via videoconference)  
Kelsey Guenette, Raincoast Ventures Ltd. (via videoconference)  
(Recorder)

Public: 15 in person; 23 via videoconference

**1. Call to Order**

Mayor Berry called the meeting to order at 6:04 p.m.

**2. Closed Council Meeting (6:00 PM)**

Proposed topics for discussion in the absence of the public:

- A. Labour
- B. Legal

Moved/Seconded

THAT the meeting be closed to the public on the basis of matters to be considered under the following sections of the *Community Charter* and where required, the Council does consider that the matters could reasonably be expected to harm the interests of the municipality if they were held in public:

- 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:
- (c) labour relations or other employee relations;
  - (g) litigation or potential litigation affecting the municipality;
  - (k) negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the Council, could reasonably be expected to harm the interests of the municipality if they were held in public;
  - n) the consideration of whether a council meeting should be closed under a provision of this subsection or subsection (2).

**CARRIED**

*The meeting returned to open session at 7:00 p.m.*

**3. Reporting Out from Closed Portion of Meeting**

This item was deferred until after conclusion of the closed session.

**4. Adoption of Agenda**

Moved/Seconded

THAT the agenda of the June 6, 2023 Regular Council Meeting be adopted with the following additions:

- Item 6(B) Phil Folkersen – Forest Fire Update
- Item 10(C)(iii) Code of Conduct.

**CARRIED**

**5. Public Participation**

A. Brian Ulrich

Brian Ulrich expressed concerns related to the format of the Infrastructure Committee.

B. Tony Greville

Concerns were expressed related to the format of the Infrastructure Committee and misrepresentation of citizens.

C. Greg Weary

Concerns were raised regarding speed and noise on the highway.

D. Tanya Cosgrave

Tanya Cosgrave questioned whether the Lions Bay watershed is a sanctioned publication.

E. Kambiz Azordegan

Concerns were raised related to parking in the Village of Lions Bay.

F. Norma Rodgers

Norma Rodgers spoke on transparency concerns at the Council table.

G. Norman Barmeier

Norman Barmeier discussed potential liability issues relating to engineers . Additionally, an updated Terms of Reference for the Infrastructure Committee was requested.

H. Ehsan Monfared

Ehsan Monfared expressed concerns regarding the Code of Conduct and the contract of the previous Acting Chief Administrative Officer (CAO).

**6. Delegations**

A. Broughton & Broughton Inc. dba Lions Bay General Store & Café, Craig Doherty – Noise Relaxation

Craig Doherty requested an exemption from the Village noise bylaw to allow for music at the Lions Bay General Store & Café patio, for Council's full term.

Moved/Seconded

THAT the exemption request by Craig Doherty, Lions Bay General Store & Café, be added to Item 14(A).

**CARRIED**

B. Phil Folkersen – Forest Fire Update

Phil Folkersen, Emergency Program Coordinator, provided an update on the recent forest fire near the Village and noted it was declared extinguished as of 4:00 p.m. today. An after-action report is being drafted, and it is recommended that set communication procedures and evacuation plans are in place for future events. Additionally, a strategy related to visitors to the Village needs to be developed.

**7. Review and Approval of Minutes of Prior Meetings**

A. Regular Council Meeting – May 16, 2023

Moved/Seconded

THAT the Regular Council Meeting Minutes of May 16, 2023 be approved with the following amendments:

- Page 1, Item 3, strike that Councillor Cunliffe signed the Code of Conduct
- Page 5, Item 13, amend the motion to include recommendations from the Climate Action Committee.

**CARRIED**

**8. Business Arising from the Minutes**

None.



## 9. Unfinished Business

### A. Follow-Up Action Items from Previous Meetings

VILLAGE OF LIONS BAY FOLLOW-UP ACTION ITEM LIST				
ACTION NO.	DATE	ITEM/ACTION/DESCRIPTION	PERSON	STATUS
265	February 21, 2023	Follow up with Ministry regarding Vacancy Tax and report back to Council.	Councillor Reuter	Ongoing

**Action:** Marina Blagodarov to ensure action item list is updated regularly and that items are not removed until completed.

## 10. Reports

### A. Staff

- i. Public Works Manager, Karl Buhr – Road Resurfacing Recommendation  
 Public Works Manager, Karl Buhr, presented a road resurfacing proposal.

Discussion ensued on the resurfacing proposal and coordination with future sewage/drainage projects.

**Action:** Public Works Manager to look into reconstruction of speed bumps on Bayview Road near the Lions Bay Elementary School.

Moved/Seconded

THAT Council waive the purchasing policy, and direct staff to accept BA Blacktop's referenced proposal for \$353,536.29.

**CARRIED**

- ii. Public Works Manager, Karl Buhr – Stop Signage at Railway Crossing  
 Recommendation to remove stop signs at identified railway crossings and install appropriate signage/road markings.

Discussion ensued on monetary contributions required from the Village if CN Rail installs additional signage/signals.

Moved/Seconded

THAT the matter be deferred to the next Council meeting.

**CARRIED**

Moved/Seconded

THAT Council direct staff to remove stop signs at three rail crossings, and institute signage, road marking and vegetation maintenance as outlined in the ISL Engineering memo “Traffic Operations Review Near Three Rail Crossings” dated Jan. 16, 2023.

**TABLED**

- iii. Controller, Joe Chirkoff – Procurement Policy  
 The draft Procurement Policy was provided with meeting materials for review.

Discussion ensued on suggested amendments to the policy.

Moved/Seconded

THAT the matter be tabled pending a review and recommendations for best practices by the consulting Corporate Officer.

**CARRIED**

Moved/Seconded

THAT the Procurement Policy be approved.

**TABLED**

B. Mayor

- i. Organizational Chart

The organizational chart was included with meeting materials for information.

Discussion ensued on the development of the organizational chart.

**Action: It was requested that a discussion on hiring seasonal/summer staff be added to the next Council meeting agenda.**

C. Council

- i. Klatt Building Update

The Mayor advised that parties involved with the Klatt Building held a meeting and resolved outstanding questions.

- ii. Bayview Bridge Update

No update was provided.

- iii. Code of Conduct

Moved/Seconded

THAT Council adopt the identified paragraphs (1. and 3.) of the Village of Lions Bay Code of Conduct until such time as the complete document is updated and approved.

**CARRIED**

D. Committees

- i. Lions Bay Beach Park Advisory Committee Update  
This item was not discussed.

- ii. Committee Discussions  
Discussion ensued on a select versus standing Infrastructure Committee.

Moved/Seconded

THAT the meeting be extended until 10:30 p.m.

**CARRIED**

E. Emergency Services

- i. RCMP Report  
The RCMP Report was provided with meeting materials for information.

Moved/Seconded

THAT the RCMP report from March to April 2023 be received.

**CARRIED**

**11. Resolutions**

A. Municipal Coordinator

Moved/Seconded

THAT Council appoints Marina Blagodarov, Acting Municipal Coordinator, as a Screening Officer as per Bylaw Notice Enforcement Bylaw No. 385, 2006, as amended.

**CARRIED**

B. Building Inspector

Discussion ensued on the qualifications of the Building Inspector candidate, potential liabilities, and mentorship opportunities.

Moved/Seconded

THAT the meeting be extended until 11:00 p.m.

**CARRIED**

Moved/Seconded

THAT Council appoints Mike Jury as a Building Inspector for the Village of Lions Bay.

**CARRIED**

**12. Bylaws**

None.

**13. Correspondence**

A. List of Correspondence to June 1, 2023

The list of correspondence was included with meeting materials for information.

Discussion ensued on including responses to correspondence in agenda packages. Additional discussion was had on establishment of the Parking Committee and Highway Noise Committee.

Moved/Seconded

THAT general correspondence be received for information; and

THAT Councillor Reuter respond to resident correspondence.

**CARRIED**

**14. New Business**

A. Noise Relaxation from agenda item 6A

This item was missed.

**15. Public Questions & Comments**

A. Randi Byrne

Randi Burn expressed appreciation to Council for its support during the recent forest fire event.

**16. Conclusion**

Moved/Seconded

THAT the open meeting be now adjourned.

**CARRIED**

*The open meeting adjourned to a closed session at 10:44 p.m.*

**17. Reporting Out from Closed Portion of Meeting**

The Mayor reported the following:

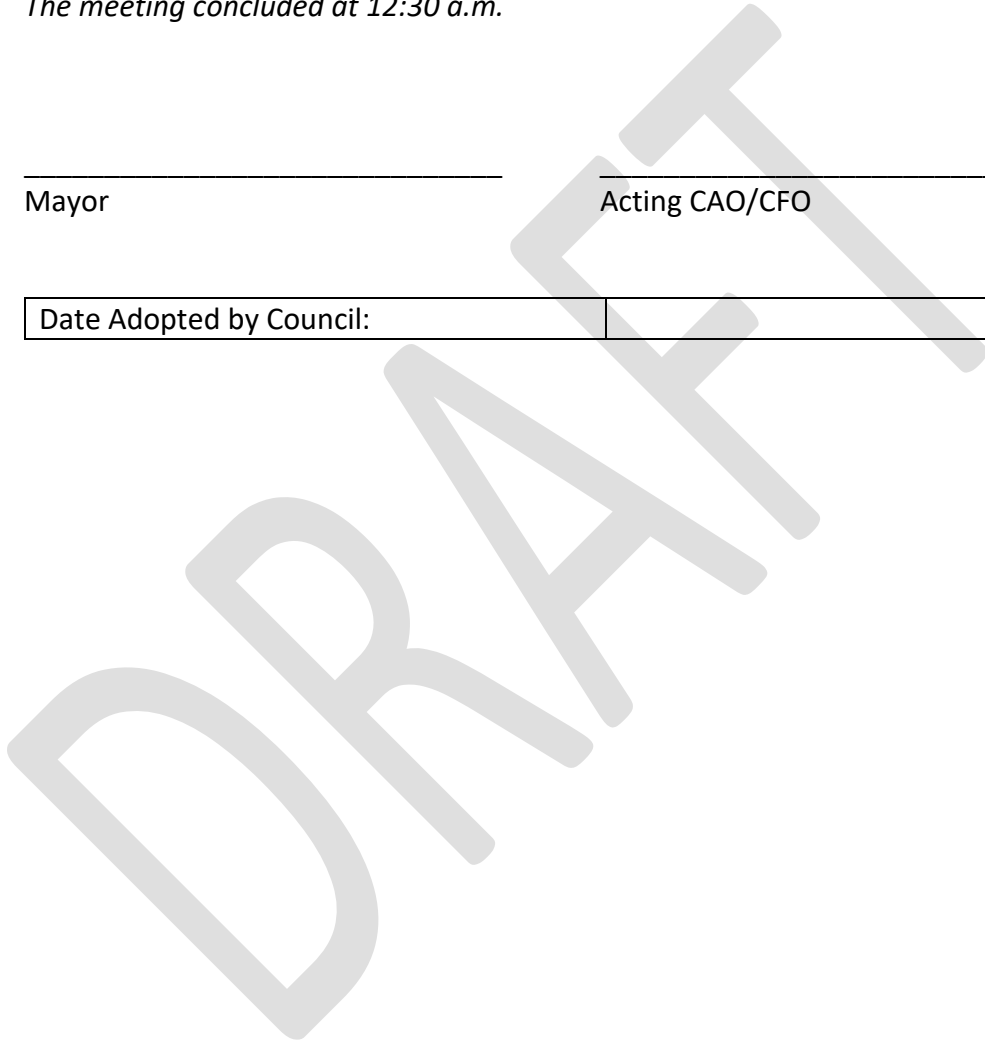
- A decision was made on the architectural contract for the build form at Lions Bay Beach Park and proponents will be notified
- With the guidance of provincial advisors, the CAO replacement is progressing
- Councillor Abbot will be resigning from the Lions Bay Beach Park Committee, effective immediately.

*The meeting concluded at 12:30 a.m.*

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Acting CAO/CFO

Date Adopted by Council:	
--------------------------	--





## THE MUNICIPALITY OF THE VILLAGE OF LIONS BAY

Type	Staff Recommendation to Council		
Title	Stop signage at railway crossings, per Transport Canada directive		
Author	Karl Buhr	Reviewed By:	-
Date	May 31, 2023	Version	1
Issued for	Council agenda of June 6, 2023		

### 1. ATTACHMENTS

- “Traffic Operations Review Near Three Rail Crossings,” ISL Engineering memo dated Jan. 16, 2023.
- Transport Canada Rail Safety - Letter of Concern - works@lionsbay.ca, 10-05-2021, Letter ID – 8888058

### 2. BACKGROUND

Lions Bay received a Transport Canada Letter of Concern dated Sep. 21, 2022 noting that road stop signs at the warning systems of all three of our rail crossings were not compliant with Transportation Association of Canada (TAC) Standards, and that the placements of stop signs were “not attempting to manage right-of-way of the road users” (attached). The next day, Sep. 22, 2022, a Rail Safety Signal Inspection Report required the removal of the stop signs to bring the crossings into compliance with the Grade Crossing Standards and Grade Crossing Regulations. ISL Engineering and Land Services Ltd. (ISL) was contracted by the Village of Lions Bay to perform a traffic operation and safety review for the three locations.

ISL produced the attached memo, recommending roadway intersection controls compliant with the Railway Safety Act.

### 3. DISCUSSION (extracts from the ISL report edited for clarity)

- The Brunswick Beach Road Railway Crossing crosses two railway tracks with a warning system including bells, side mounted lights, and gate arms. A three-leg intersection is located west of the crossing. The north leg provided access to approximately 8 residences, while the south leg provides access to approximately 27 residences. Currently, the intersection is uncontrolled and stop signs are provided at the railway crossing.



## THE MUNICIPALITY OF THE VILLAGE OF LIONS BAY



### Proposed Traffic Operation Changes

Although the proximity of the intersection to the railway crossing presents risks according to the Grade Crossing Standards, the intersection cannot be eliminated, therefore, alternative traffic control must be implemented for the intersection located west of the rail.... A stop control on the north leg would reduce the risks of queueing occurring across the tracks as the westbound movements (through and right-turn movements) have no conflicting movements. Due to the sharp curve on the west side of the crossing, Single Turn Warning Sign (WA-1) should be provided in advance of the curve with a 15 km/hr advisory speed.

- b. Lions Bay Avenue Railway Crossing crosses a single railway track with a warning system including bells and side mounted lights. A two [report says three]-leg intersection is located west of the railway crossing. The north leg of the intersection provides access to approximately 23 residences and the south leg of the intersection provides...access to the Lions Bay Marina. In addition to the highway access on the east leg, a parking lot is also provided on the east side of the railway track, therefore it is expected that some pedestrian traffic would cross the railway at Lions Bay Avenue. Currently, the intersection is uncontrolled and stop signs are provided at the railway crossing:



## THE MUNICIPALITY OF THE VILLAGE OF LIONS BAY



### Proposed Traffic Operation Changes

Although the proximity of the intersection to the railway crossing presents risks according to the GCS, the intersection cannot be eliminated, therefore, alternative traffic control must be implemented for the intersection located west of the rail.... In order to reduce the risk of queueing across the railway crossing occurring due to westbound left turn vehicles, it is recommended to implement stop control for both the northbound (Lions Bay Marina Access) and the southbound approach. Across the parking access (on the northeast side of the rail crossing) and the Lions Bay Marina access (on the southwest side of the rail crossing), it is suggested to paint dashed edge line.

- c. Tidewater Way Railway Crossing crosses a single railway track with a warning system including bells and side mounted lights. On the east side of the railway crossing is a cul-de-sac with two driveways. Currently, stop signs are provided at the railway crossing:





## THE MUNICIPALITY OF THE VILLAGE OF LIONS BAY



### Proposed Traffic Operation Changes

As mentioned for the other crossings [actually, NOT mentioned, but implied], stop signs are not appropriate for railway crossings with a warning system. Therefore, the stop signs should be removed. No traffic operation issues are anticipated due to the removal of the stop signs at the crossing.

- d. In all cases the memo suggests that to be consistent with the TAC Manual of Uniform Traffic Control Devices for Canada (MUTCD), that centreline, advance warning signage (WA-18), and double stop bars be provided at the crossing [for when the warning lights are active], and edge lines (solid white lines on the right side of the travel lanes) should be provided to reinforce continuous vehicle flow through the crossing.
- e. Council should be aware that on May 26, 2023 CN Rail notified the municipality that Certificate No. 3606 of the Canadian Transport Commission dated April 19, 2000 ordered CN Rail to install an additional set of warning lights at the grade crossing of Lions Bay Ave. As the road authority, Lions Bay must cover 50% of the total cost of the work (estimated at \$46,975, or half that if CN's application for Transport Canada funding is successful). The timing of this project has not yet been communicated to us, but it is not anticipated that this work, when complete, would affect staff's recommendation herein.

In summary:

CROSSING	EXISTING STOP SIGNS	OTHER SIGNAGE	OTHER MEASURES
Brunswick Beach Road	Remove at the Railway	<ul style="list-style-type: none"> <li>Install stop sign and stop bar for the north leg of the</li> </ul>	<ul style="list-style-type: none"> <li>Remove and maintain shrubs on the southwest side of the</li> </ul>



## THE MUNICIPALITY OF THE VILLAGE OF LIONS BAY

	Crossing	<p>intersection.</p> <ul style="list-style-type: none"> <li>• Install railway crossing warning signage (WA-18) for the westbound approach.</li> <li>• Install single turn sign (WA-1) and 15 km/hr advisory speed sign on the east and west legs of the intersection.</li> </ul>	<p>rail crossing.</p> <ul style="list-style-type: none"> <li>• Install edge lines, centreline, and double stop bars at the crossing, with dashed edge lines across driveways.</li> </ul>
Lions Bay Avenue	Remove at the Railway Crossing	<ul style="list-style-type: none"> <li>• Install stop sign and stop bar for the south and north legs of the intersection.</li> <li>• Reduce the speed limit for Lions Bay Avenue, south of Seaview Place to 20 kilometres per hour.</li> <li>• Install single turn sign (WA-1) and 15 km/hr advisory speed sign on the east and north legs of the intersection.</li> </ul>	<ul style="list-style-type: none"> <li>• Install edge lines, centreline, and double stop bars at the crossing, with dashed edge lines across driveways.</li> <li>• Remove and maintain shrubs to a low height on the northeast corner of the railway crossing.</li> <li>• Formalize access / egress to the parking lot as to not be adjacent to the rail crossing on the east side of the crossing.</li> </ul>
Tidewater	Remove at the Railway Crossing		<ul style="list-style-type: none"> <li>• Install double stop bars in advance of the railway crossing warning lights and maintain existing centreline.</li> </ul>

#### 4. BUDGET CONSIDERATIONS

Minimal: signage removal and installation can be accomplished as part of regular maintenance after paint markings are installed as part of the budgeted 2023 road marking renewal project scheduled for .

#### 5. STAFF RECOMMENDATION

**That Council direct staff to remove Stop signs at three rail crossings, and institute signage, road marking and vegetation maintenance as outlined in the ISL Engineering memo “Traffic Operations Review Near Three Rail Crossings” dated Jan. 16, 2023.**

For Council’s consideration.



## Memorandum



201-8506 200 Street, Langley BC V2Y 0M1, T: 604.371.0091 F: 604.371.0098

To: **Village of Lions Bay**  
 Attention: **Naizam Jaffer, Public Works Manager**  
 Cc: **Richard Avedon-Savage**  
 Reference: **Traffic Operations Review Near Three Rail Crossings**  
 From: **Kurtis Mayne and Grant Ngieng**

Date: **January 16, 2023**

Project No.: **33324**

## 1.0 Introduction

ISL Engineering and Land Services Ltd. (ISL) was contracted by the Village of Lions Bay (the Village) to assist in undertaking a traffic operation and safety review for three railway crossings within the Village. This review is being driven by a Transport Canada Rail Safety Signal Inspection Report, received September 22, 2021, which requires the removal of stop signs at each of the three crossings. The scope of this project will include a review of traffic operations at the nearby intersections after the removal of stop signs. A full railway crossing safety assessment was not completed for this project and additional safety requirements as per Transport Canada at the crossing were not reviewed as part of the project.

### 1.1 Study Area

The three locations reviewed for this study are the railway crossings at Brunswick Beach Road, Lions Bay Avenue, and Tidewater Way. The crossings at Lions Bay Avenue and Tidewater Way are single-track crossings while the crossing at Brunswick Beach Road is a two-track crossing. Railway crossing warning systems (railway crossing sign, light units, and bell) are provided at all three locations and a gate arm is provided at the Brunswick Beach Road crossing.



Figure 1.1 Three Railway Crossing Locations within the Village of Lions Bay





## 2.0 Field Review

A field review was conducted by ISL on September 26, 2022 to understand and observe traffic operation at the crossing locations. The field review included reviewing sightlines at the railway crossings and nearby intersections, in addition to identifying potential road user conflicts near the railway crossings. Signage was also reviewed onsite to identify whether it was consistent with the relevant regulations. Details from the field review will be discussed further in the review for each crossing (*Section 4.0*, *Section 5.0*, and *Section 6.0*). Field review photos have been attached to the end of the report.

## 3.0 Literature Review

*TAC Manual of Uniform Traffic Control Devices for Canada (MUTCD)*, *Transportation Association of Canada Geometric Design Guidelines*, *Transport Canada Grade Crossing Standards*, *Transport Canada Grade Crossing Handbook*, and *Transport Canada Grade Crossing Regulations* were reviewed to determine the appropriate application of signage. The following concerns were noted during the literature review and will be addressed in the proposed improvements for each location:

**Stop Signs at Crossing with Warning System.** It was noted that all three crossing locations had provided both railway crossing warning systems and stop signs. The Village received a Letter of Concern from Transport Canada (Dated September 21, 2021) which notes that the placement of stop signs at the warning system is not compliant with the Transportation Association of Canada (TAC) Standards and the existing placement of stop signs are not attempting to manage right-of-way of the road users

**Intersecting Road Proximity to Public Grade Crossing.** *Transport Canada Grade Crossing Standards* states that for new crossings, no part of the travelled way of an intersecting road or entranceway may be closer than 30 metres to the nearest rail of the grade crossing. It is noted that although the intersecting roads and accesses are an existing condition, it is suggested to formalize access locations as to not be adjacent to the railway crossing where possible.

**Measures that Ensure Vehicles Do Not Queue on Tracks.** *Section 100* of the *Transport Canada Grade Crossing Regulations* specify the road authority (the Village) must take measures to ensure that motor vehicles do not stop on crossing surface of public crossing due to traffic controls or vehicle queues. Therefore, any proposed traffic operations change near the crossing must not cause any vehicle queueing concerns near the railway crossing.

**Advance Warning Signs.** According to the *TAC MUTCD*, *Grade Crossing Standards* and *Grade Crossing Regulations*, Railway Crossing signs must also be installed in advance of all at-grade railway crossings that are in use. Therefore, appropriate warning signage should be provided for each crossing.





## 4.0 Brunswick Beach Road Railway Crossing

Brunswick Beach Road crosses two railway tracks with a warning system including bells, side mounted lights, and gate arms. A three-leg intersection is located on the west side of the crossing. The north leg of the intersection provided access to approximately 8 residences while the south leg provides access to approximately 27 residences. Currently, the intersection is uncontrolled and stop signs are provided at the railway crossing. The existing configuration is shown in **Figure 4.1**.



Figure 4.1 Brunswick Beach Road Railway Crossing – Existing Configuration

### Proposed Traffic Operation Changes

Although the proximity of the intersection to the railway crossing presents risks according to the *Grade Crossing Standards*, the intersection cannot be eliminated, therefore, alternative traffic control must be implemented for the intersection located west of the rail. Based on the land uses and connections to the Highway, it was assumed that a majority of the vehicle movements would travel to / from the east leg (access to highway) and west leg (27 residence accesses) of the intersection and fewer vehicles would be using the north leg. A stop control on the north leg would reduce the risks of queueing occurring across the tracks as the westbound movements (through and right-turn movements) have no conflicting movements. Therefore, the stop control could be implemented for the north leg of the intersection.

To be consistent with the *TAC Manual of Uniform Traffic Control Devices for Canada* (MUTCD), it is suggested that centreline, advance warning signage (WA-18), and double stop bars be provided at the crossing. Edge lines (solid white lines on the right side of the travel lanes) should be provided to reinforce the continuous vehicle flow through the crossing. Due to the sharp curve on the west side of the crossing, Single Turn Warning Sign (WA-1) should be provided in advance of the curve with a 15 km/hr advisory speed.

### Traffic Operations at the intersection

One-way directional vehicle traffic volumes along Brunswick Beach Road collected during May and June 2020 were reviewed. The peak hour was found to occur in June on Saturdays with 40 vehicles per hour (one direction). It was conservatively estimated that an equal number of vehicles would be travelling in both directions during the peak hour. Turning movements at the intersection were estimated to be relative to the number of residences on each leg. A conservative 5% annual growth factor was applied to the Brunswick Beach Road volumes (based on historical volumes measured along Lions Bay Avenue). Estimated 2022 turning movement volumes have been provided in **Figure 4.2**.



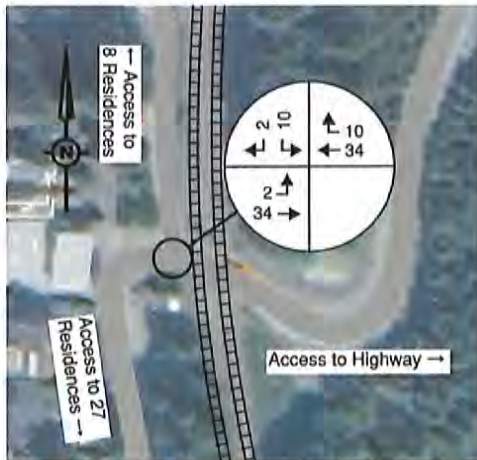


Figure 4.2 Brunswick Beach Road Peak Hour Turning Volumes

Traffic operations analysis for these peak hour volumes was performed using Synchro version 11 software and SimTraffic, a traffic micro-simulation software. The primary Measures of Effectiveness (MOEs) used in this analysis were queue length, delay, and Level of Service (LOS), taken from SimTraffic. LOS is defined as a function of the average vehicle delay (second/vehicle), and the thresholds for unsignalized intersections are shown in **Table 4.1**. LOS A and B could be considered near free flow conditions with hardly any delay to vehicle traffic, while LOS E and F indicates vehicles may be significantly delayed and be waiting for long periods for appropriate gaps. 95<sup>th</sup> percentile queue lengths means that the vehicle queue will be the length or less for 95 percent of the peak hour.

Table 4.2 LOS Definition for Unsignalized Intersections in HCM

LOS	A	B	C	D	E	F
Delay (seconds per vehicle)	0-10	10-15	15-25	25-35	35-50	≥ 50

Traffic operations analysis indicated that all movements at the Brunswick Beach Road intersection operated at LOS A (little or no delay) for all movements, and the 95<sup>th</sup> percentile queue for the stop-controlled movement was less than 2 vehicle lengths. Detailed traffic operations results can be found attached to this memorandum.

### Horizontal Sightline Review

The posted speed limit along Brunswick Beach Road is 20 km/hr. According to *Section 9.9.2 of the Geometric Design Guide for Canadian Roads*, the required intersection sight distance for a passenger car left turn movement from a stop control for 20 km/hr is 45 metres. The sight distance is measured along the intersecting roadway and the area between the sightline and travel lane should be clear of obstructions to provide sufficient time for a vehicle to safely make the left-turn movement. The decision point (driver's eye in the stopped car) for the sightline is measured 4.2 metres from the edge of the intersecting travel lane. Our analysis included only the horizontal sightlines and vertical sightlines were not able to be reviewed due to the limited scope of the project and insufficient survey data. Sightlines for Brunswick Beach Road are provided in **Figure 4.3**.

It is noted that the sightlines are adequate for the east leg to accommodate safe vehicle movements from the proposed north leg stop control and the west leg could be adequate with the maintenance of some bushes and shrubs. Trimming of the adjacent trees and shrubs should be maintained to ensure that they do not become overgrown and block the sightlines (as shown in the photo, *Brunswick Beach Road Sightline, Looking West*).





It is noted that the lane width at the railway crossing is narrow (2.75 metre lane widths) and in the future the Village should consider additional pavement width to provide adequate lane width at the crossing.



Figure 4.3 Brunswick Beach Road Sightline





## 5.0 Lions Bay Avenue Railway Crossing

Lions Bay Avenue crosses a single railway track with a warning system including bells and side mounted lights. A three-leg intersection is located west of the railway crossing. The north leg of the intersection provides access to approximately 23 residences and the south leg of the intersection provides private access to the Lions Bay Marina. In addition to the highway access on the east leg, a parking lot is also provided on the east side of the railway track, therefore it is expected that some pedestrian traffic would cross the railway at Lions Bay Avenue. Currently, the intersection is uncontrolled and stop signs are provided at the railway crossing. The existing configuration is shown in Figure 5.1.



Figure 5.1 Lions Bay Avenue Railway Crossing – Existing Configuration

### Proposed Traffic Operation Changes

Although the proximity of the intersection to the railway crossing presents risks according to the GCS, the intersection cannot be eliminated, therefore, alternative traffic control must be implemented for the intersection located west of the rail. Based on the land uses and accesses for each leg, it was assumed that the south leg of the intersection (Lions Bay Marina) operates as a driveway / access to the marina and the continuation of the roadway is to the north leg of the intersection. In order to reduce the risk of queueing across the railway crossing occurring due to westbound left turn vehicles, it is recommended to implement stop control for both the northbound (Lions Bay Marina Access) and the southbound approach.

To be consistent with the *TAC Manual of Uniform Traffic Control Devices for Canada (MUTCD)*, it is suggested that centreline, advance warning signage (WA-18), and double stop bars could be implemented. Edge lines (solid white lines on the right side of the travel lanes) could be provided to reinforce the continuous vehicle flow through the crossing to / from the north and east legs. Across the parking access (on the northeast side of the rail crossing) and the Lions Bay Marina access (on the southwest side of the rail crossing), it is suggested to provide dashed edge line.

It is noted that existing accesses to the parking lot and marina are located near the rail crossing on Lions Bay Avenue. *Transport Canada Grade Crossing Standards* states that for new crossings, no part of the travelled way of an intersecting road or entranceway may be closer than 30 metres to the nearest rail of the grade crossing. Although these accesses are an existing condition, it is recommended to formalize the access location to not be adjacent to the railway crossing.





### Traffic Operation at the Intersection

Two-way directional vehicle traffic volumes collected along Lions Bay Avenue from July 2021 to June 2022 were reviewed. The peak hour was found to occur in June 2022 on Saturdays with a two-way volume of 132 vehicles; 66 in each direction. During the summer, it is expected that vehicle trips would be generated by both Lions Bay Marina and Lions Bay Beach Park. A 50% split in volumes was assumed for vehicles travelling to/from the residences/park and to/from the marina. The 2022 turning movement volumes can be found in **Figure 5.2**:

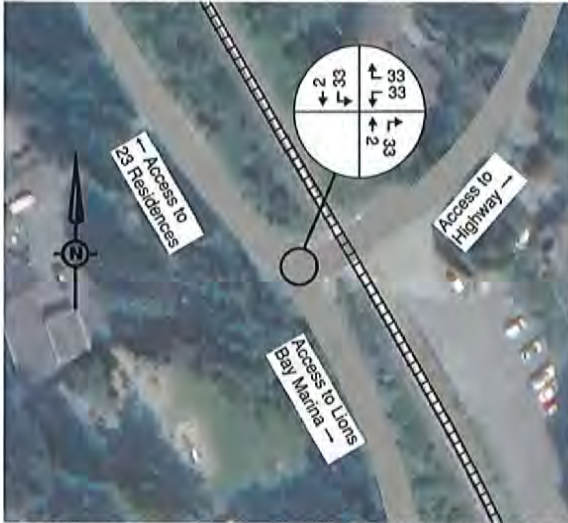


Figure 5.2 Lions Bay Avenue 2022 Peak Hour Turning Volumes

Traffic operations analysis for these peak hour volumes was performed for the Lions Bay Avenue intersection utilizing Synchro 11 as discussed in the previous section. All movements at the intersection were found to operate at LOS A, and the 95<sup>th</sup> percentile queue for the stop-controlled movement was approximately 2 vehicle lengths (14 metres). In other words, a queue of two vehicles would only occur approximately once during the peak period. Detailed traffic operations results can be found attached to this memorandum.

### Sightline Review

The posted speed limit along Lions Bay Avenue is 40 km/hr. Therefore, the required sight distance for passenger car left turn movements from a stop control for is 85 metres. Sightlines are measured as described in the previous section and the sightline for Lions Bay Avenue are provided in **Figure 5.3**.

It is noted that with the stop control applied for the Lions Bay Marina Access, sightlines for the north leg will be generally unimpeded due to the intersection configuration. For the east leg, it was found that the intersection provides insufficient sight distance due to the road curvature. Due to the challenging sightlines, it is suggested to reduce the speed limit for Lions Bay Avenue, South of Seaview Place to 20 kilometres per hour. The reduced posted speed limit should provide sufficient sight distance for vehicle movements from the stop control and will also provide additional pedestrian safety for pedestrian walking to / from Lions Bay Beach Park.

It is expected that westbound left turns by vehicles pulling trailers or boats may occur into Lions Bay Marina. In order to minimize the risk of left turn vehicles with trailers / boats queuing onto the tracks, it is recommended to provide a stop control in advance of the Lions Bay Marina for southbound vehicles. Shrubs on the northeast side of the rail crossing should be maintained low to provide adequate visibility for oncoming vehicles and pedestrians.





# Memorandum

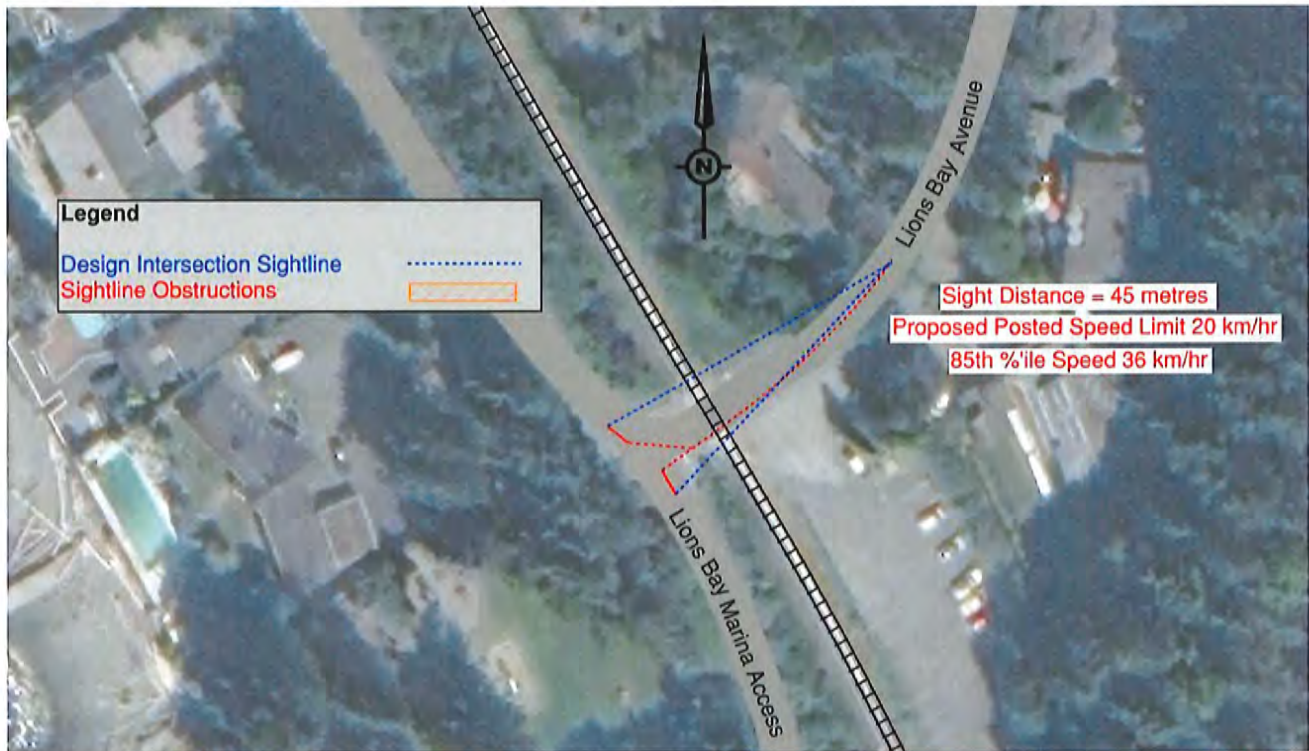


Figure 5.3 Lions Bay Avenue Sightlines





## 6.0 Tidewater Way Railway Crossing

Tidewater Way crosses a single railway track with a warning system including bells and side mounted lights. On the east side of the railway crossing, a cul-de-sac with two private accesses is provided. "No Parking" signs are provided within the cul-de-sac to avoid turnaround issues. Currently, stop signs are provided at the railway crossing. The existing configuration is shown in **Figure 6.1**.



Figure 6.1 Tidewater Way Railway Crossing – Existing Configuration

### Proposed Traffic Operation Changes

As mentioned for the other crossings, stop signs are not appropriate for railway crossings with a warning system. Therefore, the stop signs should be removed. No traffic operation issues are anticipated due to the removal of the stop signs at the crossing.

To be consistent with the *TAC Manual of Uniform Traffic Control Devices for Canada* (MUTCD), It is suggested to maintain the existing centreline and advance warning signage (WA-18) and provide double stop bars in advance of the railway crossing warning lights.



## Memorandum



### 7.0 Recommendations

According to the Letter of Concern received from Transport Canada (dated September 21, 2021), stop signs should not be used at railway crossings with warning systems due to conflicts with TAC standards, as mentioned in *Section 8.4* of the *Transport Canada Grade Crossing Handbook*, *Section A2.2.1* of the *TAC MUTCD*. Additionally, improvements have been proposed to reduce the risk of queuing on the tracks, while managing vehicle conflicts at nearby roadway intersections. The following traffic operations improvements have been proposed to improve operation and safety at the crossings and nearby intersections.

#### Brunswick Beach Road

- Remove the stop signs at the railway crossing.
- Install stop sign and stop bar for the north leg of the intersection.
- Remove and maintain shrubs on the southwest side of the rail crossing.
- Install railway crossing warning signage (WA-18) for the westbound approach.
- Install edge lines, centreline, and double stop bars at the crossing, with dashed edge lines across driveways.
- Install single turn sign (WA-1) and 15 km/hr advisory speed sign on the east and west legs of the intersection.

#### Lions Bay Avenue

- Remove the stop signs at the railway crossing.
- Install stop sign and stop bar for the south and north legs of the intersection.
- Reduce the speed limit for Lions Bay Avenue, south of Seaview Place to 20 kilometres per hour.
- Install edge lines, centreline, and double stop bars at the crossing, with dashed edge lines across driveways.
- Install single turn sign (WA-1) and 15 km/hr advisory speed sign on the east and north legs of the intersection.
- Remove and maintain shrubs to a low height on the northeast corner of the railway crossing.
- Formalize access / egress to the parking lot as to not be adjacent to the rail crossing on the east side of the crossing.

#### Tidewater Way

- Remove the stop signs at the railway crossing.
- Install double stop bars in advance of the railway crossing warning lights and maintain existing centreline.

Conceptual drawings have been prepared for the proposed recommendations at all three crossings and are attached to this memorandum.

If there are any questions or further information is required, please do not hesitate to contact the undersigned.

Yours truly,



Kurtis Mayne, P.Eng., PTOE  
Traffic Engineer



Grant Ngieng, P.Eng.  
Manager, Municipal Transportation

<b>Permit to Practice</b>	
<i>ISL Engineering and Land Services Ltd.</i>	
RR Signature:	
RR EGBC ID:	39159
Date:	2023-01-17
<b>Permit Number 1000419</b>	
<b>Engineers &amp; Geoscientists British Columbia</b>	

#### Attachments:

- Attachment #1 - Conceptual Design Drawings
- Attachment #2 - Detailed Traffic Operations Analysis and Field Review Photos









## Attachment #2

### Detailed Traffic Operation Analysis Results

Table 1.1 Brunswick Beach Road Traffic Operation Analysis Results

Intersection	Measure of Effectiveness	Eastbound				Westbound				Northbound				Southbound				Intersection OVERALL
		Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
Brunswick Beach Road	Applied Volume (veh / hr)	2	34	-	36	-	34	10	44	-	-	-	-	10	-	2	12	92
	Delay (s / veh)	1	0	-	-	-	0	0	-	-	-	-	-	4	-	2	-	1
	Level of Service	A	A	-	-	-	A	A	-	-	-	-	-	A	-	A	-	A
	95th %ile Queue (m)	0				0								9				-

Table 1.2 Lions Bay Avenue Traffic Operations Analysis Results

Intersection	Measure of Effectiveness	Eastbound				Westbound				Northbound				Southbound				Intersection OVERALL
		Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
Lions Bay Avenue	Applied Volume (veh / hr)					33	-	33	66	-	2	33	35	33	2	-	35	136
	Delay (s / veh)					0	-	4	-	-	9	9	-	10	10	-	-	7
	Level of Service					A	-	A	-	-	A	A	-	A	A	-	-	A
	95th %ile Queue (m)					0				14				15				-



Site Visit Photos



Brunswick Beach Avenue Railway Crossing, Westbound Approach (Stop Signs to be Removed and Narrow Lane Widths)



Brunswick Beach Avenue Railway Crossing, Eastbound Approach (Shrubs to be Removed on the North Side)





Lions Bay Avenue, Southbound Approach (Shrubs to be removed and maintained low on east side)



Lions Bay Avenue, Westbound Approach (At Decision Sight Distance for Proposed 20 km/hr Posted Speed)

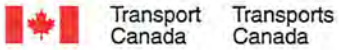




Tidewater Way, Eastbound Approach (Stop Signs to be Removed)



Tidewater Way, Westbound Approach



**Transport Canada Rail Safety - Signals Inspection Report**

<b>Road Authority</b>	Lions Bay, Village of	<b>Summary</b>	2021-07-12 to 2021-09-23, Pacific Region, Reference #s: 8437312,8436169,8436467	<b>TC Inspector</b>	William Dowd
-----------------------	-----------------------	----------------	---	---------------------	--------------

**Inspection Visits**

Inspection Date	Visit Location	Visit Status
September 22, 2021	AWS: Mile 19.52, Squamish Subdivision (Canadian National), Brunswick Beach, (Y), CrossingID: 610607	Concern

**Concerns**

Location	Responsible Authority	Description	Corrective Action	Ref. #
AWS: Mile 19.52, Squamish Subdivision (Canadian National), Brunswick Beach, (Y), CrossingID: 610607	Lions Bay (BC)	<p><u>AWS - Functionality and Operation</u></p> <p>Details: Issue with: Visibility of Warning System From SSD (at least one set of lights are visible from SSD)</p> <p>- (1) of Grade Crossings Regulations: 68. There is 1 set of lights that are blocked by trees on the West side.</p>	<p>Response to Transport Canada: The two trees blocking the signal have been removed.</p> <p>Effective As Of: October 15, 2021</p>	8437752
AWS: Mile 19.52, Squamish Subdivision (Canadian National), Brunswick Beach, (Y), CrossingID: 610607	Lions Bay (BC)	<p><u>AWS - Design and Engineering</u></p> <p>Details: Issue with: Signage - Road Authority Responsibility (Railway Crossing Ahead, Advisory Speed tab, Prepare to Stop at Railway Crossing, etc.)</p> <p>- (1) of Best Practices. There are stop signs installed at this crossing which is giving conflicting messages to motorists much like placing a stop sign at a signalized intersection. The stop lines are also faded and not visible at this location.</p>	<p>Response to Transport Canada: Notice to the Public of the pending removal of the stop signs has created a significant backlash. Council has directed me to keep them in place until we can engage a traffic engineer to review or until Transport Canada responds to our inquiries with respect to the safety of their removal. I will note that there are stop signs at existing signalized railway crossing in West Vancouver?</p> <p>Effective As Of: Unknown - further study and investigation required.</p> <p>Line Painting:- due to a province-wide shortage of line marking paints, the 2021 line marking program could not be completed. Staff will try to mark the lines temporarily before the 5th of November. Permanent line marking will not happen until August of 2022. Effective As Of: August 2022</p>	8437698





## THE MUNICIPALITY OF THE VILLAGE OF LIONS BAY

<b>Type</b>	Request for Further Research		
<b>Title</b>	GHG Reduction Analysis & Roadmap		
<b>Author</b>	Clara George	<b>Reviewed By:</b>	<b>Name</b>
<b>Date</b>	June 12, 2023	<b>Version</b>	
<b>Issued for</b>	June 15, 2023		

### Recommendation:

(1) THAT the Climate Action Committee recommends to Council THAT Council directs staff to work with the committee to procure quotes on clean energy alternatives; and

### Attachments:

Please see attached PDF

### Background and Key Information:

*This request was originally submitted in October 2021.*

*Council asked staff to research, and staff rejected the use of Renewable Diesel based on conversations with Ford Canada that uncertified fuel would void the warranty in equipment.*

*That is correct - uncertified fuel would void warranties in equipment.*

*However, Suncor/ Metro Canada's ECO-DIESEL meets all Fuel Standards.*

*Further the additional cost of purchasing Eco Diesel , estimated in 2021 at \$5,000-\$5,500 per year, can be covered by the ICIP Clean BC Communities Fund, which we received in 2022.*



## THE MUNICIPALITY OF THE VILLAGE OF LIONS BAY

The 2020 CARIP report submitted by the Village has the liners of fuels purchased by the Village.

Using available Canadian Carbon Calculators - I was able to estimate the total GHG emissions at 54.862 tCO<sub>2</sub>, as well as the % from each fuel.

Heating oil - 10.487 tCO<sub>2</sub>. = 19% of total emissions

Gasoline - 15.3 tCO<sub>2</sub> = 28% of total emissions

Diesel - 25.85 tCO<sub>2</sub> = 47% of total emissions

Propane - 3.225 tCO<sub>2</sub> = 6% of total emissions

### **Council Strategy or OCP Considerations:**

Although this report needs to be updated to embrace new technology, such as cleaner renewable fuels - the intent is still valid.

- GHG reduction is a goal in OCP as stated on page 29, Under Section 9:  
Pursuant to Section 877(3) of the Local Government Act, local governments are required to incorporate within their official community plans targets, policies, and actions for the reduction of greenhouse gas emissions.
- 
- Targets include (under Section 9.01):
  - a) Reducing 30% reduction due to change over of vehicles - smaller engine sizes.
  - b) 11% reduction assuming oil heat users convert to an alternative renewable energy source.

### **Financial Considerations:**

Based on 2020 data, the cost of switching to Renewable Diesel should be between \$5000 and \$5,500. This needs to be confirmed by staff, in discussion with fuel supplier per my previous report.

Committee and Staff need to explore the true cost of switching oil heating at the municipal hall to clean electric heat pumps and/or renewable solar panels.

Committee and Staff need to itemize and quantify which items are being run on propane and gasoline; and work towards a comprehensive cost analysis and plan to decarbonize.



## THE MUNICIPALITY OF THE VILLAGE OF LIONS BAY

---

### **Options:**

(1) Do nothing: Purely based on Municipal Fuel Consumptions as outlined in the 2020 CARIP report - the estimated GHG emissions are 54.863 tCO<sub>2</sub> annually. This will likely continue and grow if not addressed.

(2) Diesel represents 47% of the Villages' emissions.

By replacing Diesel with Renewable Diesel - we would immediately reduce our Diesel related emissions by 90%. Eliminating 23.26 tCO<sub>2</sub> annually. The cost per ton of CO<sub>2</sub> reduced is \$218.45.

(3) Further Reductions:

Replace Oil heating with Clean and/or Renewable Energy (19% reduction)

Replace gas powered tools/vehicles with electric. (28% reduction)

Replace propane powered items with electric (6% reduction)

### **Preferred Option: 2 & 3**

(2) By immediately switching to renewable Diesel - the Village would have a 44% reduction in GHG emissions in 2022 over 2020. The cost per tonne CO<sub>2</sub> reduced works out to +/- \$220, at today's cost of fuel. This difference will go down as Carbon Taxes go up.

No additional infrastructure is required.

(3) Replacing the use of oil, gas and propane will lead us to a Net Zero.

### **Legal Considerations: n/a**

### **Follow Up Action:**

- 1) Meet with Suncor to establish costs, contract etc for Renewable Diesel
- 2) Get Bids for Oil Furnace conversion to Electric Heat Pump
- 3) Establish gas powered items and budget for electrification.
- 4) Establish propane powered items and budget for electrification.

### **Communication Plan:**

This is already a village mandate.



## THE MUNICIPALITY OF THE VILLAGE OF LIONS BAY

<b>Type</b>	<b>Direction Request</b>		
<b>Title</b>	<b>Renewable Diesel Use by the Municipality</b>		
<b>Author</b>	<b>Naizam Jaffer</b>	<b>Reviewed By:</b>	<b>Peter DeJong</b>
<b>Date</b>	<b>November 25, 2021</b>	<b>Version</b>	<b>1</b>
<b>Issued for</b>	<b>November 30 / December 1 Council Strategy Session</b>		

**Recommendation:**

Council to provide direction with respect to the issue(s) outlined in this report.

**Attachments:**

- (1) Climate Action Committee Report Re: Renewable Fuel.

**Key Information:**

At the May 13, 2021, Climate Action Committee (CAC) meeting, the committee received an information report entitled “Renewable Diesel Fuel use by Works Yard.” Subsequently, at the September 14, 2021, Council Meeting, staff were asked to compile a list of its internal combustion engine (ICE) powered trucks and equipment used by Public Works. Municipal equipment in the ICE category are used regularly in the provision of various municipal services including the provision of potable water and wastewater disposal; maintenance of parks, roadways, and facilities; and delivery of fire-rescue services. Through their provision of services, they generate greenhouse gas (GHG) emissions which we should be trying to reduce.

As the CAC report identifies, the Public Works Yard site has two fuel tanks, a 1,240L tank for gasoline and an 8,620L tank for diesel, which provide fuel for the Public Works trucks, portable generators, backhoe, mini-excavator, bobcat, John Deer Mower, and numerous smaller pieces of equipment from salter motors to weed-whackers and blowers. Staff are currently compiling a full inventory of the ICE equipment used by Public Works. One omission in the CAC Report is that the fuel stored and dispensed from the Works Yard also fuels the Fire Department vehicles (truck and engines), the training compound fork-lift, and numerous smaller pieces of equipment from chain saws to wildfire suppression water pumps. Another key missing equipment group is the emergency generators located at the Dale Klatt Emergency Building, the Municipal Hall, the Kelvin



## THE MUNICIPALITY OF THE VILLAGE OF LIONS BAY

---

Grove Wastewater Treatment Plant, and the two Water Treatment Plants (Harvey Creek and Magnesia Creek).

The following table presents the Municipality’s fuel orders by volume (Litres) and total cost for the fuel, including delivery.

<b>Year Diesel or Gas</b>	<b>Litres</b>	<b>Cost</b>
2018 Diesel	5,296	\$ 6,944.92
2018 Gasoline	4,819	\$ 7,326.61
2019 Diesel	12,176	\$ 16,169.69
2019 Gasoline	5,238	\$ 7,630.39
2020 Diesel	6,367	\$ 6,859.19
2020 Gasoline	5,009	\$ 6,182.97
2021 Diesel ytd	5,724	\$ 7,276.74
2021 Gasoline ytd	5,691	\$ 8,792.92

As described in the information material presented in the CAC Report, Renewable Diesel (R100) refers to an advanced biofuel made from vegetable oil, animal fats, used cooking oil, or greases. R100 is not “Biodiesel.” Biodiesel is the most common form of alternative diesel currently available and is usually made from organically derived oils such as recycled waste cooking oil. Biodiesel is typically mixed with conventional petroleum diesel to produce a biodiesel blend (B5 to B20) and is accepted by most diesel engine manufacturers at blends of up to 20% (B20). At blends between 20-100%, Biodiesel tends to gel at colder temperatures and has been shown to adversely affect engines and result in warranty issues. R100 offers superior stability and is generally produced to a higher quality compared to Biodiesel and does not gel at colder temperatures.

R100 fuels like Suncor’s REG Renewable Diesel are manufactured to the same standards as petroleum diesel; however, the production standard of each batch can vary. The City of Vancouver (the “City”) have been using Suncor’s R100 for three years and have reported that the primary issue has been ensuring that each batch of fuel delivered to their fueling facility at the Manitoba Works Yard meets the ATM test results ([CSGB-3.517-2017](#)). The City employs a full time engineer in training (EIT) who monitors fuel data sheets for every delivery to ensure they are receiving a valid product before it enters their distribution system. The primary fuel related failure method they have faced is with water seepage into the fuels (most likely caused by vendor fuel storage tank leaks). Moisture content in the fuels is a key component of engine failure so extreme caution is used when reviewing the data sheets.





## THE MUNICIPALITY OF THE VILLAGE OF LIONS BAY

---

The City's fleet manager also advised staff that despite the R100 fuel's ability to meet national standards or the fact that the City rigorously inspects the data sheets for each batch of fuel that enters their distribution system, the three primary manufacturers of the City's equipment, Ford, Cummins, and Detroit Diesel, have steadfastly refused to warranty any vehicles and equipment running the R100 fuels. The City has taken that liability on and absorbs any such repairs within their budgets. For context, the City has approximately 2000 light duty, heavy duty, and heavy pieces of equipment and replaces approximately 200 units every year. Their annual equipment management and servicing budget is \$5.1 M.

Staff have spoken to Ford's engineers with respect to the use of R100 in our 2019 diesel trucks and have been advised that any use of these fuels in our vehicles will void our warranties. Public Works Trucks have 60-month/100,000km warranties on the engines and powertrains. Notwithstanding the warranties, we were advised by Ford that "since these fuels have not been tested, we don't know how the engines will perform, how often the filters or gaskets will have to be changed, or how the fuels will affect any of the other countless components within the fuel system". Ford's engineers did advise that they have begun testing R100 fuels on 3 European models of their fleet – a passenger vehicle, a crossover, and a light delivery van but have drawn no conclusions as of yet. Light duty or heavy-duty pickup trucks have not been tested and there are currently no immediate plans to do so.

Staff have and continue to reach out to manufacturers of the Municipality's emergency generators but have not had any luck in determining if R100 fuels will be acceptable in them. The same applies to the 2018 F420 Caterpillar Backhoe, our bobcat loader, and mini excavator. Some of our equipment is beyond the warranty stage; however, use of untested fuels on these pieces of equipment is not without risk. Without manufacturer testing, we have no way of knowing what the impact of this fuel will be on gaskets, seals, internal engine components, fuel lines, filters, etc. Failure of any of these components could lead to serious damage to the engines and leave the Village without these critical units.

Despite R100 being environmentally benign, and a highly promising alternative to fossil diesel, heavy duty vehicles and diesel engine industries have not yet embraced use of R100 in their product. Given that R100 is chemically and structurally identical to conventional diesel, one would expect the industry to move quickly in this direction, particularly with the limited market-availability of electric trucks, and medium and heavy-duty vehicles. R100 might well be a key interim strategy for many organizations to reduce fuel source emissions related to their fleets until technological advancement in the electric vehicle industry develops further. The GHG



## THE MUNICIPALITY OF THE VILLAGE OF LIONS BAY

---

emissions from fleet usage of R100 are not carbon neutral; however, they appear to be lower than emissions from regular diesel. The primary benefit to the use of R100 fuels is that they are 90% less carbon intensive in that R100 fuels are produced from 100% renewable sources.

Without rigorous and extensive testing on engines, the risk of engine failure lies fully on the end-users' shoulders. Larger organizations may be able to absorb failures or malfunctions and countenance the loss of warranty protection; however, for a small municipality, this is not necessarily the case.

Council may elect to accept a modicum of risk by using R100 fuels in smaller, less expensive to replace equipment. The Fire Department uses a diesel-powered forklift to move derelict vehicles around in their training compound when conducting auto extraction training and Public Works uses a diesel-powered ride-on mowers for use in parks, boulevards, and the school field. Both these units could be trialed on the R100 fuels. Replacement costs for these units, in the event of an engine malfunction, are \$60,000 for the forklift and \$25,000 for the ride-on mower. Another factor to the scenario of using R100 fuels in some of our equipment is that a second storage and pumping facility would be required to hold the R100 fuels. There would be a civil construction cost to the installation of a second fuel pumping station that would need to be investigated and consideration could be given to waiting until the Public Works Yard moves to Brunswick Hill.

In speaking to Ford's engineering branch for Western Canada, staff were advised of the pending release of an electric version of their iconic F150 pickup truck and pointed to that as an alternative to the use of R100 fuels. One could surmise that this is the direction in which they are focused. Indeed, many manufacturers of trucks are moving in this direction, notably Tesla's release of an electric truck earlier this year and Rivian's RT1, a commercially available pickup truck with an entry price point of \$100,000.00. The viability of pursuing electric replacements for some of our equipment as it ages is one strategy that could be used to eliminate GHG's. An alternative option might be hydrogen fuel-cell technology for heavy-duty vehicles and equipment. JCB, for example, is in final testing of a hydrogen powered 20 tonne excavator – the x220. The company has already released an electric mini excavator, the 19C-1E, and a line of electric forklifts beginning with the launch of it's JCB 30-19E.

In closing, it should be noted that staff do look at purchasing equipment with an environmental green lens and have purchased electric grass trimmers, backpack blowers, and chain saws to replace our ICE units. Bear in mind that electric replacements to ICE powered equipment currently comes at a significant premium and while most of these electric counterparts work well enough, we have experienced issues with performance and efficiency with some electric



## THE MUNICIPALITY OF THE VILLAGE OF LIONS BAY

---

replacements. The backpack blower, as an example, does not perform as well as its ICE counterpart and jobs requiring its use take twice as long to complete compared to the ICE unit. A green lens is also applied when looking at larger equipment and, as an example, the Public Works decision to purchase a Caterpillar F420 Backhoe was driven, in part, by its Tier IV certification. The mandate of Tier IV emissions standard is to reduce the amount of NOx (nitrogen oxide), HC (hydrocarbons), and PM (particulate matter) produced and released into the atmosphere. Public Works will continue to apply a green lens on future purchases of equipment and will continue to research effective alternatives to ICE products as they emerge in the marketplace.

### **Desired Result:**

- A. Ultimately, the reduction of our greenhouse gas emissions is a key strategic goal that is vital for us to do our part in the climate emergency we find ourselves in. Most municipalities have invested in developing a clearly defined plan with emission reduction targets and strategies to implement them for the short, medium, and long-term.
- B. Municipal vehicles and equipment are critical to our day-to-day operations, but more so for our response to emergencies (e.g., snow, ice and extreme weather, broken mains, blocking of our water intakes, and fire-rescue emergency response). Moving forward with a plan to replace these units requires detailed expert analysis that looks at peak demand requirements coupled with research into power capabilities and operating duration, and risk assessments.
- C. Planning scenarios for GHG reductions might well include alternatives to R100 including electric and hydrogen fuel cell technology for heavy duty fleet vehicles and equipment.

### **Options to Pursue Desired Result:**

- (1) Engage experts in this field such as Hoa Cleantech, a firm who has worked with other municipalities to help decarbonize their fleet and equipment through reducing emissions. Staff could reach out to them to develop a budget for the 2022 budget year.
- (2) Direct staff in another manner not cited in this report.

**Follow Up Action and Communication:** Per Council direction.



## THE MUNICIPALITY OF THE VILLAGE OF LIONS BAY

<b>Type</b>	<b>Information Report</b>		
<b>Title</b>	<b>Renewable Diesel Fuel use by Works Yard.</b>		
<b>Author</b>	<b>Clara George</b>	<b>Reviewed By:</b>	
<b>Date</b>	<b>May 10, 2021</b>	<b>Version</b>	
<b>Issued for</b>	<b>Thursday, May 13, 2021 Climate Action Committee Meeting</b>		

**Attachments:**

- (1) Suncor REG Renewable Diesel Information Material

**Background and Key Information:**

The Village of Lions Bay currently has 2 Fuel tanks in the Kelvin Grove Work Yard.

1 x Gasoline = 1,240 L

1 x Diesel = 8,620 L

These tanks supply the fuel for all work trucks, and 5 machines that service the village and run off of Diesel fuel.

Typically, the tanks are re-filled 3 to 4 times a year.

Currently the Fuel is delivered by Super Save Fuels.

The City of Vancouver switched all of its vehicles to 100% renewable diesel as part of it’s Greenest City Goals.

<https://vancouver.ca/green-vancouver/green-fleets.aspx>

The Village of Lions Bay has access to Suncor’s 100% Renewable Diesel through the BC Buying Group of Municipalities. The fuel would be delivered by Coast Mountain Fuels in Langley.

**Council Strategy or OCP Considerations:**

Renewable Diesel is made completely from plant and animal by-products, and is not an extracted fossil fuel. The result is a synthetic product that behaves exactly like petroleum diesel.

The Carbon Intensity for petroleum diesel is 80g of CO2 per mega joule of energy produced.

The Carbon Intensity for Renewable diesel is 9g of CO2 per mega joule of energy produced.



## THE MUNICIPALITY OF THE VILLAGE OF LIONS BAY

---

The emissions are believed to be the same, although as a cleaner fuel – it is also a more efficient fuel.

### **Financial Considerations:**

I have reached out to Suncor, and they have provided a quote for Renewable Diesel which is Vancouver Rack Rate + \$0.65000 CPL + delivery rate (tbd) which would be would be \$0.6856 higher than the Petroleum (5% Biodiesel) Suncor rate through the same program.

They also provided a discounted gasoline rate of Vancouver Rack Rate - \$0.0306 CPL + delivery.

Assuming the costs for gasoline & regular through the BC Buying Group of Municipalities is the same as what we are paying to Super Save, the additional cost to the Village would be \$5,909.87 per delivery.

### **Follow Up Action:**

- Review contract with Super Save Fuels to see costs, commitments etc.
- Look at potential rebates available to offset the additional costs.
- Look at Carbon Reduction potential for the Village by switching fuel.

### **Communication Plan:**

- Add to Lions Bay Climate Action tab on website to show the Village's commitment to fuel impact reduction.
- Share with other jurisdictions to inspire climate action.





# REG Renewable Diesel

*Reduce emissions without sacrificing performance.*

REG Renewable Diesel is an advanced biofuel that reduces greenhouse gas emissions while meeting the same ASTM D975 specification as petroleum diesel. It can be added to the existing pipeline system, making it easy to incorporate into the diesel stream.



## *Fuel Specifications*

- ▶ Can be blended with biodiesel and petroleum diesel
- ▶ Blends can be used in any diesel engine without modifications
- ▶ Aids in self-ignition of fuel and allows for easier starting, smoother running engines and reliable operation because of increased Cetane



## *Fuel Benefits*

- ▶ Included in the Energy Policy Act of 1992 (EPA) standards to meet a portion of the annual alternative fuel vehicle acquisition requirements
- ▶ Tested by the EPA and passes their Clean Air Health Effects testing requirements
- ▶ Qualifies for various state biofuel tax incentives



## Analysis of REG Renewable Diesel

Property	REG Limit	D975 ULSD Limit	Units
Cloud Point	Report	Report	°C
Water & Sediment	0.05	0.05	% volume
Conductivity	25, min	25, min	pS/m
Flash Point	52, min	52, min	°C
Ramsbottom Carbon	0.35	0.35	% mass
Ash	0.01	0.01	% mass
Kinematic Viscosity (40° C)	1.9 – 4.1	1.9 – 4.1	mm <sup>2</sup> /sec
Distillation Temperature at 90%	282 – 338	282 – 338	°C
Copper Corrosion	No. 1	No. 3	N/A
Sulfur	2	15	ppm
Aromaticity	2	35	% volume
Cetane Number	65, min	40, min	N/A



# Safety Data Sheet (SDS)

ID: SDS 402-US



## Section 1 – Identification

Product identifier	REG 9000 Renewable Diesel
Other means of identification	
Synonyms	REG - 9000™ / RHD, Renewable Diesel, Renewable Synthetic Diesel Fuel, Renewable Diesel Fuel, Bio-Derived Diesel, Biomass-Based Diesel, Diesel Fuel No. 2, R98.9 Diesel Fuel, odorless mineral spirits, paraffinic middle distillate, RD975, REG RDB5, hydrotreated esters and fatty acids, HEFA, HVO, HDRD, HRD, R99.9, RD, paraffinic middle distillate, RHD, Renewable Hydrocarbon Diesel, R100
Recommended use	Fuel for use in compression ignition engines, in other combustion applications, a solvent, or an industrial blendstock
Restrictions on use	Not intended for direct human consumption
Supplier information	REG Marketing & Logistics Group, LLC 416 S. Bell Ave Ames, IA 50010 (888) 734-8686
Emergency phone number	For Hazardous Materials [or Dangerous Goods] Incident, Spill, Leak, Fire, Exposure, or Accident call CHEMTREC Day or Night: Domestic: 1-800-424-9300 International: +1 703-741-5970

## Section 2 – Hazard(s) Identification

### Classification (in accordance with 29 CFR 1910.1200)

Hazard Class	Hazard Category	Route of Exposure
Skin Irritation	Category 2	Absorption / Dermal Contact
Eye Irritation	Category 2A	Absorption / Eye Contact
Aspiration Hazard	Category 1	Ingestion then aspiration
Flammable Liquid	Category 4	Physical Hazard

Signal word	DANGER
Pictograms	 
Hazard Statements	H315 Causes skin irritation EUH066 Repeated contact may cause skin dryness or cracking H319 Causes serious eye irritation H304 May be fatal if swallowed and enters airways H227 Combustible liquid
Precautionary statements	
Prevention	Wear appropriate protective gloves, protective garments, and eye protection. Avoid breathing mists and sprays. Wash all affected skin thoroughly after handling.  Keep container tightly closed. Keep away from heat, sparks, open flames, hot surfaces, and other potential ignition sources. Ground / bond container and receiving equipment and take precautionary measures against static discharge – including the use of non-sparking tools and explosion-proof equipment.

**Response** Do NOT induce vomiting. If swallowed: Immediately call a poison control center or physician.  
 Take off contaminated clothing immediately and wash it before reuse. If on skin, wash thoroughly with soap and water. If skin irritation or rash occurs, get medical advice.  
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists: Get medical attention.  
 In case of fire, use dry chemical or foam extinguisher – NOT water stream

**Storage** Store in a tightly closed container in a cool well-ventilated area.

**Disposal** Dispose of contents/container in accordance with local, state, and federal regulations.

**Hazards not otherwise specified** Static Accumulator (50 picosiemens or less). This product can accumulate static charge by flow or agitation, and a static discharge could cause this product to ignite.

**Section 3 – Composition / Information on Ingredients**

**Basic components** This product is a complex combination of hydrocarbons obtained by the hydrodeoxygenation and catalytic hydroisomerization of animal fats and vegetable oils followed by distillative fractionation. It consists mostly of branched and linear paraffins having carbon numbers ranging from C<sub>9</sub> to C<sub>18</sub>.

Chemical Name	Common Name & Synonyms	CAS number	% of product
Fuels, diesel, C9-18-alkane branched & linear	Renewable Hydrocarbon Diesel, RHD, Renewable Diesel	1159170-26-9	93 – 100%
Fatty acids, C14-18 and C16-18-unsatd., Me esters	Methyl Esters	67762-26-9	< 5.5%
Petroleum fuel oil	Diesel Fuel	68476-30-2	< 1%
Diesel Oil C9-20	Fuels, Diesel	68334-30-5	< 1%

**Section 4 – First-Aid Measures**

**First-aid measures for exposure**

**Inhalation** If breathing difficulties develop, move victim away from source of exposure and into fresh air. Seek medical attention.

**Skin** Take off contaminated clothing immediately and wash it before reuse. If on skin, wash thoroughly with soap and water. If skin irritation or rash occurs, get medical advice.

**Eyes** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists: Get medical attention.

**Ingestion** Aspiration Hazard: Do NOT induce vomiting. If swallowed: Immediately call a poison control center or physician.

**Most important symptoms / effects**

**Acute** Aspiration into the lungs can cause fatal chemical pneumonitis. If ingestion has occurred, assume there is a risk of aspiration into the lungs – especially if nausea or irritation occurs.

**Delayed / Chronic** Repeated exposure may cause dryness and cracking of the skin.

# Safety Data Sheet (SDS)

ID: SDS 402-US

Indication of immediate medical attention      Aspiration into the lungs can cause fatal chemical pneumonitis. Treat symptomatically and supportively.

Special treatment needed, if necessary      No information available

## Section 5 – Fire-Fighting Measures

Suitable extinguishing media      Firefighting foam, dry chemical, carbon dioxide, or other clean extinguishing agents (such as Halon or Halotron). Water mist may be effective for extinguishing soaked oily materials if applied by experienced fire-fighting personnel.

Unsuitable extinguishing media      Do not use a solid water stream, as it may scatter and spread the fire

Specific hazards arising from the chemical      Static accumulator (50 picosiemens or less), unless performance additive has been added to mitigate static accumulation. This product can accumulate static charge by flow or agitation, and a static discharge could cause this product to ignite. This product can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, or mechanical/electrical equipment). Heated liquid can release vapors that may readily form flammable mixtures at or above its flash point. If container is not properly cooled, it can rupture in the heat of a fire.

Hazardous combustion products include      Carbon monoxide, carbon dioxide, nitrogen oxides, and hydrocarbons

Protective equipment and precautions for firefighters      Incipient stage fires may be controlled with a portable fire extinguisher. For fires beyond the incipient stage, evacuate all unnecessary personnel. Emergency responders in the immediate area should wear standard firefighting protective equipment, including self-contained breathing apparatus (SCBA) and full bunker gear. In case of external fires in proximity to storage containers, use water spray to keep containers cool, if it can be done safely. Prevent runoff from entering streams, sewers, storm drains, or drinking water supply.

## Section 6 – Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures      Keep all sources of ignition away from spill / release. The use of explosion-proof equipment is recommended. Wear protective garments, impervious oil resistant boots, protective nitrile gloves, and safety glasses. If product has been heated, wear appropriate thermal and chemical protective equipment. If splash is a risk, wear splash resistant goggles and face shield. Shut off source of spill, if safe to do so. Contain spill to the smallest area possible. Isolate immediate hazard area and remove all nonessential personnel. Prevent spilled product from entering streams, sewers, storm drains, unauthorized treatment drainage systems, and natural waterways. Place dikes far ahead of the spill for later recovery and disposal. Immediate cleanup of any spill is recommended. **If material spills into or upon any navigable waters and causes a film or sheen on the surface of the water, immediately notify the National Response Center at 1-800-424-8802.**

Methods for containment and clean-up

    Small spill / incidental release      Small spills can be cleaned up with absorbent inert media (oil dri, sand, or earth), or absorbent pads. Use soapy water or degreaser to remove oily residue from the affected area, then rinse area with water. Place saturated materials in an appropriate oily waste container (metal can with a metal lid or an enclosed oily waste dumpster), and dispose of according to local, state, and federal regulations.

    Large spill / release      A spill remediation contractor with oil booms and skimmers may be needed for larger spills or spills that come into contact with a waterway or sensitive wetland. Recover as much product as possible by pumping it into totes or similar intermediate containers. Remove any remaining product with absorbent inert media (oil dri, sand, or earth), or absorbent pads. Use soapy water or degreaser to remove oily residue from the affected area, then rinse area with water. Place saturated materials in

# Safety Data Sheet (SDS)

ID: SDS 402-US

an appropriate oily waste container (metal can with a metal lid or an enclosed oily waste dumpster), and dispose of according to local, state, and federal regulations.

**Other information**

Materials saturated with this product, such as oily rags, used oil dri, soaked insulation pads, etc., may spontaneously combust due to product decomposition in the presence of oxygen. Place all such materials into appropriate oily waste containers (such as metal cans with metal lids or oily waste dumpsters with lids), and dispose of according to local, state, and federal regulations.

## Section 7 – Handling and Storage

**Precautions for safe handling**

Open container slowly to relieve any pressure. When transferring product, use pipes, hoses, and tanks that are electrically bonded and grounded to prevent the accumulation of static electricity. This product can accumulate static charge by flow or agitation, and a static discharge could cause ignition. Use explosion-proof electrical equipment (ventilation, lights, material handling, etc...). Wash thoroughly after handling and before eating, drinking or using toilet facilities. Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames.

“Empty” containers can retain residue that may be ignitable. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks or other sources of ignition. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

**Conditions for safe storage, including incompatibilities**

Use and store this material in cool, dry, well ventilated areas away from all sources of ignition. Storage tanks should have an appropriate ventilation and pressure relief system. Store only in approved containers, and keep them tightly closed. Keep away from strong oxidizing agents, strong reducing agents, strong acids, and strong bases. Open containers should be carefully resealed and kept upright to avoid leakage. Protect the container against physical damage.

## Section 8 – Exposure Controls / Personal Protection

**Precautions for safe handling**

**Component exposure limits**

Component	CAS #	OSHA PEL	ACGIH TLV	Form	Weight %
Fuels, diesel, C <sub>9-18</sub>	1159170-26-9	None	None	Liquid, Vapor or Aerosol	98-100%
ULS Diesel	68476-30-2	None	100 mg/m <sup>3</sup> TWA	Vapor & Aerosol	<2%
Unsaturated methyl esters	67762-26-9	None	None	Liquid	<5.5%

**Appropriate engineering controls**

Keep product enclosed in primary containment (hoses, pipes, tanks, etc.) to avoid contact with skin. Handle in accordance with good industrial hygiene and safety practices.

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Use sealed systems as far as possible. Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Local exhaust ventilation is recommended. Eye



# Safety Data Sheet (SDS)

ID: SDS 402-US

washes and showers should be available for emergency use. Firewater monitors and deluge systems are recommended. Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping. Define procedures for safe handling and maintenance of controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with this product. Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation. Do not ingest. If swallowed then seek immediate medical assistance.

**Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Individual Protection Measures**

**Personal protective equipment**

**Eyes / face**

Chemical splash goggles are recommended. However, if a local risk assessment determines that chemical splash goggles may not be required, safety glasses should be selected to provide adequate eye protection. If splash potential exists, add the use of a face shield.

**Skin**

Wear disposable nitrile gloves for incidental contact. For more substantial contact, wear thicker nitrile or other similar oil-resistant gloves. Wear protective garments, such as a chemical apron, chemical resistant coveralls, or chemical resistant coat and pants, along with impervious oil-resistant boots. Remove soaked protective equipment, decontaminate with soapy water, and rinse thoroughly before reuse. Note: product will cause natural rubbers to degrade at a very rapid rate. Such protective equipment will need to be carefully inspected after decontamination to see if it is still in serviceable condition. Any defective or worn out equipment should be immediately discarded.

**Respiratory**

No exposure limits are available for this product as a mixture, but appropriate organic vapor or supplied air respiratory protection may be worn if irritation or discomfort is experienced. Where required, respiratory protection must be provided and used in accordance with all local, state, and federal regulations.

**Section 9 – Physical and Chemical Properties**

<b>Appearance - Physical State:</b>	Liquid	<b>Appearance - Color:</b>	Clear to yellow/green tint ( <i>May also be colored red – if sold for off road use</i> )
<b>Odor:</b>	Odorless to mild paraffin	<b>Odor Threshold:</b>	No information available
<b>pH:</b>	No information available	<b>Melting/Freezing Point:</b>	No information available
<b>Boiling Point/Range:</b>	150-315° C (300-600° F)	<b>Flash Point:</b>	>60° C (>140° F)
<b>Evaporation Rate:</b>	No information available	<b>Flammability (solid/gas):</b>	No information available
<b>LFL:</b>	0.6%	<b>UFL:</b>	4.7%
<b>Vapor Pressure:</b>	<0.3 mmHg @ 20° C	<b>Vapor Density:</b>	>1 (air=1)
<b>Relative Density @ 15° C:</b>	0.77 – 0.79 g/ml	<b>VOC:</b>	No information available
<b>Solubility (H<sub>2</sub>O):</b>	Insoluble	<b>Solubility (other):</b>	No information available
<b>Auto Ignition Temp.:</b>	No information available	<b>Decomposition Temp.:</b>	No information available
<b>Viscosity (at 40° C):</b>	1.9 – 4.1 cP	<b>Partition coefficient (n-octanol/water) :</b>	No information available



# Safety Data Sheet (SDS)

ID: SDS 402-US

**Section 10 – Stability and Reactivity**

Reactivity	When handled and stored appropriately, no dangerous reactions are known
Chemical stability	Stable in closed containers at room temperature under normal storage and handling conditions. Hazardous polymerization will not occur.
Possibility of hazardous reactions	When handled and stored appropriately, no dangerous reactions are known.  If product is heated beyond its flash point, vapors can cause a flash fire.  See Sections 5 and 6 regarding spontaneous combustion of product-saturated absorbent materials.
Conditions to avoid	Ignition sources, accumulation of static electricity, heating product to its flash point, or allowing the product to cool below its melting point (otherwise it may solidify and not be transferable until it is reheated).
Incompatible materials	Keep away from strong oxidizing agents, strong reducing agents, strong acids, and strong bases.
Hazardous decomposition products	Carbon monoxides, carbon dioxide, nitrogen oxides, hydrocarbons, water vapor

**Section 11 – Toxicological Information**

Likely routes of exposure	Absorption, ingestion, and inhalation
Symptoms	
Inhalation	Coughing or irritation (vapor, mist, or aerosols)
Ingestion	Nausea, vomiting, or feeling unwell
Skin contact	Redness, or irritation
Eye contact	Redness or irritation and tearing
Acute toxicity	
Oral	No information available
Dermal	No information available
Inhalation	No information available
Skin corrosion / irritation	No testing was available. However, prolonged or repeated skin contact may irritate the skin and produce dermatitis.
Serious eye damage / eye irritation	No testing was available. However, oil mist may irritate the eyes.
Sensitization ( <i>Respiratory or Skin</i> )	No information available
Germ cell mutagenicity	No information available
Carcinogenicity	No information available
Component carcinogenicity	No information was available for the listed components of this product. However, IARC, NTP, and NIOSH list diesel exhaust particulates as a possible carcinogen.

Reproductive / developmental toxicity	No information available
Specific target organ toxicity	No information available
Single exposure	No information available
Repeated exposure	No information available
Aspiration hazard	Due to kinematic viscosity below 5.0 cSt, OSHA regulations state this product may be fatal if it is swallowed and then enters the airways.





## Section 12 – Ecological Information

Acute ecotoxicity - short-term exposure	
Fish	No information available
Invertebrates	No information available
Algae	No information available
Persistence and degradability	Biodegradation at >44% (per ASTM D5864-05)
Bioaccumulative potential	No information available
Mobility in soil	No information available
Other adverse effects	No information available

## Section 13 – Disposal Considerations

Disposal ( <i>waste / unwanted product</i> )	If the material is spilled to soil or water, characteristic testing of the contaminated materials is recommended. Further, this material, once it becomes a waste, may be subject to the land disposal restrictions in 40 CFR 268.40 and may require treatment prior to disposal to meet specific standards. Consult federal, state and local regulations to ensure they are followed.
Disposal ( <i>containers with residue</i> )	Container contents should be completely used and containers should be emptied prior to discarding. Containers must be disposed in compliance with federal, state, and local regulations. To assure proper disposal of empty containers, consult federal, state and local regulations and disposal authorities.

**Section 14 – Transport Information**

	International	Domestic
ID Number	UN1202	NA1993
Proper Shipping Name	Diesel fuel	Combustible liquid, n.o.s. (Renewable Diesel)
Transport Hazard Class	3	Comb liq
Packing Group	III	III
Placard	Flammable Liquid	Flammable Liquid
Marine Pollutant	No	No
Transport in Bulk Requirements	242 (see 49 CFR §173.242)	241 (see 49 CFR §173.241)
Special Transportation Precautions	No information available	No information available
Special Note	This material may be reclassified as a combustible liquid (49 CFR 173.120(b))	
Shipping Label		
Placard (Shipment by truck or rail in bulk)		

**Section 15 – Regulatory Information**

**Inventory Listings**

- DSL  Listed  Exempt  
 TSCA  Listed  Exempt

**U.S. Federal Regulations**

**CERCLA:** This material, as supplied, does contain some substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). Although there is a “petroleum exclusion” clause which exempts crude oil (along with fractions of crude oil and products – both finished and intermediate) from the CERCLA 103 reporting requirements, there may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**Clean Water Act:** This product contains chemical(s) regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):


**SARA 311/312 Hazard Categories:**

Hazard Class	Hazard Category
Skin Irritation	Category 2
Eye Irritation	Category 2A
Aspiration Hazard	Category 1
Flammable Liquid	Category 4



**U.S. State Regulations**

**California Proposition 65:**

 This product can expose you to chemicals including [name of one or more chemicals], which is [are] known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

Fuels, diesel, No 2 (diesel engine exhaust is listed as a possible carcinogen)

**U.S. State Right-to-Know Regulations:**

<b>New Jersey</b> <i>Component</i>	US New Jersey Worker and Community Right-to-know Act (New Jersey Statute Annotated Section 34:5A-5) <i>CAS Number</i>
Fuels, diesel, No 2	68476-34-8

<b>Pennsylvania</b> <i>Component</i>	US Pennsylvania Worker and Community Right-to-know Law (34 PA. Code Chap. 301-323) <i>CAS Number</i>
Fuels, diesel, No 2	68476-34-8

**Section 16 – Other Information**

Issuing Date: Jan 20, 2014

Revision Date: March 9, 2020

Version #: 20200309

NFPA:

1	Health
2	Flammability
0	Reactivity

Revision Note: Modified the CAS number for methyl esters in Section 3.

WARNING: POTENTIALLY HAZARDOUS MATERIAL. IMPROPER USE OR MISHANDLING CAN RESULT IN SERIOUS INJURY OR DEATH. THIS PRODUCT CONTAINS SUBSTANCES WHICH, IF MODIFIED, MAY BE FLAMABLE AND MAY BURN OR EXPLODE IF HEATED OR EXPOSED TO FLAME OR OTHER IGNITION SOURCE OR WATER, OXIDIZING AGENTS, ACIDS OR OTHER CHEMICALS. AVOID INGESTION, INHALATION AND CONTACT WITH SKIN AND EYES.

**Disclaimer:**

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of SDS**

Intentionally Blank



# FUELLED WITH PURPOSE

Introducing Petro-Canada EcoDiesel™

We understand Canadian businesses are under pressure to lower their greenhouse gas emissions.

We also know it's important for us to deliver reliable, easy-to-use fuel solutions to keep your business running, while helping you reduce your environmental impact.

Our new hydrotreated renewable diesel, Petro-Canada EcoDiesel, is just one of the ways we're striking that balance. This is a drop-in fuel that helps reduce your carbon footprint immediately, without the additional cost of retrofitting your equipment or fleet.

## What is Petro-Canada EcoDiesel?

Petro-Canada EcoDiesel is made with hydrotreated renewable diesel (HRD). HRD is an alternative fuel produced from 100% renewable materials<sup>1</sup> that can include non-consumable food waste, like animal fats and vegetable oils.

It's produced through a refining process called hydrotreating. The process involves treating the renewable feedstock with hydrogen, under high temperatures and

pressures, to upgrade renewable feedstock to diesel-fuel quality. The final product is a high-quality, low-carbon-intensity renewable diesel which has a comparable chemical composition to conventional diesel.

This premium-quality renewable diesel can be used undiluted in your diesel equipment, making the switch to Petro-Canada EcoDiesel simple.

### Why choose Petro-Canada EcoDiesel?



#### Reduce your fleet's emissions

In addition to lower overall exhaust emissions, using Petro-Canada EcoDiesel can reduce Greenhouse Gas (GHG) emissions by up to 84%<sup>2</sup> compared to conventional diesel.



#### Cleaner burning with a strong performance

Petro-Canada EcoDiesel is proven to offer the same high performance as conventional diesel, but with a higher cetane number. While conventional diesel has a minimum cetane of 40, Petro-Canada EcoDiesel has a minimum cetane of 70, which allows for a cleaner, smoother combustion and overall strong performance to meet the demands for today's fleets and equipment.



#### The simplest switch

Petro-Canada EcoDiesel is a drop-in fuel, so you can effectively and immediately switch between conventional petroleum diesel and Petro-Canada EcoDiesel within the same fleet or equipment. Best of all, it can be seamlessly integrated into your current diesel engines without the associated costs of retrofitting or major equipment overhauls<sup>3</sup>.



#### A small decision making a big impact

Petro-Canada EcoDiesel is primarily sourced from low-carbon-intensity (CI) feedstocks. Using Petro-Canada EcoDiesel helps to reduce landfill waste and the burning of fossil fuels, which is better for the environment when compared to traditional diesel.

## Built for business



### Backed by Petro-Canada™

With Petro-Canada EcoDiesel, you can expect the same quality and reliability that you would from any of our offerings. We stand behind our products—and our supply chain—by providing ongoing support to ensure that your business is moving forward.

### Highly compatible

Petro-Canada EcoDiesel works with your existing storage and distribution infrastructure without any changes to equipment or facilities.

### Cold-temperature operability

Petro-Canada EcoDiesel offers improved low-temperature performance when compared to high-biodiesel fuel blends (i.e. B6+). It can be used year round in places like the Greater Vancouver Area, but it's also suitable for use in temperatures down to  $-20^{\circ}\text{C}^4$ . In colder climates, Petro-Canada EcoDiesel can be provided seasonally to meet low-temperature operability needs<sup>5</sup>. Contact your local Petro-Canada sales representative prior to use in your region to get advice on optimal use and maintenance practices.



### Applications and specifications

Petro-Canada EcoDiesel meets the industry standard specifications for diesel fuel including the American Society for Testing and Materials (ASTM) D975 and Canadian General Standards Board (CAN/CGSB) 3.517.



## A small change can make a big impact

If you used 1 million litres of Petro-Canada EcoDiesel instead of 1 million litres of conventional diesel fuel, you would save approximately 3,075 tonnes<sup>6</sup> of GHG emissions from entering the atmosphere. That’s like taking hundreds of cars off the road – or planting thousands of trees – just by switching to an alternative fuel.

What is the impact of using 1 million litres of Petro-Canada EcoDiesel? (vs. conventional diesel) — approximately 3,075 tonnes of GHG emissions reduction, which is equivalent to:



GHG EMISSIONS FROM:

**943<sup>7</sup>**

gasoline-powered passenger vehicles driven for one year



CARBON SEQUESTERED BY:

**51,242<sup>8</sup>**

tree seedlings grown for 10 years



CO<sub>2</sub> EMISSIONS FROM:

**720<sup>9</sup>**

homes’ energy use for one year

### Diesel fuel properties

Property	Conventional Petroleum Diesel	Petro-Canada EcoDiesel
Carbon Intensity (g CO <sub>2</sub> /MJ)	94.76 <sup>10</sup>	9 - 30 <sup>11</sup>
Cetane Number	Min 40	Min 70



## Our commitment

Now more than ever, we're committed to helping our customers move forward. We know moving toward a more sustainable future is important to our customers and the generations to come.

We're helping our customers lead the way and reduce greenhouse gas emissions. Because we're not only inspired by what lies ahead. We're inspired by working together to get there. After all, together is how we'll create a cleaner, brighter future.

<sup>1</sup> Petro-Canada EcoDiesel may contain up to 1% of conventional diesel.

<sup>2</sup> Lifecycle greenhouse gas emission reductions are compared to fossil diesel with the BC LCFS default value for carbon intensity. The carbon intensity for the Petro-Canada EcoDiesel was based on current supply and calculated with GHGenius.

<sup>3</sup> Seasonal change-out is required. Please consult your Petro-Canada account manager to discuss the use and maintenance practices for your region.

<sup>4</sup> We procure different temperature specifications to accommodate different seasons. Please consult with your Petro-Canada account manager to determine when the fuel is suitable for use within your geography. The above information is provided without warranty or representation of any kind. All product provided is warranted only to meet specifications in sales documentation provided by Petro-Canada, which includes meeting national fuel specifications and regulatory specifications. All other warranties are expressly disclaimed, including, without limitation, fitness for any particular purpose.

<sup>5</sup> Contact your sales representative prior to use to discuss best use and maintenance practices in your area.

<sup>6</sup> We calculate greenhouse gas emission reductions based on the average tonnes of CO<sub>2</sub> released per litre of Petro-Canada EcoDiesel versus conventional diesel. We used British Columbia's Low Carbon Fuel Standard (BC LCFS) approved data. Conventional diesel releases on average 0.003662 tonnes of CO<sub>2</sub> per litre burned, while Petro-Canada EcoDiesel releases 0.000547 tonnes of CO<sub>2</sub> for each litre consumed. Therefore, the overall greenhouse gas emission reduction with Petro-Canada EcoDiesel is 0.003075 tCO<sub>2</sub>/L, which equates to an 84% reduction.

<sup>7</sup> This is an estimation of the number of gasoline-powered passenger vehicles removed from the road by using Petro-Canada EcoDiesel vs. conventional diesel. According to Natural Resources Canada, a gasoline-powered vehicle produces 3.26 metric tonnes CO<sub>2</sub>E per vehicle per year. For example, the use of 1 million litres of Petro-Canada EcoDiesel reduces emissions of CO<sub>2</sub> by about the same amount as 943 gasoline-powered vehicles. Note: According to the U.S. Environmental Protection Agency (EPA), "Passenger vehicles are defined as 2-axle 4-tire vehicles, including passenger cars, vans, pickup trucks, and sport/utility vehicles."

<sup>8</sup> According to the U.S. Environmental Protection Agency (EPA), a mix of medium-growth coniferous and deciduous trees, planted in an urban setting and allowed to grow for 10 years, sequesters approximately 0.060 metric tonnes CO<sub>2</sub>E/tree. For example, the use of 1 million litres of Petro-Canada EcoDiesel reduces emissions of CO<sub>2</sub> by about the same amount of carbon sequestered by 51,242 trees over 10 years.

<sup>9</sup> This is an estimation of the number of homes' energy use equivalent reduction by using Petro-Canada EcoDiesel. According to Natural Resources Canada, the amount of energy consumed by households/homes is a mix of electricity, natural gas, propane and fuel oil which calculates, based on statistics, to 4.27 metric tonnes CO<sub>2</sub>E/home/year. For example, the use of 1 million litres of Petro-Canada EcoDiesel reduces emissions of CO<sub>2</sub> by about the same amount as the energy consumed by 720 households/homes.

<sup>10</sup> This CI value refers to unblended ULSD only. Source: British Columbia Renewable and Low Carbon Fuel Requirements Regulation (BC LCFS).

<sup>11</sup> Based on historical Suncor HRD supply data.



Interested in learning more about Petro-Canada EcoDiesel?  
Please reach out to your Petro-Canada representative.

You can also visit [petro-canada.ca/EcoDiesel](https://petro-canada.ca/EcoDiesel) or email [ssrinqs@suncor.com](mailto:ssrinqs@suncor.com)





# FREQUENTLY ASKED QUESTIONS

EVERYTHING YOU WANT  
TO KNOW ABOUT

## PETRO-CANADA ECODIESEL™

### Q: Why Petro-Canada EcoDiesel?

A: Petro-Canada EcoDiesel demonstrates our commitment to helping Canadian businesses reduce their carbon footprint immediately and meet their sustainability goals while keeping their businesses moving forward with one simple switch.

### Q: What is Petro-Canada EcoDiesel?

A: Petro-Canada EcoDiesel is made with hydrotreated renewable diesel (HRD). HRD is an alternative fuel produced from 100% renewable materials<sup>1</sup> that can include non-consumable food waste like animal fats and vegetable oils. It's produced through a refining process called hydrotreating. This process involves treating the renewable feedstock with hydrogen under high temperatures and pressures to upgrade renewable feedstock to diesel-fuel quality. The hydrotreated renewable diesel has fuel properties similar to conventional diesel and does not vary based on the feedstock used.

The final product is a high-quality, low-carbon-intensity renewable diesel, which has a comparable chemical composition to conventional diesel.

Carbon intensity is the measure of the equivalent amount of CO<sub>2</sub> (GHG) emitted in the fuel's total lifecycle. The lower the carbon intensity number, the lower the emissions rate.



**Q: What are the key product features and benefits of Petro-Canada EcoDiesel compared to petroleum diesel?**

- A:**
- Lowers overall exhaust emissions and reduces Greenhouse Gas (GHG) emissions by up to 84%<sup>2</sup> compared to conventional diesel
  - Is a drop-in fuel that can be seamlessly integrated into your current diesel engines without the associated costs of retrofitting or major equipment overhauls
  - Works with your existing storage and distribution infrastructure without any changes to equipment or facilities<sup>3</sup>
  - Offers the same high performance as conventional diesel, but with a higher cetane number. A high cetane value allows for a smoother combustion and overall strong performance
  - Primarily sourced from waste feedstocks like used cooking oil or waste animal fats, helping to reduce landfill waste
  - Better cold-weather performance compared to high-biodiesel fuel blends (i.e. B6+) and is suitable for use in temperatures as low as -20°C in the winter and -6°C during the summer<sup>4</sup>. Can be used year round in temperate climates and provided seasonally in colder climates to meet low-temperature operability needs<sup>5</sup>
  - Meets the industry standard diesel specifications including American Society for Testing and Materials (ASTM) D975 and Canadian General Standards Board (CAN/CGSB) 3.517
  - Contains negligible sulphur and aromatic compounds
  - Backed by Petro-Canada™ and offers the same quality, reliability, service and ongoing support you'd expect from us
- 

**Q: Is there a difference in performance when using Petro-Canada EcoDiesel?**

- A:** Petro-Canada EcoDiesel is proven to offer the same high performance as conventional diesel, but with a higher cetane number. Cetane measures the combustion quality of diesel fuel – the higher the number, the smoother and cleaner the combustion. While conventional diesel has a minimum cetane of 40, Petro-Canada EcoDiesel has a minimum cetane of 70, which allows for a cleaner, smoother combustion and overall strong performance to meet the demands for today's fleets and equipment.
- 

**Q: Can Petro-Canada EcoDiesel be used in cold temperatures?**

- A:** All diesel products, including HRD, have specific cold-temperature requirements. It's important to meet these specifications to ensure that your equipment and vehicles are performing at their best during colder weather. Petro-Canada EcoDiesel can be used year round in places like the Greater Vancouver Area, but it's also suitable for use in temperatures as low as -20°C<sup>4</sup>. Please consult your Petro-Canada sales representative to discuss the use and maintenance practices for your region.



**Q: Can you use petroleum diesel and Petro-Canada EcoDiesel interchangeably?  
Can you mix them both in the same tank?**

**A:** Yes. Petro-Canada EcoDiesel is a drop-in fuel. That means that you can switch between conventional petroleum diesel and Petro-Canada EcoDiesel within the same fleet or equipment without the extra maintenance. It can also be mixed with petroleum diesel to create a blended product or added to the same tank at any time, without mixing. Please consult your Petro-Canada sales representative to discuss the use and maintenance practices for your region.

---

**Q: What type of feedstocks are used for Petro-Canada EcoDiesel?**

**A:** Petro-Canada EcoDiesel is primarily sourced from low-carbon-intensity (CI) feedstocks like used cooking oil or waste animal fats.

---

**Q: Is Petro-Canada EcoDiesel different from biodiesel (FAME)?**

**A:** Yes. While the two products can be produced from the same feedstocks, the production process differs greatly.

Biodiesel is produced through a chemical process called transesterification, in which raw oils or fat feedstocks are separated and converted to what is known as fatty acid methyl esters (FAME), which contain oxygenated molecules, resulting in a final product with different properties compared to conventional diesel.

Petro-Canada EcoDiesel, however, is produced through a refining process called hydrotreating. This process involves treating the raw oils or fat feedstocks with hydrogen under elevated temperatures and pressures. This process is similar to how conventional fuels are produced and results in a pure hydrocarbon composition so the chemical properties of the finished renewable product are similar to conventional petroleum diesel.

Most OEMs only approve up to a maximum 20% biodiesel blend with conventional diesel, while renewable diesel has been approved for use at up to 100%.

B6-B20 FAME/biodiesel blends are suitable for use down to -15°C, while Petro-Canada EcoDiesel can be used down to -20°C<sup>4</sup>.

---

**Q: What specifications does Petro-Canada EcoDiesel meet?**

**A:** It meets the industry-standard specifications for diesel fuel including the American Society for Testing and Materials (ASTM) D975 and Canadian General Standards Board (CAN/CGSB) 3.517.

## Q: Is HRD approved by my engine manufacturer?

A: HRD is approved by most OEMs for both on- and off-road use. North American diesel specifications do not limit the amount of renewable diesel content.

This table contains examples of OEM approval on the use of HRD and is not intended to be an exhaustive list. Please consult with your sales representative prior to use of any Petro-Canada EcoDiesel product.

BRAND	OEM APPROVALS
<b>Cummins</b>	<p>Renewable diesel can be used as drop-in replacements. Full URL can be found <a href="#">here</a>.</p> <p>Approved the use of hydrotreated renewable diesel (HRD) in their entire line of diesel generator sets. Full URL can be found <a href="#">here</a>.</p>
<b>Caterpillar</b>	<p>Renewable diesel can be used as a drop-in replacement for diesel fuel if it meets the specification for diesel fuel. For example, if it meets the American Society for Testing and Materials (ASTM) D975<sup>6</sup>, which is the specification for diesel fuel in the United States. Full URL can be found <a href="#">here</a>.</p>
<b>Detroit Diesel Corporation</b>	<p>Compatible with the following engine types: DD5, DD8, DD13, DD15, DD16.</p> <p>Renewable diesel blends up to 100% must be produced to meet the specifications of EN15940 prior to blending with petroleum or biodiesel. EN 15940 fuel must meet American Society for Testing and Materials (ASTM) D975<sup>6</sup> standards. Full URL can be found <a href="#">here</a>.</p>
<b>Ford Motor Company</b>	<p>Approved the use of HRD in its <a href="#">Transit vans</a> (2.0 Litre EcoBlue engine).</p>
<b>Mack Trucks</b>	<p>Signed off on the use of renewable diesel fuel in <a href="#">all Mack engines</a>.</p>
<b>Volvo Trucks North America</b>	<p>Approved the use of renewable diesel fuel for all its proprietary Volvo engines. Full article can be found <a href="#">here</a>.</p>
<b>Paccar</b>	<p>PACCAR Inc. approves the use of paraffinic diesel at any blend level or as a stand-alone fuel, provided that the following conditions are met:</p> <ul style="list-style-type: none"> <li>• The Paraffinic (Renewable) Diesel in the fuel meets EN 15940 specifications</li> <li>• The finished fuel meets the properties of ASTM Standard D975<sup>6</sup></li> </ul>

**Note:** Approval can vary. It is recommended that you check with your OEM and/or refer to your owner's manual.

**Q: Can I expect changes to fuel economy while using Petro-Canada EcoDiesel? Will Petro-Canada EcoDiesel affect my fuel economy?**

**A:** Despite the differences in density when compared to conventional diesel, the higher cetane and smoother combustion properties of Petro-Canada EcoDiesel allow for minimal reductions to fuel economy. The cleaner combustion of Petro-Canada EcoDiesel could also result in cleaner fuel injectors, which may maintain or improve fuel efficiency over time if used in optimal conditions.

<sup>1</sup> Petro-Canada EcoDiesel may contain up to 1% of conventional diesel.

<sup>2</sup> Lifecycle greenhouse gas emission reductions are compared to fossil diesel with the BC LCFS default value for carbon intensity. The carbon intensity for the Petro-Canada EcoDiesel was based on current supply and calculated with GHGenius.

<sup>3</sup> Seasonal change-out is required. Please consult your Petro-Canada account manager to discuss the use and maintenance practices for your region.

<sup>4</sup> We procure different temperature specifications to accommodate different seasons. Please consult with your Petro-Canada account manager to determine when the fuel is suitable for use within your geography. The above information is provided without warranty or representation of any kind. All product provided is warranted only to meet specifications in sales documentation provided by Petro-Canada, which includes meeting national fuel specifications and regulatory specifications. All other warranties are expressly disclaimed, including, without limitation, fitness for any particular purpose.

<sup>5</sup> Contact your sales representative prior to use to discuss best use and maintenance practices in your area.

<sup>6</sup> Petro-Canada EcoDiesel meets ASTM D975.



**Interested in learning more about Petro-Canada EcoDiesel?  
Please reach out to your Petro-Canada representative.**

**You can also visit [petro-canada.ca/EcoDiesel](https://petro-canada.ca/EcoDiesel) or email [ssrings@suncor.com](mailto:ssrings@suncor.com)**





## VILLAGE OF LIONS BAY CODE OF CONDUCT

As local elected representatives, Council members, we recognize that responsible conduct is essential to providing good governance for the Village of Lions Bay.

We further recognize that responsible conduct is based on the foundational principles of integrity, accountability, respect, and leadership & collaboration.

In order to fulfill our obligations and discharge our duties, we are required to conduct ourselves to the highest ethical standards by being active participants in ensuring that these foundational principles are followed in all of our dealings with every person, including those with other members, staff, and the public.

### FOUNDATIONAL PRINCIPLES OF RESPONSIBLE CONDUCT

1. **Integrity** – means being honest and demonstrating strong ethical principles. Conduct under this principle upholds the public interest, is truthful and honourable.

2. **Respect** – means having due regard for others' perspectives, wishes and rights; it also means displaying deference to the offices of local government, and the role of local government in community decision making. Conduct under this principle is demonstrated when a member fosters an environment of trust by demonstrating due regard for the perspectives, wishes and rights of others and an understanding of the role of the local government.

3. **Accountability** – means an obligation and willingness to accept responsibility or to account for one's actions. Conduct under this principle is demonstrated when the Council (or other decision-making body of the Municipality), individually and collectively, accept responsibility for their actions and decisions.

4. **Leadership & Collaboration** – means an ability to lead, listen to, and positively influence others; it also means coming together to create or meet a common goal through collective efforts. Conduct under this principle is demonstrated when a member encourages individuals to work together in pursuit of collective objectives by leading, listening to, and positively influencing others.

Signed this 10<sup>th</sup> day of June, 2023.

  
\_\_\_\_\_  
N. ABBOTT





## VILLAGE OF LIONS BAY CODE OF CONDUCT

As local elected representatives, Council members, we recognize that responsible conduct is essential to providing good governance for the Village of Lions Bay.

We further recognize that responsible conduct is based on the foundational principles of integrity, accountability, respect, and leadership & collaboration.

In order to fulfill our obligations and discharge our duties, we are required to conduct ourselves to the highest ethical standards by being active participants in ensuring that these foundational principles are followed in all of our dealings with every person, including those with other members, staff, and the public.

### FOUNDATIONAL PRINCIPLES OF RESPONSIBLE CONDUCT

1. **Integrity** – means being honest and demonstrating strong ethical principles. Conduct under this principle upholds the public interest, is truthful and honourable.

2. **Respect** – means having due regard for others' perspectives, wishes and rights; it also means displaying deference to the offices of local government, and the role of local government in community decision making. Conduct under this principle is demonstrated when a member fosters an environment of trust by demonstrating due regard for the perspectives, wishes and rights of others and an understanding of the role of the local government.

3. **Accountability** – means an obligation and willingness to accept responsibility or to account for one's actions. Conduct under this principle is demonstrated when the Council (or other decision-making body of the Municipality), individually and collectively, accept responsibility for their actions and decisions.

4. **Leadership & Collaboration** – means an ability to lead, listen to, and positively influence others; it also means coming together to create or meet a common goal through collective efforts. Conduct under this principle is demonstrated when a member encourages individuals to work together in pursuit of collective objectives by leading, listening to, and positively influencing others.

Signed this 13<sup>th</sup> day of June, 2023.



## VILLAGE OF LIONS BAY CODE OF CONDUCT

As local elected representatives, Council members, we recognize that responsible conduct is essential to providing good governance for the Village of Lions Bay.

We further recognize that responsible conduct is based on the foundational principles of integrity, accountability, respect, and leadership & collaboration.

In order to fulfill our obligations and discharge our duties, we are required to conduct ourselves to the highest ethical standards by being active participants in ensuring that these foundational principles are followed in all of our dealings with every person, including those with other members, staff, and the public.

### FOUNDATIONAL PRINCIPLES OF RESPONSIBLE CONDUCT

1. **Integrity** – means being honest and demonstrating strong ethical principles. Conduct under this principle upholds the public interest, is truthful and honourable.
2. **Respect** – means having due regard for others' perspectives, wishes and rights; it also means displaying deference to the offices of local government, and the role of local government in community decision making. Conduct under this principle is demonstrated when a Member fosters an environment of trust by demonstrating due regard for the perspectives, wishes and rights of others and an understanding of the role of the local government.
3. **Accountability** – means an obligation and willingness to accept responsibility or to account for one's actions. Conduct under this principle is demonstrated when the Council (or other decision-making body of the Municipality), individually and collectively, accept responsibility for their actions and decisions.
4. **Leadership & Collaboration** – means an ability to lead, listen to, and positively influence others; it also means coming together to create or meet a common goal through collective efforts. Conduct under this principle is demonstrated when a member encourages individuals to work together in pursuit of collective objectives by leading, listening to, and positively influencing others.

Signed this 7 day of June, 2023.



## VILLAGE OF LIONS BAY

<b>General Correspondence:</b>			
<b>Date Rec'd</b>	<b>FROM</b>	<b>TOPIC</b>	<b>Page No.</b>
3-Jun-23	G1 Skye Hawkins	mvp systems project coordination	1
3-Jun-23	G2 Sharon Gregson, Coalition of Child Care Advocates of BC	UBCM Child Care Resolution	5
7-Jun-23	G3 MP, Patrick Weiler	Eligible travellers from 13 more countries now qualify for visa-free travel to Canada	7
13-Jun-23	G4 MP, Patrick Weiler	Enabling Accessibility Fund Youth Component Call for Proposals	9
<b>Resident Correspondence:</b>			
<b>Date Rec'd</b>	<b>FROM</b>	<b>TOPIC</b>	<b>Page No.</b>
5-Jun-23	R1 Chris Cauac	RoundUp	10
5-Jun-23	R2 Marilynne Cary	Trail access and evacuation plan	12
6-Jun-23	R3 Betty Birrell	Pedestrian traffic; fire hazards	13
14-Jun-23	R4 Zeyang Xu & Nichos Pat	Utilities	14
14-Jun-23	R5 Norma Rodgers	CAO	15
15-Jun-23	R6 Rose Dudley	<i>omitted - subject to legal review</i>	
15-Jun-23	R7 Norma Rodgers	Transparency	16
15-Jun-23	R8 Dave Butler	Building Permit issued	17
15-Jun-23	R9 Christine Livingstone	Rainwater harvesting rebate proposal	18



**From:** [mvp.systems2021@gmail.com](mailto:mvp.systems2021@gmail.com)  
**To:** [council@portmoody.ca](mailto:council@portmoody.ca); [mayor.dahl@campbellriver.ca](mailto:mayor.dahl@campbellriver.ca); [gferrero@whiterockcity.ca](mailto:gferrero@whiterockcity.ca); [engage@terrace.ca](mailto:engage@terrace.ca); [info@powellriver.ca](mailto:info@powellriver.ca); [mayor@duncan.ca](mailto:mayor@duncan.ca); [peter@duncan.ca](mailto:peter@duncan.ca); [john@duncan.ca](mailto:john@duncan.ca); [ibron@revelstoke.ca](mailto:ibron@revelstoke.ca); [gsulz@revelstoke.ca](mailto:gsulz@revelstoke.ca); [info@cumberland.ca](mailto:info@cumberland.ca); Council; [mrichman@pemberton.ca](mailto:mrichman@pemberton.ca); [mayor@ashcroftbc.ca](mailto:mayor@ashcroftbc.ca); [janstett@ashcroftbc.ca](mailto:janstett@ashcroftbc.ca); [dlambert@ashcroftbc.ca](mailto:dlambert@ashcroftbc.ca); [admin@village.clinton.bc.ca](mailto:admin@village.clinton.bc.ca); [rogerh@lumby.ca](mailto:rogerh@lumby.ca); [bobbek@lumby.ca](mailto:bobbek@lumby.ca); [tomk@lumby.ca](mailto:tomk@lumby.ca); [ken.johnston@reddeer.ca](mailto:ken.johnston@reddeer.ca); [michael.dawe@reddeer.ca](mailto:michael.dawe@reddeer.ca); [victor.doerksen@reddeer.ca](mailto:victor.doerksen@reddeer.ca); [vesna.higham@reddeer.ca](mailto:vesna.higham@reddeer.ca); [cindy.jefferies@reddeer.ca](mailto:cindy.jefferies@reddeer.ca); [lawrence.lee@reddeer.ca](mailto:lawrence.lee@reddeer.ca); [dianne.wyntjes@reddeer.ca](mailto:dianne.wyntjes@reddeer.ca)  
**Subject:**.mvp systems project coordination  
**Date:** Saturday, June 3, 2023 7:57:20 PM

---

To: Municipality

Subject: Proposal for Eternal River Clean Energy Project

Dear council,

I hope this letter finds you in good health and high spirits. I am writing to present an exciting opportunity for a Municipality to become a pioneer in clean energy production and reap the numerous benefits associated with the implementation of the clean energy Eternal River project. This forefront product holds the key to transforming our energy landscape and creating a sustainable future for our community.

The Eternal River project is a clean energy initiative that combines cutting-edge technology and innovative practices to generate electricity in an environmentally friendly manner. We are seeking a municipality, town, or city in Canada to collaborate with us in building the first installation of this ground-breaking project. By joining hands with us, your Municipality would not only play a vital role in fostering clean energy generation but also stand to gain a range of favorable terms and benefits.



One of the primary benefits for your municipality is the potential for job creation. The implementation of the Eternal River project will require a skilled workforce, and your community will have the opportunity to provide employment to local residents. This infusion of jobs will boost the local economy and contribute to the overall prosperity of the region.

Additionally, the Eternal River project offers the prospect of cheap electricity for your municipality. As a partner in this initiative your Municipality will have access to low-cost, sustainable energy, clean water creation onsite, reducing the burden on consumers and promoting economic growth. The cost of maintaining the project is minimal, ensuring long-term affordability for the community.

Furthermore, our clean energy solution is designed to have a low environmental impact, allowing for the creation of parks and homes in close proximity to the power generation source. Unlike traditional methods such as wind towers or solar panels, Eternal River can be installed next to or beneath existing infrastructure, eliminating the need for a direct water source and minimizing transmission distances. This means that our project will provide clean power to the Municipality, while preserving valuable land resources for other purposes.

Moreover, the Eternal River project aims to incorporate hydrogen production and carbon capture technologies. We are actively seeking

collaborations with hydrogen production and carbon capture companies, offering them a dedicated space within our system for cheap power costs. This integrated approach positions Eternal River as a global leader in clean energy solutions, with the potential for widespread adoption and sales across the globe.

By being the initial municipality to invest in the Eternal River project, your Municipality will have the unique opportunity to host a manufacturing plant, creating a significant number of jobs for Canadians. It is our vision to keep this project Canadian and contribute to the growth of our local industries. The revenues generated from the project can also be channeled towards building schools, providing training programs, and improving the overall well-being of all communities. Because you set rates in your municipality you control the use of revenues for the community infrastructure.

Considering the immense potential of this project, I urge you to consider the advantages and reach out to inquire further. By partnering with us on the Eternal River clean energy initiative, your Municipality will position itself as a forward-thinking community committed to sustainability, economic growth, and enhanced resilience. The benefits of this collaboration range from environmental preservation and energy independence to job creation and improved quality of life for our residents.

I am available at [mvp.systems2021@gmail.com](mailto:mvp.systems2021@gmail.com) or 7786784562 to discuss this opportunity in more detail or answer any questions you may have. I look forward to the possibility of working together on this transformative project.

Thank you for your time and consideration.

Yours sincerely,

Skye hawkins

7786784562

Mvp systems powering the world is our goal.

**From:** [Sharon Gregson](#)  
**To:** [Lions Bay Reception](#); [Ken Berry](#)  
**Subject:** Urgent - UBCM Child Care Resolution  
**Date:** Saturday, June 3, 2023 9:12:29 PM

---

Sharon Gregson  
Coalition of Child Care Advocates of BC  
2772 East Broadway  
Vancouver, BC V5M 1Y8

Mayor Ken Berry  
The Village of Lions Bay  
400 Centre Road  
Lions Bay, BC V0N 2E0

Subject: Urgent - UBCM Child Care Resolution

To Honourable Mayor Ken Berry and Council,

The Coalition of Child Care Advocates of BC is a longstanding, non-profit organization dedicated to the creation of a high-quality, affordable, accessible child care system in BC. We appreciate that your Council shares this vision to support families with young children, and the local economy in your community.

In recent years there has been measurable progress toward a quality child care system in BC with historic provincial and federal investments. New publicly-funded affordability measures for families including \$10aDay sites, wage enhancements for educators, and more licensed programs are making a positive difference.

However, local and Indigenous governments and nonprofit organizations across BC are still facing significant child care challenges, with demand for licensed child care outstripping supply, and a severe shortage of early childhood educators.

One of the major obstacles facing local governments when they want to expand child care in their communities is the grant-based application process required to access provincial capital funding. The current process places a major burden on applicants, usually local government staff working with non-profit agencies, requiring them to coordinate all aspects of design, development, and implementation. Significant technical expertise and organizational capacity are also necessary to complete the online applications, which often does not exist at the local level or pulls resources away from other municipal duties.

To address this urgent issue, we request that your Council adopt the resolution shared below, as originally supported by the Regional District of Nanaimo, or a similar resolution. Once adopted we hope the resolution will be forwarded to your local area association and on to the 2023 UBCM Convention.

This resolution urges 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 resolution further requests the Ministry of Education and Child Care to replace the current grant-based application process with a systematic expansion of universal child care that upholds UNDRIP obligations and supports the involvement of, but does not rely on, local and Indigenous governments and nonprofit organizations to coordinate design and implementation.

Evidence-based research makes clear that such a systemic approach will lead to a more equitable and accessible



child care system across British Columbia.

Thank you for your attention to this matter, and for recognizing that child care is a priority for healthy communities. Please reach out should any clarification be required.

Yours sincerely,



Sharon Gregson  
Spokesperson \$10aDay  
Coalition of Child Care Advocates of BC

### **Sample Resolution**

WHEREAS the Ministry of Education and Child Care is responsible for B.C.'s \$10/day child care program, and ChildCareBC's growing system of universal child care has been life-changing for families, with demand far outstripping supply; AND WHEREAS the current grant-based process to expand universal child care relies on grant applicants to coordinate all aspects of design and implementation, and local and Indigenous governments and nonprofit organizations often lack the resources to successfully manage this process in accordance with UBCM-funded child care needs assessments and action plans:

THEREFORE BE IT RESOLVED that while the Province continues to rely on individual grant applicants to plan and develop child care expansion, that instead, the Province provide multi-year funding to local and Indigenous governments and nonprofit organizations to support resources to coordinate this process:

AND BE IT FURTHER RESOLVED that UBCM urge the Ministry of Education and Child Care to replace the current grant-based application process with a systematic expansion of universal child care that upholds UNDRIP obligations and supports the involvement of, but does not rely on, local and Indigenous governments and nonprofit organizations to coordinate design and implementation.



HOUSE OF COMMONS  
CHAMBRE DES COMMUNES  
CANADA

*Patrick Weiler*

Member of Parliament  
West Vancouver-Sunshine Coast-Sea to Sky Country

June 7, 2023

Dear Friends & Neighbours,

Canada is a destination of choice for people looking to visit, do business or reunite with family and friends. That's why we are committed to improving our immigration programs and services by making them more efficient and equitable for people around the world.

This week, the Honourable Sean Fraser, Minister of Immigration, Refugees and Citizenship, announced the addition of 13 countries to the electronic travel authorization (eTA) program. Travellers from these countries who have either held a Canadian visa in the last 10 years or who currently hold a valid United States non-immigrant visa can now apply for an eTA instead of a visa when travelling to Canada by air. Effective today, eligible travellers from these countries can benefit from the program:

- Antigua and Barbuda
- Argentina
- Costa Rica
- Morocco
- Panama
- Philippines
- St. Kitts and Nevis
- St. Lucia
- St. Vincent and the Grenadines
- Seychelles
- Thailand
- Trinidad and Tobago
- Uruguay

Introducing visa-free air travel will make it faster, easier, and more affordable for thousands of travellers to visit Canada for up to six months for either business or leisure. It will also help grow Canada's economy by facilitating more travel, tourism and international business, and by strengthening Canada's relationships with these countries while keeping Canadians safe.

This decision will also divert thousands of applications from Canada's visa caseload, allowing us to process visa applications more efficiently, which will benefit all visa applicants.

Individuals who already have a valid visa can continue to use it to travel to Canada. Those who are not eligible for an eTA, or who are travelling to Canada by means other than air (for example, by car, bus, train

and boat—including by cruise ship), will still need a visitor visa. Travellers can visit [Canada.ca/eTA](https://Canada.ca/eTA) to find out whether they're eligible for an eTA and how to apply for one.

If you have any questions, please do not hesitate to reach out to our office and our Caseworker would be more than happy to assist you.

Sincerely,

A handwritten signature in black ink, appearing to be 'P. Weiler', written in a cursive style.

Patrick Weiler, MP

*West Vancouver-Sunshine Coast-Sea to Sky Country*



HOUSE OF COMMONS  
CHAMBRE DES COMMUNES  
CANADA

*Patrick Weiler*

Member of Parliament  
West Vancouver-Sunshine Coast-Sea to Sky Country

June 13, 2023

Dear Friends & Neighbours,

Young people are leading the way in breaking down barriers to accessibility and enabling the participation of all Canadians in every aspect of society. That is why the Government of Canada is providing opportunities for Canadian youth to develop important skills, while investing in an inclusive and accessible Canada.

On June 5, the Minister of Employment, Workforce Development and Disability Inclusion, Carla Qualtrough, **launched a new call for proposals under the Enabling Accessibility Fund (EAF) youth innovation component**. Canadian youth between the ages of 15 and 30 are encouraged to demonstrate their leadership and allyship by applying to become youth accessibility leaders through the EAF's youth innovation component. Youth accessibility leaders help to identify barriers within their communities and then partner with local organizations to help secure up to \$10,000 in accessibility project funding.

**Youth are invited to [submit their expressions of interest in being named a Youth Accessibility Leader \(YAL\) online by October 10, 2023 at 2:00 PM PDT](#). Canadian organizations partnering with a confirmed YAL, must submit their application for project funding by 2:00 p.m. PDT online on October 31, 2023.**

This initiative supports the development of accessible and inclusive communities, which is the focus of pillar three under the [Government's Disability Inclusion Action Plan](#). It also contributes to the Government's on-going commitment to create a fully inclusive Canada, free of physical, societal, and attitudinal barriers.

If you have any questions, please do not hesitate to reach out to our office. We would be happy to support your application in any way that we can.

Sincerely,

A handwritten signature in black ink, appearing to be 'P. Weiler'.

Patrick Weiler, MP  
*West Vancouver-Sunshine Coast-Sea to Sky Country*



**From:** [ePost](#)  
**To:** [Council](#)  
**Subject:** FW: Village Update  
**Date:** Monday, June 5, 2023 3:10:05 PM

---

Dear Council,  
Please see email below.

Thank you,

**Marina Blagodarov**  
*Acting Municipal Coordinator*

---

**From:** CHRIS CAUAC [REDACTED]  
**Sent:** Monday, June 5, 2023 2:17 PM  
**To:** ePost <[epost@lionsbay.ca](mailto:epost@lionsbay.ca)>  
**Subject:** Re: Village Update

Yes please... I think it's important that council and our village is aware and accountable for these types of chemicals being sprayed in our backyards

On Mon, Jun 5, 2023 at 10:25 AM ePost <[epost@lionsbay.ca](mailto:epost@lionsbay.ca)> wrote:

Hello Chris,

Thank you for your email.  
Would you like me to forward this to all of Council?

For all future correspondence to all of Council, please email [council@lionsbay.ca](mailto:council@lionsbay.ca)

Thank you,

**Marina Blagodarov**  
*Acting Municipal Coordinator*

---

**From:** CHRIS CAUAC <[CHRIS.CAUAC@LIONS.BAY.CA](mailto:CHRIS.CAUAC@LIONS.BAY.CA)>  
**Sent:** Friday, June 2, 2023 7:04 PM  
**To:** ePost <[epost@lionsbay.ca](mailto:epost@lionsbay.ca)>  
**Subject:** Re: Village Update

Although invasive plant species are a real consideration and issue, we need to find better ways to deal with them

I wonder if the mayor and council are aware that **RoundUp**, along with many of the other chemicals being sprayed are incredibly carcinogenic and actually banned in most countries. Additionally, we are close to a lot of water and watersheds, so rain run-off of this stuff is also something to seriously consider.

**ClearView** = glyphosate ... enough said?

**Garlon XRT** - This product is **highly toxic to fish, aquatic plants and aquatic invertebrates** and is not labelled for application to water surfaces. Keep out of wetlands, lakes, ponds, streams, rivers and wildlife habitats at the edge of bodies of water. Do not contaminate water by cleaning of equipment or disposal of wastes.

**Vantage XRT** = glyphosate

**VP480** = glyphosate DMA salt

For everyone's convenience, a couple informative links about **glyphosate**

<https://usrtk.org/pesticides/glyphosate-health-concerns/>

<https://www.consumernotice.org/environmental/pesticides/glyphosate-in-food/>

On Fri, Jun 2, 2023 at 5:11 PM The Village of Lions Bay <[epost@lionsbay.ca](mailto:epost@lionsbay.ca)> wrote:

|

**From:** [REDACTED]  
**To:** [Council](#)  
**Subject:** Trail access and evacuation plan  
**Date:** Monday, June 5, 2023 9:10:30 PM

---

Dear Sirs and Madam

I live on Sunset Drive and I would like to address the issue of safety in our forest and village. Would you please consider closing access to the trail heads for the foreseeable future. I have spoken to many overnight hikers and I know for a fact that they are not adhering to the fire ban that is in place and there is absolute no monitoring or enforcement of said ban . Our homes are at risk and is it likely that if nothing is done, to mitigate this risk, that someone can and possibly will be held accountable.


I know that crown land is not our jurisdiction but access to the trail head run through our village and it is possible to prevent out of village vehicles to come up.

Also, has anything been done about an evacuation plan in the event of an emergency. I understand that a 'person' has taken on the job but is anything progressing?

Please address these concerns.

Sincerely  
Marilyne Cary

[REDACTED]  
Sent from my iPhone

**From:**   
**To:** [Lions Bay Reception; Council](#)  
**Subject:** Some notes re:pedestrian traffic; fire hazards  
**Date:** Tuesday, June 6, 2023 7:23:59 AM

---

Dear Mayor and council :

With regard to the hiking traffic/pedestrians on our roads - is not a solution to this problem long overdue ? Does someone have to get hit by a car before action is taken ? Our roads were not designed to handle the hoards of pedestrians straddling the roads in upper LBay and they should not be funnelling through our narrow streets. I'm sure this has been mentioned before but there should be a paid parking "lot" near the highway, and hikers can use one of the existing lower trails from there to access the upper trail heads. There should be firm notification to use the porta-potties before venturing forth, and to take a supplied people poop bag in case of need- pack it out as is done in many areas of the US - don't leave it in our watershed . Keep in mind that the majority of the people coming here to hike are not educated in forest etiquette and appropriate signage could be helpful. (there is a LOT of poo out there , at trailside, not covered and buried )

As for the threat of fire - about 2 years ago, I met some fellows on Trudi's trail , coming up past the tennis courts . They said that they were doing a fire hazard assessment of the forests in Lions Bay . Does anyone know what came of that study ? That particular wedge of forest has numerous standing dead trees, deadfall, and 30' of dead branches on the lower trunks of live trees - instant kindling for fire - right next to 3 homes . Evergreen trees should not be within 10 metres of a residence .

Regards , Betty Birrell



**From:** [REDACTED]  
**To:** [Council](#)  
**Subject:** Utilities of a house with one member living inside  
**Date:** Wednesday, June 14, 2023 10:51:14 AM

---

Hi council,

This is Zeyang Xu from [REDACTED], and Nichos Pat from [REDACTED].  
We are all one person living in the house and we use very little water compared to other families. We just think we have been paying for the water bill too much and the entire system is really unfair to a single-person homeowner like us.

Please let me know if there is anything you guys can do about this unfairness.

thanks,  
Zeyang Xu & Nichos Pat.

**From:** [REDACTED]  
**To:** [Lions Bay Reception; Council](#)  
**Subject:** CAO  
**Date:** Wednesday, June 14, 2023 5:22:14 PM

---

June 14, 2023

Dear Mayor and Councillors,

I am wondering why a permanent CAO has not been hired. The job has been posted for months.

During the March 23rd Council Meeting Interim CAO Miller claimed that the village had received about 30 applications with the required skill sets. Why have none of those applicants been hired?

Please update residents during the June 20 Council Meeting about the CAO hiring process and progress.

regards,  
Norma Rodgers

**From:** [REDACTED]  
**To:** [Lions Bay Reception; Council](#)  
**Subject:** transparency  
**Date:** Thursday, June 15, 2023 2:53:43 PM

---

Dear Councillors Abbott and Cunliffe,

Would you be willing to propose that Council adopt these procedures?

1. Publish agendas on the Friday before Council meetings.

Giving Councillors and residents four days to read the documents and letters in the agenda package would indicate openness, and a Council that accepts questions. Providing the agenda only 24 hours before meetings limits scrutiny.

2. Publish all resident opinion letters to allow free speech.

A Council open to the public would encourage residents to express their opinions and criticisms without the threat of defamation.

3. Advertise committee descriptions and recruit from all residents.

Will ongoing committees be open to all residents? There have been no announcements about terms of reference or invitations to apply for other committees, such as a parking committee which is long overdue.

Councillor Rueter agreed to adopt these procedures by zoom during the last council meeting.

Councillor Broughton emailed his response agreeing to publishing agendas on the Friday before meetings.

Concerning residents' letters, he does not "believe 'free speech' provides an individual licence to disrespect, harm or defame" and so supports pulling critical correspondence based on Councils' own perspective.

On committees, Councillor Broughton says "Council has reached out to a broad range of interested residents" but since the outreach has not been published to all residents, committee membership so far has been limited. He "doesn't believe my request for 'reasons for inclusion' is appropriate" other than to identify skill sets.

Would Councillors Abbott and Cunliffe please add their voices?

regards,  
Norma Rodgers

**From:** [REDACTED]  
**To:** [Council](#)  
**Cc:** [Lions Bay Reception](#)  
**Subject:** Building permit issued for new SFD  
**Date:** Thursday, June 15, 2023 11:57:13 AM

---

Council, you know the system is broken when,

1) a new SFD worth in the millions of dollars has a building permit issued by a illegal CAO and is not approved to do so under the community charter and our bylaws without plans being checked for compliance to the building code and the building bylaws and zoning bylaws of the Village.

2) The building permit is valued and typed up by an employee who does not have the qualifications or approval by the union to do this.

3) letters of assurance from structural, geotechnical and architectural have not been checked.

4)plumbing/ sprinklers for compliance to NFPA not checked.

All of this and a lot more puts the Village in a legal situation which could result in more legal fees and embarrassment to go along with the all ready debacle we have existing.

Regards Dave Butler

Sent from my iPhone



**From:** [REDACTED]  
**To:** [Council](#)  
**Subject:** Rainwater harvesting rebate proposal  
**Date:** Thursday, June 15, 2023 7:03:13 PM

---

Dear Council,

I'd like to propose that Lions Bay implement a modest rebate on rain barrels and rain storage tanks.

Rainwater harvesting reduces stress on stretched water sources, and can help us prevent reversion to "draconian" outdoor water use restrictions - a challenge we all know will only get worse. Using rainwater for plants and gardens reduces average household water use significantly. It also supports the many residents whose quality of life is greatly enhanced by their gardening hobbies.

Benefits to the village of reduced household water use are extensive. It can prevent or mitigate:

- water shortages
- increased concentration of pollutants when water levels are low
- costly expansion of water infrastructure
- increased energy consumption of pumping and treating water
- environmental impact of stormwater run-off

Many local districts realize the benefits and are offering similar rebates, including:

- Sunshine Coast (\$1000)
- Nanaimo (\$450)
- Victoria (\$450)
- Salt Spring (\$250)
- Parksville (\$50 towards barrels)
- Cranbrook (\$50 towards barrels)

It's not an exhaustive list, but it's clear that amid environmental uncertainty and global warming, having a secondary water source is good for individuals, and good for the village. I look forward to council's response.

Regards,  
Christine Livingstone