#### VILLAGE OF PEMBERTON -REGULAR COUNCIL MEETING AGENDA-

**Agenda** for the **Regular Meeting** of Council of the Village of Pemberton to be held Tuesday, June 30, 2020 at 9:00 a.m. in Council Chambers, 7400 Prospect Street. This is Meeting No. 1518.

"This meeting is being recorded as authorized by the Village of Pemberton Video Recording & Broadcasting of Electronically Held Council, Committee, and Board Meetings"

## \* All Council and Staff will be attending the meeting electronically. Instructions for public participation at the meeting can be found <u>here</u>.

#### Item of Business

#### 1. 9:00 A.M. CALL TO ORDER REGULAR MEETING

In honour of the Lil'wat7ul, the Village of Pemberton acknowledges that we are meeting within the unceded territory of the Lil'wat Nation.

#### 2. APPROVAL OF AGENDA

**Recommendation: THAT** the Agenda be approved as presented.

#### 3. ADOPTION OF MINUTES

a) Regular Council Meeting No. 1517, Tuesday, June 16, 2020

**Recommendation: THAT** the minutes of Regular Council Meeting No. 1517, held Tuesday, June 16, 2020, be adopted as circulated.

#### 4. BUSINESS ARISING FROM THE PREVIOUS REGULAR COUNCIL MEETING

#### 5. RISE WITH REPORT FROM IN CAMERA

#### 6. BUSINESS ARISING FROM THE COMMITTEE OF THE WHOLE

#### 7. COMMITTEE MINUTES - FOR INFORMATION

There are no committee minutes for information.

#### 8. DELEGATIONS

There are no delegation presentations.

#### 9. REPORTS

#### a) Office of the Chief Administrative Officer

i. BC Transit - Verbal Update

**Recommendation: THAT** the Verbal Report from the Chief Administrative Officer regarding BC Transit be received.

ii. Friendship Trail - B.C. Active Transportation Infrastructure Grants – Verbal Update

**Recommendation: THAT** the verbal report from the Chief Administrative Officer regarding the Friendship Trail B.C. Active Transportation Infrastructure Grants be received.

Page No.

#### b) Corporate & Legislative Services

#### i. Open Meeting without Public Present Resolution

#### **RECOMMENDATION ONE:**

**WHEREAS** Ministerial Order 192, issued June 17, 2020, requires that local governments make 'best efforts' to meet the legislative requirements to hold open meetings that enable the public to participate in person;

**AND WHEREAS** if a local government is not able to accommodate having the public attend in person at an open meeting because they are unable to meet the Public Health Officers recommendations and physical distancing and gathering requirements, the local government must pass a resolution providing a rationale for the continued need to meet without the public physically present;

**AND WHEREAS** the Village of Pemberton Council Chambers is small and physical distancing requirements cannot be met in a way that will enable Council, Staff and the public to safely attend all Village council, committee, commission or board meetings;

**AND WHEREAS** the Village has explored alternative meeting space options and found limited suitable alternatives, and as the pandemic has dramatically reduced available financial resources, any potentially suitable options would require an undesirable reallocation of resources away from essential services and in Council's view would be too costly for the Village's taxpayers;

**AND WHEREAS** the Village has been utilizing the ZOOM Webinar program to hold all meetings of the Village, including council, committee, commissions, public hearings and board meetings, which has enabled Council, Staff and the public to attend and participate as required;

**AND WHEREAS** the electronic meeting format has been positively received by the public and successfully resulted in a greater opportunity for the public to attend and participate through the regular question period format and public input format that resembles the standard in-person meeting format;

#### THEREFORE LET IT BE RESOLVED:

**THAT** given the Village of Pemberton is unable to accommodate the public attending in person at council, committee, commission and board meetings due to the small size of the council chambers and the costs associated with renting another location, the Village of Pemberton will continue to hold all open meetings (council, committee, commission, public hearings and board) via electronic means for the duration authorized under Ministerial Order 192, as long as the Public Health Officer recommendations and requirements stay in place or until an alternative location which is cost effective and can safely accommodate Council, Staff and the public can be arranged.

**RECOMMENDATION TWO: THAT** the agenda Order of Proceedings and Business be amended by moving consideration of bylaw readings to follow staff reports for the July Regular Council meetings;

**AND THAT** Staff be directed to prepare a Council Procedure Bylaw Amendment respecting this change.

#### c) Development Services

i. Draft Revised Community Amenity Contribution Policy

**Recommendation: THAT** Council Support the Draft Policy that establishes guidelines for negotiating Community Amenity Contributions (CACs) on a case by case basis and direct Staff to seek input from the development industry, on the understanding that going forward the Village will use a combination of negotiations and amenity zoning where most applicable.

#### d) **Operations Department**

#### i. 2019 Drinking Water System Annual Report

**Recommendation: THAT** Council receives the 2019 Drinking Water System Annual Report for information

#### e) MAYOR'S Report

#### f) COUNCILLORS' Reports

#### 10. BYLAWS

There are no bylaws for reading or adoption.

#### 11. CORRESPONDENCE

- a) For Action
  - i. Justin Penney, Village of Pemberton, dated June 16, 2020, regarding parking <sup>122</sup> for residents and commercial property owners of Expedition Station.

Recommendation: THAT correspondence be referred to Staff for response.

ii. Rya Letham and Polek Rybczynski, Village of Pemberton, dated June 24, 2020, <sup>123</sup> concerning installation of 5G telecommunications technology in Pemberton.

**Recommendation: THAT** the correspondence be referred to Staff for response.

iii. Laura Jones, Executive Vice President, and Samantha Howard, Senior Director 125 of BC, Canadian Federation of Independent Business (CFIB), dated June 19, 2020, seeking support for small business recovery through the "#SmallBusinessEveryDay" campaign.

**Recommendation: THAT** the correspondence be forwarded to the Pemberton & District Chamber of Commerce and the Mayor's Task Force for COVID-19 Response and Relief Committee.

- b) For Information
  - i. Dudley Coulter, BC Craft Farmers Co-op, dated June 13, 2020, seeking support 127 for a proposal to Federal & Provincial governments – Creating Opportunity for BC's Craft Cannabis Sector and Supporting the Economic Recovery.
  - ii. Sherry Ridout, Citizens for Safe Technology, dated June 14, 2020, providing 179 information on 5G telecommunications technology & impacts on communities.
  - iii. Susie Dain-Owens, Land and Resource Specialist, Ministry of Forests, Lands, Natural Resource Operations & Rural Development, dated June 16, 2020, providing final results for the online public survey for the Meager & Keyhole Hotsprings Visitor Use Management Project.

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- iv. Andy Meeker, Pemberton Base Manager, Blackcomb Helicopters, dated June27623, 2020, expressing appreciation for the Village's assistance in establishing<br/>the Hydro Training Facility at the Pemberton Regional Airport.276
- v. Maja Tait, President, Union of BC Municipalities (UBCM), dated June 19, 2020, 277 providing the Province's response to the resolution submitted by Village of Pemberton Council in 2019.

**Recommendation: THAT** the above correspondence be received for information.

#### **12. DECISION ON LATE BUSINESS**

#### **13. LATE BUSINESS**

#### **14. NOTICE OF MOTION**

#### **15. QUESTION PERIOD**

279

#### 16. IN CAMERA

**THAT** the meeting is closed to the public in accordance with the *Community Charter* Section 90 (1) (k) that in the view of Council could reasonably expect to harm the interest of the municipality if they were held in public.

#### 17. RISE FROM IN CAMERA

#### 18. ADJOURNMENT OF REGULAR COUNCIL MEETING

#### VILLAGE OF PEMBERTON -REGULAR COUNCIL MEETING MINUTES-

**Minutes of the Regular Meeting** of Council of the Village of Pemberton held on Tuesday, June 16, 2020 at 5:30 p.m. in Council Chambers, 7400 Prospect Street. This is Meeting No. 1517.

| IN ATTENDANCE*:       | Mayor Mike Richman<br>Councillor Ted Craddock<br>Councillor Leah Noble<br>Councillor Amica Antonelli<br>Councillor Ryan Zant  |
|-----------------------|---|
| STAFF IN ATTENDANCE*: | Nikki Gilmore, Chief Administrative Officer<br>Sheena Fraser, Manager of Corporate & Legislative<br>Services<br>Lisa Pedrini, Manager of Development Services<br>Joanna Rees, Planner<br>Christine Burns, Recreation Services Manager<br>Elysia Harvey, Legislative Assistant |
| PUBLIC:               | 2   |
| MEDIA:                | 1   |

\*ALL COUNCIL MEMBERS AND STAFF ATTENDED ELECTRONICALLY

## A RECORDING OF THE MEETING WAS MADE AVAILABLE TO THE PUBLIC & MEDIA

#### 1. CALL TO ORDER REGULAR MEETING

At 5:32 p.m. Mayor Richman called the Regular Meeting to Order

In honour of the Lil'wat7ul, the Village of Pemberton acknowledges that we are meeting within the unceded territory of the Lil'wat Nation.

#### 2. APPROVAL OF AGENDA

Moved/Seconded THAT the agenda be approved as presented. CARRIED

#### 3. ADOPTION OF MINUTES

#### a) Regular Council Meeting No. 1515, Tuesday, May 26, 2020

Moved/Seconded **THAT** the minutes of Regular Council Meeting No. 1515, held Tuesday, May 26, 2020, be adopted as circulated. **CARRIED**  Village of Pemberton Regular Council Meeting No. 1517 Tuesday, June 16, 2020 Page **2** of **9** 

#### b) Special Council Meeting No. 1516, Tuesday, June 9, 2020

Moved/Seconded **THAT** the minutes of Special Council Meeting No. 1516, held Tuesday, June 9, 2020, be adopted as circulated.

#### CARRIED

## c) Public Hearing Minutes for Zoning Amendment (Sunstone RTA-1) Bylaw No. 883, 2020, Tuesday May 26, 2020

Moved/Seconded **THAT** the minutes of the Public Hearing for Zoning Amendment (Sunstone RTA-1) Bylaw No. 883, 2020, be received. **CARRIED** 

#### 4. BUSINESS ARISING FROM THE PREVIOUS REGULAR COUNCIL MEETING

There was no business arising from the previous Regular Council Meeting.

#### 5. RISE WITH REPORT

a) Village of Pemberton Bursary Recipient

Rise with Report Regular Council Meeting No. 1516 Tuesday, May 26, 2020:

#### Village of Pemberton Bursary

At the In Camera Council Meeting, held on May 26, 2020, Council reviewed applicant submissions to the Village of Pemberton Bursary, which is funding in the amount of \$2,000, provided to a graduating student from Pemberton Secondary School residing within the Village boundaries.

The Village is pleased to announce that the 2020 Bursary was awarded to Belle Dorgelo.

#### b) Mayor's Task Force on COVID-19 Response and Recovery – Committee Appointments

Rise with Report Special Council Meeting No. 1517 Tuesday, June 9, 2020

#### Mayors Task Force on COVID Response and Recovery – Appointments

At the Special In Camera Council Meeting No. 1516, held Tuesday, June 9, 2020, Council considered membership on the Mayors Task Force on COVID-19 Response and Recovery and the following people have been appointed to this Select Committee of Council:

#### Community Members at Large:

- Rodney Payne
- Jacquie Smith
- Judith Walton

#### Mental Health Worker:

• Erin Johnson

### Financial Services Professional or Financial Planning Professional:

• Stuart McConnachie

#### Local Organizations:

- Meredith Kemp, Pemberton & District Chamber of Commerce
- Mark Mendonca, Tourism Pemberton
- Jaye Russell, Sea to Sky Community Services
- Natalie Szewczyk, WorkBC

#### 6. BUSINESS ARISING FROM THE COMMITTEE OF THE WHOLE

There was no business arising from the Committee of the Whole.

#### 7. COMMITTEE MINUTES - FOR INFORMATION

There were no committee minutes for information.

#### 8. DELEGATIONS

There were no delegation presentations.

Village of Pemberton Regular Council Meeting No. 1517 Tuesday, June 16, 2020 Page **4** of **9** 

#### 9. REPORTS

#### a) Office of the Chief Administrative Officer

#### i. Pemberton Economic Development Collaborative, Request to Reinstate BC Rural Dividend Program Funding – Verbal Report

Correspondence drafted by the Pemberton & District Economic Development Collaborative was brought forward to seek Council's support in requesting reinstatement of the BC Rural Dividend Program Funding, which was discontinued in 2019.

#### Moved/Seconded

**THAT** the correspondence to the Director of the Rural Policy and Programs Branch requesting reinstatement of the BC Rural Dividend Program Funding be supported.

#### CARRIED

#### b) Development Services

#### i. Temporary Use Permit – (TUP009) – 1394 Portage Road – Food Truck

#### Moved/Seconded

**THAT** the issuance of Temporary Use Permit No.009 be authorized to permit a food truck to be temporarily located at 1394 Portage Road, legally described as Lot B, DL 203, LLD EPP46258, for a period of three (3) years subject to the Applicant fulfilling the following conditions to the satisfaction of the Manager of Development Services:

- The applicant submits written confirmation of access from the neighbouring lot 1392 Portage Road, legally described as Lot 4 DL 203 LDP EPP1760;
- The applicant provides an alternative to the use of bark mulch as a landscaping cover and provide a revised landscaping plan that incorporates FireSmart principles;
- Any landscaping must comply with the Village of Pemberton Plant List; and
- Any and all fees incurred over and above the non-refundable deposit for the processing of the Temporary Use Permit Renewal application be paid by the applicants.

CARRIED

#### ii. Non-Medical (Recreational) Cannabis Retail Policy DEV-11 Amendment

Moved/Seconded **THAT** the amended Non-Medical (Recreational) Cannabis Retail Policy be approved.

#### CARRIED

#### iii. Village of Pemberton Plant List 2020

Moved/Seconded **THAT** Staff further review the plant species listed below as Bear Attractants with the Bear Smart Society and provide an update at a future meeting:

Wild Rose (*Rosa pisocarpa*) Nootka Rose (*Rosa nutkana*) Kinnickinnick (*Arctostaphylus uva-ursi*) Red-osier Dogwood (*Cornus stolonifera*) **CARRIED** 

#### c) Recreation Services

#### i. Recreation Services Department 2020 First Quarter Update

Moved/Seconded THAT the Recreation Services Department 2020 First Quarter Report be received for information.

#### CARRIED

#### ii. Recreation Services Return to Play Update

Moved/Seconded THAT the Recreation Services Return to Play Update be received. CARRIED

#### d) MAYOR'S Report

Mayor Richman reported on the following meetings:

- Squamish Lillooet Regional District (SLRD) Board Meeting on May 27, 2020; agenda items included:
  - Reports from auditors;
  - Olympic Park campsites;
  - Retaining wall bylaw for 1<sup>st</sup> & 2<sup>nd</sup> Readings;
  - o Britannia Beach housing agreement amendment;
  - o Transit;

Village of Pemberton Regular Council Meeting No. 1517 Tuesday, June 16, 2020 Page **6** of **9** 

- Wood Fibre LNG requested an extension of environmental assessment deadline;
- Heli biking tour group submitted an amended application by reducing proposed trail use and flight frequency;
- SLRD Committee of the Whole:
  - BC Rent Bank rental assistance program;
  - Development of Short-Term Vacation Rental regulatory tools for Areas A, B, C to include, temporary use permits, consultation with neighbours, & Good Neighbour Agreement.
- Sea to Sky Regional Hospital District Board Meeting on May 28, 2020; agenda items included:
  - Completion of Whistler Blackcomb Foundation Sea-to-Sky Community Hospice and admission of first patients;
  - Presentation by Karin Olson, Chief Operating Officer, Coastal Region, Vancouver Coastal Health;
  - o Budget.
- Transit Committee Meeting on June 3, 2020; agenda items included:
  - COVID-19 impacts update;
  - Decrease in fare box;
  - Feasibility study for Area C.
- Tourism Meeting on June 4, 2020, with community stakeholders; discussion took place respecting various approaches to welcoming tourists back into the community while maintaining safe public health boundaries.
- Kevin Clark, Operations & Maintenance Manager, Pemberton Valley Dyking District (PVDD) to discuss upcoming seismic testing & results of the Miller-Lillooet Dyke, as well as continued communication, collaboration & support between the Village and PVDD.
- Meeting with political leaders including Lower Mainland Mayors, Premier John Horgan and Minister Robinson regarding an update on the Provincial Health and Safety measures in place.
- Patrick Weiler, MP, and Jordan Sturdy, MLA, to discuss tourism funding.
- Pemberton Valley Utilities & Services Committee Meeting on June 11, 2020; agenda items included:
  - Recreation Services update;
  - Funding approved for Secretary position for the Pemberton & District Economic Development Collaborative.

- Union of BC Municipalities on June 16, 2020, meeting which included a presentation from BC Transit and Translink and public input session.
- The first Mayor's Task Force for COVID Relief & Recovery will take place this Thursday June 18<sup>th</sup>.

Lastly, Mayor Richman commented on the success of the recent Pemberton Secondary School (PSS) graduation ceremony and parade which was conducted very differently this year due to COVID-19, and acknowledged the PSS staff for their efforts in organizing a memorable occasion for the students.

#### e) COUNCILLORS' Reports

#### Councillor Zant

Councillor Zant reported on the following:

- Attended the Tourism Pemberton Meeting; future funding requests & signage for RV parking were topics of discussion.
- Attended the Virtual Town Hall with MLA Sturdy on June 11<sup>th</sup>.
- Attended the Cemetery Committee Meeting; a GoFundMe page has been started to seek funding support for fencing and columbarium.

#### Councillor Antonelli did not report.

Councillor Craddock did not report.

Councillor Noble did not report.

#### 10.BYLAWS

- a) Bylaw for First, Second, Third, and Fourth Readings
  - i. Village of Pemberton Bylaw Notice Enforcement Amendment Bylaw No. 885, 2020

Moved/Seconded THAT Village of Pemberton Bylaw Notice Enforcement Amendment Bylaw No. 885, 2020, be given First, Second, Third and Fourth Readings. CARRIED

- b) Bylaws for Fourth and Final Readings
  - i. Village of Pemberton Zoning Amendment (Sunstone RTA-1 Text Amendment) Bylaw No. 883, 2020

Moved/Seconded

**THAT** Village of Pemberton Zoning Amendment (Sunstone RTA-1 Text Amendment) Bylaw No. 883, 2020, be given Fourth and Final Readings. **CARRIED** 

ii. Village of Pemberton Repeal of Downtown Enhancement Contingency and Downtown Barn Parking Lot Paving Loan Authorization Bylaw No. 863, 2019, Bylaw No. 880, 2020

Moved/Seconded

**THAT** the Village of Pemberton Downtown Enhancement Project Contingency and Downtown Barn Parking Lot Loan Authorization Bylaw No. 863, 2019, Repeal Bylaw No. 880, 2020, be given Fourth and Final Readings.

#### CARRIED

#### 11.CORRESPONDENCE

a) For Action

There were no correspondence items for action.

#### b) For Information

There were no correspondence items for information.

#### **12. DECISION ON LATE BUSINESS**

#### **13.LATE BUSINESS**

There was no late business for consideration.

#### **14.NOTICE OF MOTION**

#### **15.QUESTION PERIOD**

#### **16.IN CAMERA**

#### Moved/Seconded

**THAT** the meeting is closed to the public in accordance with the *Community Charter* Section 90 (I) that in the view of Council could reasonably expect to harm the interest of the municipality if they were held in public.

#### CARRIED

#### 17. MOVE IN CAMERA

At 6:50 p.m. Council moved In Camera

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#### **18. RISE FROM IN CAMERA**

At 7:15p.m. Council rose from In Camera without report.

#### **19. ADJOURNMENT OF REGULAR COUNCIL MEETING**

Moved/Seconded THAT the Regular Council Meeting be adjourned. CARRIED

At 7:15p.m. the Regular Council Meeting was adjourned.

Mike Richman Mayor Sheena Fraser Corporate Officer



| Date:    | Tuesday, June 30, 2020                                   |
|----------|--|
| То:      | Nikki Gilmore, Chief Administrative Officer              |
| From:    | Sheena Fraser, Manager, Corporate & Legislative Services |
| Subject: | Open Meeting without Public Present Resolution           |

**REPORT TO** 

COUNCIL

#### **PURPOSE**

The purpose of this report is to present information respecting Ministerial Order No. 192, issued June 17, 2020, and the requirement to pass a resolution providing a rationale to meet without the public present.

#### BACKGROUND

As a result of the State of Emergency declared by the provincial government in March, in response to the COVID-19 Pandemic, there have been several Ministerial Orders issued to address legislative requirements that could not be met as a result of the Public Health Orders that established physical distancing rules and limits on the number of people allowed at a gathering.

Ministerial Order 83 (M83), issued March 26, 2020, established that despite the requirements set out in *Community Charter* whereby meetings of Council must be held so the public may attend, other than when a meeting is declared closed under s. 90, during the state of emergency a local government is not required to allow members of the public to attend. It also established that council meetings could be held electronically and that all members of council may attend through this form and be considered present. As well, it gave local government the ability to give readings and adopt a bylaw at the same meeting thereby relieving the requirement to give time between Third Reading and Adoption.

Ministerial Order No. 83 was replaced by Ministerial Order No. 139 (M139) on May 1, 2020. M139 expanded the above noted allowances to Trust Bodies and Improvement Districts, addressed the holding of public hearings via electronic means and enabled Improvement Districts to defer the holding of annual general meetings.

On June 17, 2020, in response to the Province's Restart Plan and as a means of encouraging local government to move back to normal operations to the best of their ability, Ministerial Order No. 192 (M192) was issued (**Appendix A**). This order replaces M139 and removes the ability for a local government to give readings and adopt bylaws (other than certain financial bylaws) at one meeting and requires that local government make *"best efforts"* to allow the public to attend open meetings in-person while still ensuring the public health orders and recommendations are being adhered to. M192 also establishes that if a local government is not able to accommodate the attendance of the public in person a resolution must be passed stating the reason for holding meetings without the public and noting how openness, transparency, accessibility and accountability are being met.

#### **DISCUSSION & COMMENTS**

As a means of understanding what 'best efforts' to ensure that openness, transparency, accessibility and accountability might look like, the Ministry of Municipal Affairs and Housing issued an accompanying document with the Ministerial Order titled: *Guidance for Open Meetings, Electronic Meetings and Timing Requirements for Bylaw Passage under Ministerial Order 192* (**Appendix B**).

The Guidelines set out that 'best efforts' to hold open meetings with public in attendance include providing information on how the local government will meet the Public Health Order (PHO) requirements and recommendations by considering:

- How many members of the public can be safety accommodated while maintaining physical distancing (utilizing the 5 m<sup>2</sup> space/person rule and 2 meter physical distancing rule)
- Options for another meeting space
- Management of public attendance if space is limited
- Offering other ways, the public can provide input on agenda topics (ie: email, online submissions, letters)
- Options for electronic attendance by the public
- Adjusting agenda items and meeting schedules of important or controversial issues to a larger meeting space
- Providing access to draft agendas/minutes and old video recordings (if available)
- Providing information about what efforts have been made if a local government must continue to meet without the public physically present.

#### Meeting without Public Presence:

The Village Office is limited in space and the Council Chambers is small in comparison to some other jurisdictions. The Ministry Guidelines set out that it would be appropriate to follow the Public Health Officer guidelines for retail food and grocery stores that require at least five (5)  $m^2$  of unencumbered space per person. The Council Chambers is 32  $m^2$ , however, the meeting table reduces the space to 30  $m^2$ , as such if the Village were to reopen to accommodate the public being present at a meeting it would limit the number of people in attendance (including Council and Staff) to six (6). Further, the shape of the meeting room may result in the physical distancing requirements of 2 meters reducing that number even further.

The Guidelines also recommend that separate exit and entrance doors and one-way walkways be established, that the meeting space be arranged to ensure physical distancing requirements for Council, Staff and public can be met and that cleaning protocols are put in place before, during and after a meeting. Given the size of the meeting room, the layout of the White Building and Chambers as well as the limited staffing resources available these recommendations are difficult to impossible for the Village to achieve.

In order to meet the 'best efforts' to open the meetings to the public consideration could be given to moving the meetings to a larger venue such as the Pemberton Community Centre; however, only 1/3 of the Great Hall is available for use and there will be costs associated with the rental of the space, tables and chairs, increased cleaning protocols and possibly the need for a sound system. Alternatively, the Village could consider renting the SLRD Boardroom which is 60m2 and as such can accommodate up to 12 people based on the 5m2 of unencumbered space per person; however, the number will be reduced to six (6) at the table and three (3) in the gallery

when implementing the 2 meter physical distancing requirement. As only three (3) people, beyond those at the meeting table, will able to be in attendance in order to provide the public priority seating the meetings will still need to be conducted electronically to allow for Staff participation. There will also be costs associated with room rental which have not been confirmed. As such, this option is not recommended at this time. Other locations such as the school gyms were considered but not pursued due to costs.

As a result of the meeting room constraints and the challenges associated with successfully achieving the Public Health Officer recommendations and requirements, as noted in the Guidelines, the Village is unable to hold open meetings where the public can attend in person at this time. As such, it is recommended that a resolution be passed providing a rational to continue to meet without the public present until the state of emergency is rescinded or an alternative location which can provide for Council, Staff and the public to safely attend can be found. The proposed resolution is provided under the Recommendations section at the end of this report.

#### **Electronic Meetings:**

M192 still enables a local government to hold electronic meeting but must still use 'best efforts' to ensure that the public are able to hear, or watch and hear, the meeting. If a local government is not able to accommodate this, a resolution must be passed stating the rationale by which electronic participation by the public cannot be accommodated.

As the Village is successfully utilizing the ZOOM webinar format for meetings, the Village is effectively ensuring that the public can not only hear, but hear and watch the proceedings, and able to participate during the open question period or public input portions of a meeting as may be required. As such, the Village meets or exceeds ensuring that openness, transparency, accessibility and accountability are still being met while using an electronic meeting format and is able to meet the public participation expectations; therefore, no action is required to pass a resolution to this effect at this time.

#### **Bylaw Passage:**

As noted above, M192 rescinds the ability for a Council to give readings and adopt a bylaw at one meeting. This was initially put in place to accommodate the passage of bylaws that required a quick turn around and accommodate circumstances whereby it was difficult or not possible to hold two separate meetings especially while local governments were working through the best way forward to facilitate the regular meeting schedule at the start of the state of emergency. In this regard, the Village was able to utilize this option when considering the financial bylaws which were passed in May. With this said, the Order does permit that certain bylaws related to the financial health and operation of a local government may still be adopted on the same day as third reading. The list of affected bylaws is noted on page 3 and 4 of the Guidelines.

The Guidelines set out further guidance and operational considerations a local government should consider to accommodate an open meeting with public in attendance, during this unique time, including providing or establishing:

- Training for Elected Officials and Staff
- Public notice and communications planning
- Meeting space protocols

• Technical options and procedures.

In the event that the Village is able to move forward and hold open meetings, at which the public is able to attend in person, the recommendations from the Guidelines will be reviewed and put into practice. It should be noted that in respect to public notification the Village is already following or exceeding the recommendations provided.

#### **Regular Agenda Order of Proceedings and Business:**

The Guidelines also recommend that if meetings are to be held via electronic means, consideration be given to adjusting the Agenda Order of Proceedings and Business by considering items that may be of greater public interest (ie: council reports, bylaw presentation and readings) at the beginning of the meeting. As such, it is recommended that Council consider a resolution to amend the Agenda Order of Proceedings and Business by moving consideration of Bylaw Readings to follow Staff Reports and to direct Staff to bring forward a Council Procedure Bylaw Amendment to address this recommended adjustment in the agenda order.

#### **COMMUNICATIONS**

The Guidelines issued by the Ministry provide recommendations for ensuring information about the meeting format and how to participate is easily available to the public. In this regard, the Village already uses various social media channels such as the eNEWS and the Village Facebook page as a means of regularly updating residents on local issues including how to access and participate in electronic meetings.

As well, the Village website calendar includes a link to instructions to the electronic meeting link and how to watch the meeting live and the Council Meeting Information Page has also been updated to include this information. This information is also posted on the Village of Pemberton Notice Boards located at the Village Office and Post Office.

The meetings are also being recorded and live broadcast via ZOOM Webinar. As per the Village's newly implemented *Video Recording & Broadcasting of Electronically Held Council, Committee and Board Meetings Policy*, following the meeting the recordings are made available on the Village website to allow the public to view the proceedings.

#### LEGAL CONSIDERATIONS

The *Community Charter* establishes in s. 89 that a meeting of council must be open to the public. However, M192 establishes that if a local government can provide rationale whereby this is not possible to do so they may pass a resolution indicating such which will relieve them of the requirement during the provincial State of Emergency given the social distancing requirements set by the Public Health Officer.

The proposed resolution provided has received legal review and the rationale is deemed to meet intent of that set out in M192.

#### **IMPACT ON BUDGET & STAFFING**

This report was prepared in-house by the Corporate and Legislative Services Department and its preparation deemed to be a component of day to day operations.

#### **INTERDEPARTMENTAL IMPACT & APPROVAL**

There are no interdepartmental impacts or approvals required.

#### **IMPACT ON THE REGION OR NEIGHBOURING JURISDICTIONS**

The passing of this resolution has no impacts on the region or neighbouring jurisdictions.

#### **ALTERNATIVE OPTIONS**

**Option One**: THAT the Village continue to hold meetings via electronic means without the public present given the meeting room constraints and the inability to safely maintain the public health officer recommendations and requirements.

Staff recommended option.

**Option Two**: THAT Staff be directed to look for an alternative location that can accommodate Council, Staff and the public, and safely maintain public health officer recommendations, requirements and cleaning protocols.

Not recommended due to costs associated with room rental and cleaning requirements.

**Option Three**: That Council provide alternatives for consideration.

#### **RECOMMENDATION ONE:**

**WHEREAS** Ministerial Order 192, issued June 17, 2020, requires that local governments make 'best efforts' to meet the legislative requirements to hold open meetings that enable the public to participate in person;

**AND WHEREAS** if a local government is not able to accommodate having the public attend in person at an open meeting because they are unable to meet the Public Health Officers recommendations on physical distancing and gathering requirements, the local government must pass a resolution providing a rationale for the continued need to meet without the public physically present;

**AND WHEREAS** the Village of Pemberton Council Chambers is small and physical distancing requirements cannot be met in a way that will enable Council, Staff and the public to safely attend all Village council, committee, commission or board meetings;

**AND WHEREAS** the Village has explored alternative meeting space options and found limited suitable alternatives, and as the pandemic has dramatically reduced available financial resources, any potentially suitable options would require an undesirable re-allocation of resources away from essential services and in Council's view would be too costly for the Village's taxpayers;

**AND WHEREAS** the Village has been utilizing the ZOOM Webinar program to hold all meetings of the Village, including council, committee, commissions, public hearings and board meetings, which has enabled Council, Staff and the public to attend and participate as required;

**AND WHEREAS** the electronic meeting format has been positively received by the public and successfully resulted in a greater opportunity for the public to attend and participate through the regular question period format and public input format that resembles the standard in-person meeting format;

#### THEREFORE LET IT BE RESOLVED:

**THAT** given the Village of Pemberton is unable to accommodate the public attending in person at council, committee, commission and board meetings due to the small size of the council chambers and the costs associated with renting another location, the Village of Pemberton will continue to hold all open meetings (council, committee, commission, public hearings and board) via electronic means for the duration authorized under Ministerial Order 192, as long as the Public Health Officer recommendations and requirements stay in place or until an alternative location which is cost effective and can safely accommodate Council, Staff and the public can be arranged.

#### **RECOMMENDATION TWO:**

**THAT** the agenda Order of Proceedings and Business be amended by moving consideration of bylaw readings to follow staff reports for the July Regular Council meetings;

**AND THAT** Staff be directed to prepare a Council Procedure Bylaw Amendment respecting this change.

#### ATTACHMENTS:

**Appendix A**: Ministerial Order 192, issued June 17, 2020

**Appendix B**: Ministry of Municipal Affairs and Housing - Guidance under Ministerial Order 192, issued June 17, 2020

| Prepared by:     | Sheena Fraser, Manager, Corporate & Legislative Services |
|------------------|--|
| CAO Approval by: | Nikki Gilmore, Chief Administrative Officer              |

## **Appendix A**

### **PROVINCE OF BRITISH COLUMBIA**

## ORDER OF THE MINISTER OF PUBLIC SAFETY AND SOLICITOR GENERAL

#### **Emergency Program Act**

#### Ministerial Order No. M192

WHEREAS a declaration of a state of emergency throughout the whole of the Province of British Columbia was declared on March 18, 2020;

AND WHEREAS local governments, including the City of Vancouver, and related bodies must be able to conduct their business in accordance with public health advisories to reduce the threat of COVID-19 to the health and safety of members and employees of local government and related bodies and members of the public;

AND WHEREAS it is recognized that public participation in local governance is an essential part of a free and democratic society and is important to local governments' purpose of providing good government to communities;

AND WHEREAS the threat of COVID-19 to the health and safety of people has resulted in the requirement that local governments and related bodies implement necessary limitations on this public participation;

AND WHEREAS section 10 (1) of the *Emergency Program Act* provides that I may do all acts and implement all procedures that I consider necessary to prevent, respond to or alleviate the effects of any emergency or disaster;

I, Mike Farnworth, Minister of Public Safety and Solicitor General, order that

- (a) the Local Government Meetings and Bylaw Process (COVID-19) Order No. 2 made by MO 139/2020 is repealed, and
- (b) the attached Local Government Meetings and Bylaw Process (COVID-19) Order No. 3 is made.

06/2020

Minister of Public Safety and Solicitor General

(This part is for administrative purposes only and is not part of the Order.)

Authority under which Order is made:

Act and section:

Emergency Program Act, R.S.B.C. 1996, c. 111, s. 10

Other: MO 73/2020; MO 139/2020; OIC 310/2020

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#### LOCAL GOVERNMENT MEETINGS AND BYLAW PROCESS (COVID-19) ORDER NO. 3

#### **Division 1 – General**

#### Definitions

1 In this order:

"board" has the same meaning as in the Schedule of the Local Government Act;

"council" has the same meaning as in the Schedule of the Community Charter;

- "improvement district" has the same meaning as in the Schedule of the Local Government Act;
- "local trust committee" has the same meaning as in section 1 of the *Islands Trust Act*;

"municipality" has the same meaning as in the Schedule of the Community Charter;

- **"municipality procedure bylaw"** has the same meaning as "procedure bylaw" in the Schedule of the *Community Charter*;
- "regional district" has the same meaning as in the Schedule of the Local Government Act;
- **"regional district procedure bylaw"** means a procedure bylaw under section 225 of the *Local Government Act*;
- "trust body" means
  - (a) the trust council,
  - (b) the executive committee,
  - (c) a local trust committee, or
  - (d) the Islands Trust Conservancy,
  - as defined in the Islands Trust Act;
- "Vancouver council" has the same meaning as "Council" in section 2 of the *Vancouver Charter*;
- "Vancouver procedure bylaw" means a bylaw under section 165 [by-laws respecting Council proceedings and other administrative matters] of the Vancouver Charter.

#### Application

- 2 (1) This order only applies during the period that the declaration of a state of emergency made March 18, 2020 under section 9 (1) of the *Emergency Program* Act and any extension of the duration of that declaration is in effect.
  - (2) This order replaces the Local Government Meetings and Bylaw Process (COVID-19) Order No. 2 made by MO 139/2020.

#### **Division 2 – Open Meetings**

#### **Open meetings – municipalities**

3

- (1) A council, or a body referred to in section 93 [application of rule to other bodies] of the Community Charter, must use best efforts to allow members of the public to attend an open meeting of the council or body in a manner that is consistent with any applicable requirements or recommendations made under the Public Health Act.
  - (2) A council or body is not required to allow members of the public to attend a meeting if, despite the best efforts of the council or body, the attendance of members of the public cannot be accommodated at a meeting that would otherwise be held in accordance with the applicable requirements or recommendations under the *Public Health Act*.
  - (3) If a council or body does not allow members of the public to attend a meeting, as contemplated in subsection (2) of this section,
    - (a) the council or body must state the following, by resolution:
      - (i) the basis for holding the meeting without members of the public in attendance;
      - (ii) the means by which the council or body is ensuring openness, transparency, accessibility and accountability in respect of the meeting, and
    - (b) for the purposes of Division 3 [Open Meetings] of Part 4 [Public Participation and Council Accountability] of the Community Charter, the meeting is not to be considered closed to the public.
  - (4) The council or body may pass a resolution under subsection (3) (a) in reference to a specific meeting or, if the same circumstances apply, more than one meeting.
  - (5) This section applies despite
    - (a) Division 3 [Open Meetings] of Part 4 [Public Participation and Council Accountability] of the Community Charter, and
    - (b) any applicable requirements in a municipality procedure bylaw of a council.

#### Open meetings – regional districts

- 4 (1) A board, a board committee established under section 218 [appointment of select and standing committees] of the Local Government Act, or a body referred to in section 93 [application of rule to other bodies] of the Community Charter as that section applies under section 226 [board proceedings: application of Community Charter] of the Local Government Act, must use best efforts to allow members of the public to attend an open meeting of the board, board committee or body in a manner that is consistent with any applicable requirements or recommendations made under the Public Health Act.
  - (2) A board, board committee or body is not required to allow members of the public to attend a meeting if, despite the best efforts of the board, board committee or body, the attendance of members of the public cannot be accommodated at a meeting that would otherwise be held in accordance with the applicable requirements or recommendations under the *Public Health Act*.

- (3) If a board, board committee or body does not allow members of the public to attend a meeting, as contemplated in subsection (2) of this section,
  - (a) the board, board committee or body must state the following, by resolution:
    - (i) the basis for holding the meeting without members of the public in attendance;
    - (ii) the means by which the board, board committee or body is ensuring openness, transparency, accessibility and accountability in respect of the meeting, and
  - (b) for the purposes of Division 3 [Open Meetings] of Part 4 [Public Participation and Council Accountability] of the Community Charter as that Division applies to a regional district under section 226 of the Local Government Act, the meeting is not to be considered closed to the public.
- (4) The board, board committee or body may pass a resolution under subsection (3) (a) in reference to a specific meeting or, if the same circumstances apply, more than one meeting.
- (5) This section applies despite
  - (a) Division 3 [Open Meetings] of Part 4 [Public Participation and Council Accountability] of the Community Charter,
  - (b) section 226 [board proceedings: application of Community Charter] of the Local Government Act, and
  - (c) any applicable requirements in a regional district procedure bylaw of a board.

#### Open meetings – Vancouver

- 5 (1) The Vancouver council, or a body referred to in section 165.7 [application to other city bodies] of the Vancouver Charter, must use best efforts to allow members of the public to attend an open meeting of the Vancouver council or the body in a manner that is consistent with any applicable requirements or recommendations made under the *Public Health Act*.
  - (2) The Vancouver council or a body is not required to allow members of the public to attend a meeting if, despite the best efforts of the Vancouver council or the body, the attendance of members of the public cannot be accommodated at a meeting that would otherwise be held in accordance with the applicable requirements or recommendations under the *Public Health Act*.
  - (3) If the Vancouver council or a body does not allow members of the public to attend a meeting, as contemplated in subsection (2) of this section,
    - (a) the Vancouver council or the body must state the following, by resolution:
      - (i) the basis for holding the meeting without members of the public in attendance;
      - (ii) the means by which the Vancouver council or the body is ensuring openness, transparency, accessibility and accountability in respect of the meeting, and
    - (b) for the purposes of section 165.1 [general rule that meetings must be open to the public] of the Vancouver Charter, the meeting is not to be considered closed to the public.

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- (4) The Vancouver council or a body may pass a resolution under subsection (3) (a) in reference to a specific meeting or, if the same circumstances apply, more than one meeting.
- (5) This section applies despite
  - (a) section 165.1 of the Vancouver Charter, and
  - (b) any applicable provision in the Vancouver procedure bylaw.

#### Open meetings - trust bodies

- 6 (1) A trust body, or a board of variance established by a local trust committee under section 29 (1) *[land use and subdivision regulation]* of the *Islands Trust Act*, must use best efforts to allow members of the public to attend an open meeting of the trust body or board of variance in a manner that is consistent with any applicable requirements or recommendations made under the *Public Health Act*.
  - (2) A trust body or board of variance is not required to allow members of the public to attend a meeting if, despite the best efforts of the trust body or board of variance, the attendance of members of the public cannot be accommodated at a meeting that would otherwise be held in accordance with the applicable requirements or recommendations under the *Public Health Act*.
  - (3) If a trust body or board of variance does not allow members of the public to attend a meeting, as contemplated in subsection (2) of this section,
    - (a) the trust body or board of variance must state the following, by resolution:
      - (i) the basis for holding the meeting without members of the public in attendance;
      - (ii) the means by which the trust body or board of variance is ensuring openness, transparency, accessibility and accountability in respect of the meeting, and
    - (b) For the purposes of section 11 [procedures to be followed by local trust committees] of the Islands Trust Act, the meeting is not to be considered closed to the public.
  - (4) A trust body or board of variance may pass a resolution under subsection (3) (a) in reference to a specific meeting or, if the same circumstances apply, more than one meeting.
  - (5) This section applies despite
    - (a) section 11 [application of Community Charter and Local Government Act to trust bodies] of the Islands Trust Regulation, B.C. Reg. 119/90, and
    - (b) any applicable requirements in a procedure bylaw of a trust body.

#### **Division 3 – Electronic Meetings**

#### Electronic meetings – municipalities

A council, or a body referred to in section 93 [application of rule to other bodies] of the Community Charter, may conduct all or part of a meeting of the council or body by means of electronic or other communication facilities.

- (2) A member of a council or body who participates in a meeting by means of electronic or other communication facilities under this section is deemed to be present at the meeting.
- (3) When conducting a meeting under subsection (1), a council or body must use best efforts to use electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public.
- (4) If a council or body does not use electronic or other communication facilities as described in subsection (3), the council or body must state the following, by resolution:
  - (a) the basis for not using electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public;
  - (b) the means by which the council or body is ensuring openness, transparency, accessibility and accountability in respect of the meeting.
- (5) A council or body may pass a resolution under subsection (4) in reference to a specific meeting or, if the same circumstances apply, more than one meeting.
- (6) Section 128 (2) (c) and (d) *[electronic meetings and participation by members]* of the *Community Charter* does not apply in respect of a meeting conducted by means of electronic or other communication facilities under this section unless a council or body proceeds as described in subsection (3) of this section, in which case those paragraphs apply.
- (7) This section applies despite
  - (a) section 128 of the Community Charter, and
  - (b) any applicable requirements in a municipality procedure bylaw of a council.

#### Electronic meetings – regional districts

- 8 (1) A board, a board committee established under section 218 [appointment of select and standing committees] of the Local Government Act, or a body referred to in section 93 [application of rule to other bodies] of the Community Charter as that section applies under section 226 [board proceedings: application of Community Charter] of the Local Government Act, may conduct all or part of a meeting of the board, board committee or body by means of electronic or other communication facilities.
  - (2) A member of a board, board committee or body who participates in a meeting by means of electronic or other communication facilities under this section is deemed to be present at the meeting.
  - (3) When conducting a meeting under subsection (1), a board, board committee or body must use best efforts to use electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public.
  - (4) If a board, board committee or body does not use electronic or other communication facilities as described in subsection (3), the board, board committee or body must state the following, by resolution:

- (a) the basis for not using electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public;
- (b) the means by which the board, board committee or body is ensuring openness, transparency, accessibility and accountability in respect of the meeting.
- (5) A board, board committee or body may pass a resolution under subsection (4) in reference to a specific meeting or, if the same circumstances apply, more than one meeting.
- (6) Section 2 (2) (d) and (e) [electronic meetings authorized] of the Regional District Electronic Meetings Regulation, B.C. Reg. 271/2005, does not apply in respect of a meeting conducted by means of electronic or other communication facilities under this section unless a board, board committee or body proceeds by using electronic or other communication facilities as described in subsection (3) of this section, in which case those paragraphs apply.
- (7) This section applies despite
  - (a) section 221 [electronic meetings and participation by members] of the Local Government Act,
  - (b) the Regional District Electronic Meetings Regulation, and
  - (c) any applicable requirements in a regional district procedure bylaw of a board.

#### **Electronic meetings – Vancouver**

- 9 (1) The Vancouver council, or a body referred to in section 165.7 [application to other city bodies] of the Vancouver Charter, may conduct all or part of a meeting of the Vancouver council or the body by means of electronic or other communication facilities.
  - (2) A member of the Vancouver council or of a body who participates in a meeting by means of electronic or other communication facilities under this section is deemed to be present at the meeting.
  - (3) When conducting a meeting under subsection (1), the Vancouver council or a body must use best efforts to use electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public.
  - (4) If the Vancouver council or a body does not use electronic or other communication facilities as described in subsection (3), the Vancouver council or the body must state the following, by resolution:
    - (a) the basis for not using electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public;
    - (b) the means by which the Vancouver council or the body is ensuring openness, transparency, accessibility and accountability in respect of the meeting.
  - (5) The Vancouver council or a body may pass a resolution under subsection (4) in reference to a specific meeting or, if the same circumstances apply, more than one meeting.

- (6) Section 2 (2) (c) and (d) [electronic meetings authorized] of the City of Vancouver Council Electronic Meetings Regulation, B.C. Reg. 42/2012, does not apply in respect of a meeting conducted by means of electronic or other communication facilities under this section unless the Vancouver council or a body proceeds by using electronic or other communication facilities as described in subsection (3) of this section, in which case those paragraphs apply.
- (7) This section applies despite
  - (a) section 164.1 [meeting procedures] of the Vancouver Charter,
  - (b) the City of Vancouver Council Electronic Meetings Regulation, and
  - (c) any applicable provision in the Vancouver procedure bylaw.

#### Electronic meetings – improvement districts

- (1) An improvement district board, or a committee of an improvement district board appointed or established under section 689 [appointment of select and standing committees] of the Local Government Act, may conduct all or part of a meeting of the improvement district board or committee of an improvement district board, other than an annual general meeting, by means of electronic or other communication facilities.
  - (2) A member of an improvement district board or committee of an improvement district board who participates in a meeting by means of electronic or other communication facilities under this section is deemed to be present at the meeting.
  - (3) When conducting a meeting under subsection (1), an improvement district board or committee of an improvement district board must use best efforts to use electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public.
  - (4) If an improvement district board or committee of an improvement district board does not use electronic or other communication facilities as described in subsection (3), the improvement district board or committee of an improvement district board must state the following, by resolution:
    - (a) the basis for not using electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public;
    - (b) the means by which the improvement district board or committee of an improvement district board is ensuring openness, transparency, accessibility and accountability in respect of the meeting.
  - (5) An improvement district board or committee of an improvement district board may pass a resolution under subsection (4) in reference to a specific meeting or, if the same circumstances apply, more than one meeting.
  - (6) This section applies despite
    - (a) section 686 [meeting procedure improvement district board] of the Local Government Act, and
    - (b) any applicable requirements in a procedure bylaw of an improvement district board.

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#### Electronic meetings – trust bodies

- (1) A trust body, or a board of variance established by a local trust committee under section 29 (1) [land use and subdivision regulation] of the Islands Trust Act, may conduct all or part of a meeting of the trust body or board of variance by means of electronic or other communication facilities.
  - (2) A member of a trust body or board of variance who participates in a meeting by means of electronic or other communication facilities under this section is deemed to be present at the meeting.
  - (3) When conducting a meeting under subsection (1), a trust body or board of variance must use best efforts to use electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public.
  - (4) If a trust body or board of variance does not use electronic or other communication facilities as described in subsection (3), the trust body or board of variance must state the following, by resolution:
    - (a) the basis for not using electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public;
    - (b) the means by which the trust body or board of variance is ensuring openness, transparency, accessibility and accountability in respect of the meeting.
  - (5) A trust body or board of variance may pass a resolution under subsection (4) in reference to a specific meeting or, if the same circumstances apply, more than one meeting.
  - (6) This section applies despite
    - (a) section 2 [electronic meetings authorized] of the Islands Trust Electronic Meetings Regulation, B.C. Reg. 283/2009, and
    - (b) any applicable requirements in a procedure bylaw of a trust body or applicable to a board of variance.

#### **Division 4 – Timing Requirements**

#### Timing requirement for bylaw passage - municipalities

- 12 Despite section 135 (3) [requirements for passing bylaws] of the Community Charter, a council may adopt a bylaw on the same day that a bylaw has been given third reading if the bylaw is made in relation to
  - (a) the following sections of the Community Charter:
    - (i) section 165 [financial plan];
    - (ii) section 177 [revenue anticipation borrowing];
    - (iii) section 194 [municipal fees];
    - (iv) section 197 [annual property tax bylaw];
    - (v) section 200 [parcel tax bylaw];
    - (vi) section 202 [parcel tax roll for purpose of imposing tax];
    - (vii) section 224 [general authority for permissive exemptions];

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- (viii) section 226 [revitalization tax exemptions];
- (ix) section 235 [alternative municipal tax collection scheme], and
- (b) tax sales, as referred to in Divisions 4 [Annual Tax Sales] and 5 [Tax Sale Redemption Periods] of the Local Government Finance (COVID-19) Order made by MO 159/2020, or otherwise under Division 7 [Annual Municipal Tax Sale] of Part 16 [Municipal Provisions] of the Local Government Act.

#### **Division 5 – Public Hearings**

#### Public hearings – Local Government Act

- (1) A public hearing under Part 14 [Planning and Land Use Management] or 15 [Heritage Conservation] of the Local Government Act, including a public hearing under section 29 (1) (b) [land use and subdivision regulation] of the Islands Trust Act, may be conducted by means of electronic or other communication facilities.
  - (2) For the purposes of providing notice of a public hearing to be conducted under subsection (1),
    - (a) any notice of the public hearing must include instructions for how to participate in the public hearing by means of electronic or other communication facilities,
    - (b) any material that is to be made available for public inspection for the purposes of the public hearing may be made available online or otherwise by means of electronic or other communication facilities, and
    - (c) a reference to the place of a public hearing includes a public hearing that is conducted by means of electronic or other communication facilities.
  - (3) This section applies to delegated public hearings.
  - (4) This section applies despite the following provisions:
    - (a) section 124 [procedure bylaws] of the Community Charter;
    - (b) section 225 [procedure bylaws] of the Local Government Act;
    - (c) section 11 [application of Community Charter and Local Government Act to trust bodies] of the Islands Trust Regulation, B.C. Reg. 119/90;
    - (d) section 2 [electronic meetings authorized] of the Islands Trust Electronic Meetings Regulation, B.C. Reg. 283/2009;
    - (e) any applicable requirements in a procedure bylaw made under the *Community Charter*, the *Local Government Act* or the *Islands Trust Act*.

#### Public hearings – Vancouver Charter

- 14 (1) A public hearing under Division 2 [Planning and Development] of Part 27 [Planning and Development] of the Vancouver Charter may be conducted by means of electronic or other communication facilities.
  - (2) For the purposes of providing notice of a public hearing to be conducted under subsection (1),
    - (a) any notice of the public hearing must include instructions for how to participate in the public hearing by means of electronic or other communication facilities,

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- (b) any material that is to be made available for public inspection for the purposes of the public hearing may be made available online or otherwise by means of electronic or other communication facilities, and
- (c) a reference to the place of a public hearing includes a public hearing that is conducted by means of electronic or other communication facilities.
- (3) This section applies despite
  - (a) section 566 [amendment or repeal of zoning by-law] of the Vancouver Charter, and
  - (b) any applicable provision in the Vancouver procedure bylaw.

#### **Division 6 – Deferral of Annual Requirements**

## Annual general meeting and requirements – improvement districts

- (1) An improvement district may defer an annual general meeting that is required under section 690 [annual general meeting improvement districts] of the Local Government Act to a date not later than December 31, 2020.
  - (2) An improvement district may defer the preparation of financial statements required under section 691 [annual financial statements] of the Local Government Act to a date not later than December 31, 2020.
  - (3) Despite the date referred to in section 691 (5) of the *Local Government Act*, an improvement district may submit to the inspector the audited financial statements of the improvement district for the preceding year and any other financial information required by the inspector at the time of the annual general meeting of the improvement district.
  - (4) If an annual general meeting of an improvement district is deferred under subsection (1) of this section and the term of an improvement district trustee would be expiring and the vacancy filled at that meeting, the term of the improvement district trustee is extended until the annual general meeting is held.
  - (5) This section applies despite
    - (a) Division 3 [Governance and Organization] of Part 17 [Improvement Districts] of the Local Government Act, and
    - (b) any applicable provisions in a letters patent for an improvement district.

## **APPENDIX B**



## Guidance for Open Meetings, Electronic Meetings and Timing Requirements for Bylaw Passage under Ministerial Order 192

### Introduction

This document provides guidance to local governments on open meetings, electronic meetings and the timing requirements for bylaw passage as outlined in Ministerial Order 192 (replaces M139). <u>http://www.bclaws.ca/civix/document/id/mo/mo/2020\_m192</u>

Order 192 repeals and replaces M139, moves local governments towards normal operations as they move through the restart process. The guidance below provides practical advice to local governments while operating under Order M192 and measures that support recommendations of the Provincial Public Health Officer (PHO) and the principles of local government openness, accountability, accessibility and transparency.

This document focuses on the primary changes set out in Order M192. However, all other previous provisions under M139 such as conducting public hearings electronically, allowing for Council, Boards and the Islands Trust Body to meet electronically and deferring improvement district annual general meetings, remain in effect under Order M192. Other rules such as those provided for in legislation or local government procedure bylaws such as: notice requirements; voting rules; and, minutes also continue to apply.

Order M192 continues to provide local governments flexibility in their meeting procedures while moving towards increased public presence at local government meetings where appropriate, for both "in person" and electronic meetings. Order M192 also transitions local governments to more standard rules in relation to bylaw adoption, limiting the previous Order's broad authority to read and adopt a bylaw on the same day it has been given to third reading to now only apply to the types of bylaws specified in Order M192.

### **Guidance for Ministerial Order 192**

As local governments transition back towards more normal operations as part of <u>BC's Restart Plan</u> -including holding meetings with the public in attendance -- new or amended policies and procedures are needed to support elected officials, local government staff and the public.

#### **Open Meetings**

Order M192 requires local governments to undertake "best efforts" to meet the legislative requirements for open meetings so the public can continue to participate and understand local government decision-making in a way that is meaningful for them.

Local governments that are unable to meet the PHO recommendations and requirements and hold open meetings where the public can attend in person are now required to adopt a resolution to provide a

Ministry of Municipal Affairs and Housing

Governance and Structure Branch

Local Government Division

 Mailing Address:

 Po Box 9839, STN PROV GOVT

 Victoria, BC V8W 9T1

 Phone:
 250 387-4020

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 250 387-7972

Location: 4<sup>th</sup> Floor, 800 Johnson Street

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rationale for the continued need to meet without the public present. They must also describe what local measures are being taken to meet the principles of openness, transparency and accessibility. The resolution may be in reference to a specific meeting or, if the same circumstances apply, more than one meeting.

Best efforts from local governments include:

- Provide information to the local government staff, elected officials and the public on how the local government is meeting the PHO requirements and recommendations at open meetings:
  - how many members of the public can safely be accommodated at the meeting location while meeting physical distancing guidelines;
  - whether another meeting location has been considered to provide better space for public attendance (and what, if any, are the limitations of that space); and,
  - how public attendance at meetings will be managed if there is limited space; (e.g. restricting numbers of attendees; ensuring no crowds at entranceways).
- Offer alternative means by which the public can provide input on agenda topics before or during a meeting to increase accessibility (e.g. via email, online submission form, phone or written letter);
- If in-person presence will not be physically possible in the meeting room, consider technology for enabling the public to be present by electronic means (e.g. livestream proceedings in a space made available in other facilities where people can watch and hear the open meeting);
- Adjust the agenda and meeting schedules so that matters that are likely to be controversial or attract high public interest are the subject of a separate meeting held in a larger facility;
- Provide draft agendas, minutes and archived video of meetings (if available) to the public to facilitate public understanding of local government decision making; and,
- Document and be able to provide information to the public about what efforts have been made and considered if the local government needs to continue to meet without the public physically present.

For more information on legislative open meeting requirements please see: <a href="https://www2.gov.bc.ca/gov/content/governments/local-governments/governance-powers/councils-boards/meetings/rules">https://www2.gov.bc.ca/gov/content/governments/local-governments/governance-powers/councils-boards/meetings/rules</a>

#### **Electronic Meetings**

Order M192 requires that local governments undertake best efforts to provide facilities that enable the public to hear, or watch and hear, meetings if the meeting is held electronically or council members are attending by means of electronic communication.

If after best efforts, local governments are unable to provide the facilities where the public can hear, or watch and hear a meeting held electronically, they must provide, by resolution, the reasons for not providing facilities that allow the public to hear, or watch and hear, the meeting. The resolution must also describe the means by which they are ensuring openness, transparency, accessibility and accountability in respect of the meeting. The resolution may be in reference to a specific meeting or, if the same circumstances apply, more than one meeting.

Best efforts from local governments include:

- Electronic meetings should attempt to resemble the in-person public meeting as much as possible, adhering to rules of procedural fairness. This means making best efforts to follow existing procedures and to allow members of the public to be heard;
- Explore alternative facilities that provide the means for the public to hear, or watch and hear, the electronic meeting (e.g. a larger venue or a venue that provides technology for the public to hear, or watch and hear the meeting);
- Explore available technology that will enable the public to hear, or watch and hear, the meeting (e.g. livestream, record and provide an archived copy on the local government website, or provide a telephone at the facility for the public to hear the meeting); and,
- Anticipate technology issues and consider allowing additional time on the agenda to resolve technical issues, including the possible lag when live-streaming.

For more information on electronic meetings please see:

https://www2.gov.bc.ca/gov/content/governments/local-governments/governance-powers/councilsboards/meetings/electronic

#### **Timing Requirements for Bylaw Passage**

Order M192 repeals the authority for the expedited passage of bylaws under M139 which authorized bylaw adoption in the same day as third reading for regional districts and the Islands Trust and narrows the eligibility for the expedited single-day bylaw adoption of certain financial bylaws by municipalities. This recognizes that the number and scope of very time-sensitive emergency-focused decisions needed diminish as local governments move into transition and restart, while providing targeted flexibility for certain municipal financial bylaws.

Allowing for at least a single day between third reading and adoption creates an opportunity for both reflective critical thought and other necessary actions, such as conditions, approvals, and further public input. Providing this time contributes to the principles of good governance, fairness and public process. However, it is critical that that the Province continue to provide municipalities with the tools to quickly and effectively manage their cash flow issues. Many municipal financial bylaws also often have an annual requirement, meaning that they must occur within a specific timeframe, and if not adopted when necessary, could carry significant financial risk for a community.

The following bylaws regarded as important to the financial health and operation of have been authorized for expediated process where adoption can occur on the same day as third reading. These bylaws do not require approval, electoral consent or electoral assent. Bylaw making powers under the *Community Charter*, include:

- Financial Plan (s.165);
- Revenue Anticipation Borrowing (s.177);
- Municipal Fees (s.194);
- Annual Property Tax Bylaw (s.197);
- Parcel Tax Bylaw (s.200);
- Parcel Tax Roll for the Purpose of Imposing Tax (s.202);

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- General Authority for Permissive exemptions (s.224);
- Revitalization Tax Exemptions (s.226); and,
- Alternative Municipal Tax Collection Scheme (s. 235).

Bylaw making powers under the Local Government Act:

• Tax sales, as referred to in Divisions 4 [Annual Tax Sales] and 5 [Tax Sale Redemption Periods] of the Local Government Finance (COVID-19) Order made by MO 159/2020, or otherwise under Division 7 [Annual Municipal Tax Sale] of Part 16 [Municipal Provisions] of the *Local Government Act.* 

The authority for expedited bylaw passage timing is not provided to regional districts as they have the existing authority under LGA s.228 to pass certain bylaws on the same day if there are 2/3 votes cast. It is also not provided to the Islands Trust as it is primarily a land use planning body and have limited involvement in emergency services and therefore are less likely to need the streamlined bylaw passage moving forward.

For more information on the bylaw adoption process please see: <u>https://www2.gov.bc.ca/gov/content/governments/local-governments/governance-powers/bylaws/bylaw-adoption-process</u>

# Further Guidance on Best Practices and Operational Considerations for Local Government Open Meetings

Order M192 requires that local governments make best efforts to hold open meetings with the public in attendance. The guidelines below are to help reduce the risk of person-to-person transmission of COVID-19 during open meetings and to assist local governments to create policies and procedures that follow the PHO requirements and recommendations and support the principles of local government openness, transparency and accessibility.

#### Training for Elected Officials and Local Government Staff

- Establish safe meeting policies and procedures based on the recommendations of the PHO;
- Identify areas of risk for holding open meetings and develop policies and procedures to address risks using the <u>WorkSafeBC COVID-19 Safety Plan template;</u>
- Provide training for elected officials and local government staff including review of amended policies and procedures for open meetings, available technologies, changes to occupancy limits, meeting room flow/setup and how tasks are completed;
- Keep a record of who has completed and attended training and provide a way for elected officials, staff and the public to bring forward health and safety concerns for open meetings;
- Have a plan in place that considers what to do if someone falls ill at an open meeting or starts to feel unwell; and,
- Revisit open meeting procedures and policies every few weeks to ensure best efforts are continuing to be met and to review questions/concerns from the public.

#### **Public Notice**

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- Provide public notice that meetings of council or board are now open to the public;
- Create a robust communication plan so members of the public understand how to continue to be involved with their local government;
- Include a contact (e.g., corporate officer) in the public notice for the public to contact if they wish to attend remotely, call-in or provide comment on agenda items (*this will depend on technological capabilities of each local government*);
- Include information on the local government website, public notice posting place, social media and other community notice boards that outline the health and safety measures in place for open meetings (e.g., physical distancing; limit on number of people; attendance only if well);
- Include where draft meeting minutes and archived recordings of meetings (if available) may be found on the local government website;
- Include information on how the public can hear, or watch and hear the meeting either online or if another facility is provided for this purpose;
- Provide an e-mail subscription service where the public can sign up to receive notice of upcoming meetings, agendas and minutes or a newsletter with links to these items on the local government website;
- Provide regular updates to the public on changes that are made to procedures and policies for council or board meetings; and,
- If the community newspaper has shut down, notice may be given by alternative means per s.94(4) of the *Community Charter*.

#### **Meeting Location**

- Post signage, including occupancy limits and effective hygiene practices at the main entrance to the building and meeting room. Signage should also be posted indicating who is restricted from entering the premises (including visitors and staff with symptoms of COVID-19 or those who feel unwell);
- PHO has developed guidance for the retail food and grocery store sector that requires at least five square metres of unencumbered floor space per person;
- Have a greeter at the front entrance to explain safety procedures;
- Create separate entrance and exit doors and one-way walkways in the meeting space;
- Implement cleaning and sanitizing protocols for the meeting space before, during and after the meeting (e.g., multiple speakers using the same podium) particularly for high touch surfaces;
- Consider leaving doors open so there is no need to touch doors handles;
- Arrange the space in such a way as to meet physical distancing requirements for council or board members, local government staff and the public (e.g., members of the public moving in the space before, during and after the meeting and location of chairs and aisles);

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- Post directional signage at the entrance to the meeting room (e.g., that the public may not move chairs or other furniture and no food or drink except closed mugs/water bottles);
- Created designated seating areas for the public and any delegations; and,
- Consider alternative venues if the space can't accommodate the public at all due to physical distancing requirements and if it won't pose challenges for the technology being used. Local governments may by bylaw or resolution provide that meetings be held outside of the municipal boundaries (s.134.1 *Community Charter* and s.224 *Local Government Act*) Typically, this provision is in the local government procedure bylaw.

#### **Elected Officials Attendance at Meeting Location**

- If some members of council or board choose to attend by means of electronic communication, ensure that if quorum is lost there is a procedure in place to either suspend proceedings until quorum is achieved or cancel or postpone the meeting;
- Ensure council or board members can hear those members attending by electronic means;
- Amend the procedure bylaw to allow for electronic special meetings and electronic participation at regular meetings by some members (if this is not already provided for);
- In the procedure bylaw, develop guidelines to assist with electronic meeting process including how the presiding member will take a vote on a motion or bylaw adoption; and,
- Outline the process for how members attending electronically can participate in the debate.

#### Local Government Staff at Meeting Location

- Provide an option for local government staff presenting on agenda topics to present remotely or call-in to the meeting; and,
- Ensure physical distancing is in place for local government staff at the meeting.

#### **Public Attendance at Meeting Location**

- Provide space for the public to physically attend the meeting, but also encourage members of the public to attend remotely if this is option is available;
- Create a local government webpage with a picture of the public gallery showing the meeting space, how physical distancing requirements are being met and outline cleaning and sanitizing protocols;
- Provide information on how many members of the public can reasonably be accommodated in the meeting space, while meeting physical distancing requirements;
- Outline how in-person attendance at meetings will be managed at the start, during and after the meeting;
- Provide access to hand sanitizer before members of the public enter the building or meeting room and post signage indicating those who are unwell must stay home;

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- Have a staff member act as a greeter to explain the new protocols in place as the public enters the building (e.g. how to fill the public seating area left to right or what to do if they must leave during the meeting or attend the washroom);
- Provide a designated seating area for delegations to limit how far they have to move through the space to present to council or board; and,
- Clearly mark how the public may enter and exit the space.

## Agendas

- Provide agendas early if possible and make them available online and at the public notice posting place for the public to review what is coming up (this may help the public make an informed decision as to whether they wish to attend the meeting);
- At the top of the agenda or in some other way clearly state how the public may provide comment on agenda items both at the meeting and via email, online submission form, phone or written letter prior to the meeting and how these will be addressed at the meeting;
- Consider bunching agenda topics that may be of greater public interest at the beginning so a break can be provided afterwards if people wish to leave the meeting or consider controversial topics at different meetings;
- Provide opportunities for the public to leave at different points during the meeting;
- Move the consent agenda to the end of the meeting;
- Provide opportunities in the agenda to allow people to leave the meeting room safely; this may assist in not having everyone leave at the same time;
- If possible, postpone controversial agenda topics or consider using other engagement tools so the public can provide input outside of a meeting; and,
- Provide information to the public on how comments received via other mechanisms (email; letter; public engagement tool) will be presented at a council or board meeting or incorporated into the agenda.

# Provide Opportunities for the Public to Watch and Hear Electronically (if technology is available)

- Provide easy to understand information on the local government website, public notice posting place and in other community spaces for the public to understand how they can attend electronically (if available) including:
  - how to call in and listen if this option is available;
  - where to view a livestream or archived version of the meeting; and,
  - o how to ask questions during question period if this is an option;
- Make archived versions of recorded meetings and meeting minutes available to the public as soon as possible after the meeting; and,

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• Ensure the chair advises participants that the meeting is being recorded and include a statement to this effect in the agenda.

## **Opportunities for the Public to Provide Input on Meeting Topics**

- Actively promote others means for the public to participate in council or board meetings;
- Ensure the process for the public to submit comments on agenda topics is well understood and there are several options available to support accessibility (e.g., by email, letter, phone, dropbox);
- If only limited seating is available for the public and there is a public question period, consider how questions from those in attendance and those attending electronically (if available) will be managed;
- Explore options for expanded on-line or in-person public engagement opportunities for specific projects and issues (particularly those that may be potentially controversial); and,
- Consider ways in which questions not answered at the meeting may be made public.

## **Delegations at Open Meetings**

- Outline a clear method for delegations to participate in the meeting on the local government website;
- Continue to accept in-person delegations if physical distancing requirements can be met and the item is on the agenda;
- Provide alternative methods for delegations to present (e.g., written; electronic; drop-box; prerecorded video or real-time presentation);
- Provide a reserved spot for a delegation to sit if they are presenting at the meeting location; and,
- Schedule delegations at the beginning of the meeting or stagger them so there are fewer people at the meeting location.

## Minutes

- Post draft minutes of open meetings on the local government website and at the public notice posting place or other designated places after the meeting; and,
- If council or board members or local government staff attend electronically, reflect disconnections and connections in the meeting minutes.

## **Technical Difficulties**

- Create a plan for when technical difficulties arise, including the process if a technical failure does not allow for the meeting to continue;
- Do a trial run with volunteers if using new technology or in a new location;
- Have a staff member on standby who is the contact for participants with technical issues;

- Ensure accessibility considerations have been made for people with hearing or visual impairments;
- Solidify roles and responsibilities should there be technology issues or a technology failure;
- Practice organizing and incorporating public comments into the meeting;
- Provide etiquette guidelines for those attending online or by phone (e.g., muting themselves unless speaking, stating full name, behavior expectations or they may be dropped from the meeting);
- If the public is able to participate in a live streamed meeting, consider what controls the moderator has and consider a chat option where questions can be asked; and,
- Consider privacy and security of the platform being used.

## Background

## **Open Meetings**

The *Community Charter* (CC), Division 3 – Open Meetings s.89 and *Local Government Act* (LGA) s.226(1)(a) provide that council and regional district board meetings must be open to the public unless the subject matter relates to one of the items listed in the closed meetings section of the legislation.

Under legislation all meetings of local government elected (councils and boards) and appointed bodies (such as committees, commissions and other subsidiary bodies) must be open to the public. Discussion and decisions must occur in properly called meetings, where the public can review the agenda and listen to the debate to understand how and why a council or board is making decisions. The requirement for open meetings is broad, in keeping with the principles of openness, transparency and accountability.

The previous Orders under the *Emergency Program Act* recognized the need for local governments to make necessary decisions and provided an override to existing open meeting rules and waived the requirement for councils (including the City of Vancouver), regional district boards and the Islands Trust to hold meetings in a venue that is open to the public.

## **Electronic Meetings**

Section 128 of the CC and s.226 of the LGA provide that local governments may hold special meetings electronically and allow council or board members to attend regular meetings by means of electronic communication if it is authorized in their procedure bylaw. The legislation provides that except for any part of the meeting that is closed to the public, the facilities must enable the public to hear, or watch and hear, the meeting at the meeting location.

The previous Orders under the *Emergency Program Act* recognized the need for local governments to continue to be able to hold meetings while following physical distancing guidelines and provided an override to existing rules and procedure bylaws and allowed councils (including the City of Vancouver), regional district boards and the Islands Trust to hold all or part of any meeting electronically. It also waived the requirement to provide facilities that enable to public to hear, or watch and hear, the meeting.

## **Timing Requirements for Bylaw Passage**

Section 135(3) of the CC requires municipal councils to leave one day between third reading of a bylaw and final adoption. Section 228 of the LGA provides that regional districts may adopt a bylaw in the same meeting if the bylaw receives at least 2/3 votes cast and it does not require approval, consent, or assent under any Act. Bylaws for the Islands Trust are subject to section 11 of the Islands Trust Regulation [application of CC and LGA] where trust bodies are subject to the bylaw timing requirements under the *Community Charter* and *Local Government Act*.

The previous Orders under the Emergency Program Act provided authority for municipalities, regional districts, and the Islands Trust to adopt bylaws on the same day as third reading with some limitations. It relaxed the requirements under s.135(3) of the CC and allowed municipalities to pass bylaws on the same day as third reading. It further relaxed the requirement for regional district bylaws by allowing for same day adoption if the motion for adoption received the majority of the votes cast (rather than 2/3 votes cast), provided that the bylaw did not require approval, consent, or assent under an Act before adoptions.

## **Additional Resources:**

BC Centre for Disease Control

- Event Planning
- General COVID-19 Information

## WorkSafeBC

- <u>Municipalities and COVID-19 safety</u>
- WorkSafeBC Safety Plan Template
- WorkSafeBC Signs and Templates
- <u>General Guide to Reducing Risk</u> <u>https://www.worksafebc.com/en/about-us/covid-19-updates/covid-19-returning-safe-operation</u>

## **BC Municipal Safety Association**

Pandemic Exposure Control COVID-19

## **Government of Canada**

<u>Risk assessment for mass gatherings</u>

## World Health Organization

- Planning recommendations for mass gatherings
- <u>Getting workplace ready for COVID-19</u>

## **Ombudsperson's Guide to Open Meetings**

## **AMTCO Electronic Council Meeting Resources**

#### **Electronic Participation Procedure:**

https://amcto.com/Resources-Publications/Resources/Electronic-Council-Meetings/Electronic Meeting Procedure 2020.aspx M192 – Guidance, June 17, 2020 Page 11

Procedure for Electronic Participation in City Council Meetings:

https://amcto.com/Resources-Publications/Resources/Electronic-Council-Meetings/Procedures\_for\_City\_Council\_Participation\_in\_Elect.aspx



| То:      | Nikki Gilmore, Chief Administrative Officer   |
|----------|---|
| From:    | Lisa Pedrini, Manager of Development Services<br>Cameron Chalmers, Contract Planner |
| Subject: | Draft Revised Community Amenity Contribution Policy                                 |

## PURPOSE

The purpose of this report is to present to Council a Draft Community Amenity Contribution (CAC) Policy (**Appendix A**) that will serve as a framework for defining and negotiating voluntary community amenity contributions with developers of residential and mixed-use development projects applying for rezoning.

## BACKGROUND

Council adopted the Village's Community Amenity Policy (attached as **Appendix B**) at the Regular Council Meeting No. 1185, held July 10, 2007. The current CAC Policy stipulates an expected amount of CAC's on new single family and multi-family residential development to offset the impacts of growth on public facilities, services, and amenities. Over time, it was realized that there were issues with the CAC Policy and as part of the 2009 Strategic Plan, Council directed Staff to undertake a review of the 2007 Community Amenity Policy particularly in relation to exploring the use of amenity zoning (density bonusing) as an alternative to its CAC approach.

On March 3, 2009, Council considered a report at the Committee of the Whole meeting which identified certain community amenities proposed by BCR Properties and Signal Hill Homes (now called Tiyata) development. Following a review of these proposed community amenity enhancements, Staff was directed to proceed with amending the Community Amenity Policy to permit onsite credits in lieu of the Policy's contribution requirements.

This Policy was again revisited at various In Camera Meetings<sup>1</sup> held April 21, 2009, March 16, 2010 and again on May 3, 2016 with new Council Members being briefed on the topic. Although Council did not rise with report after the May 3, 2016 In Camera (closed) discussion, Staff was tasked with preparing a revised Draft Community Amenity Contribution Policy which would establish that CAC's be negotiated on a case by case basis, using density bonusing and/or other alternatives based on how other municipalities are addressing amenity contributions.

Soon after, work began on developing a new CAC Policy; however, as a result of adjusted priorities in 2016, this initiative was set aside for consideration until 2017. It should be noted

<sup>&</sup>lt;sup>1</sup> Council discussions on this matter took place In Camera pursuant to Section 90 (1) (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.

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Council subsequently rose with report on this direction at Regular Meeting Council Meeting No. 1448, held on May 2, 2017. The preparation of the policy has remained on the work plan since that time.

Although it was resolved that the Draft Policy be brought forward for consideration at a Committee of the Whole meeting, it is being brought forward on June 20, 2020 to Council due to the ongoing COVID-19 situation (Committee of the Whole meetings have ceased since February 2020).

## **DISCUSSION & COMMENTS**

The Village of Pemberton has been experiencing a significant amount of new development for several years. New development brings new requirements for Village infrastructure and amenities. The Village of Pemberton has accommodated new residential, commercial, and industrial development and enjoyed the benefits it contributes; however, the Village recognizes that it is unfair for new development to become a financial burden on existing taxpayers. It is acknowledged that new development should pay a reasonable share of the costs of new infrastructure and amenities that are needed to accommodate additional growth and to address the impacts of new development on the existing community.

There are two (2) main tools a local government may use to ensure that new development pays its fair share of the costs of new community infrastructure and amenities:

- Development Cost Charges (DCCs): The Village of Pemberton Development Cost Charge Bylaw No. 723, 2013 imposes a one-time charge on all new developments; to help cover the cost of off-site infrastructure services required to accommodate growth. DCC's may only be used to contribute to community-wide needs for expansion and upgrade specifically of the Village's water system, sanitary sewer system, roads, drainage system, and park land as per the *Local Government Act* (2015), Section 566. DCC's may not be used to pay for other types of community services such as recreation, policing, fire, and library services that can be impacted by growth.
- Community Amenity Contributions (CACs): The Village of Pemberton adopted a Community Amenity Policy in July 2007 to address the burden that residential development imposes on the demand for public facilities, services, and amenities. The Policy addressed certain public interest considerations as part of Village Council's ability to exercise its discretion to rezone land and set out specific expected [voluntary] contributions to help fund recreational amenities such as a swimming pool complex, an arena, outdoor skating rink, a water park, a skateboard park, and a bike park. It was anticipated that the Community Amenity Policy would be reviewed every two (2) years to remain relevant.

Given that a few of the listed amenities in the Community Amenity Policy have now been achieved, it is timely to update the Policy with a new list of desired community amenities. Another reason to review the Village's Community Amenity Policy is to ensure that the Village is following best management practices as prescribed by the Province of British Columbia.

For this reason, a new Draft Policy is being presented for Council's consideration that will capitalize on the opportunity to gain public facilities, services, and amenities through voluntary

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contributions from proponents in the rezoning process. The policy is intended as a framework for how the Village of Pemberton will define community amenities, and a framework for establishing and securing Community Amenity Contributions through the rezoning process. See Draft Revised Policy attached as **Appendix A**.

The Draft Policy also allows the Village to accept voluntary amenities as either cash or in-kind services from development projects seeking rezoning similar to the current approach taken in adopting amenity zoning (density bonusing) bylaws.

The intent of this policy document is to clearly state the Village's approach to obtaining Voluntary Community Amenity Contributions through negotiation with developers on a case-by case basis. This is to also ensure that the public, landowners, and developers understand the Village's expectations, purpose and mechanisms for these voluntary contributions while staying within the letter of the law.

## **Community Amenity Contributions in British Columbia**

The provincial context with respect to having developers help shoulder the burden that new development places on community amenities, is outlined in the following long version of the Provincial Guidelines related to determining voluntary Community Amenity Contributions (March 2014):<u>https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/local-governments/planning-land-use/community amenity contributions guide.pdf</u>.

The Short Guide is attached as **Appendix C**.

## 1. Density bonus zoning in exchange for amenities or affordable housing

Density bonusing is specifically authorized by Section 482 of the *Local Government Act* (2015). Density bonusing is a zoning tool that creates a financial incentive for developers to provide an amenity, in exchange for the right to build at an increased density than is normally permitted in the Zoning Bylaw. The concept is that a developer can choose to build at the base density without having to supply a density bonus contribution or they can choose to build more densely, up to a limit set in the zone, when they opt to provide an amenity.

The advantage of this tool is that it is an up-front, predictable, and consistent means of obtaining public benefits from developers in exchange for the Village granting additional development potential to projects. As long as the maximum bonus density and the required amenity are defined in the Zoning Bylaw, there is considerable flexibility regarding the kinds of community benefits that can be achieved.

The form of public benefits can include not only recreational amenities, but also publicly accessible open space or plazas, public art, child care facilities, or cash-in-lieu (e.g. a fixed contribution at a defined dollar rate per square foot of additional density) to be put in a municipal reserve fund for a significant future amenity/project.

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A great number of municipalities are also utilizing density bonusing to address the need for affordable housing to gain such on-site housing amenities as:

- Rental apartments (where the additional density must be used to provide rental apartments);
- Price controlled, limited equity market units (for residents and employees);
- Housing units controlled, managed or owned by non-profit housing groups providing affordable housing;
- Guaranteed or time limited rental units with rent control mechanisms;
- Social housing for people with special needs;
- Accessible or adaptive units (i.e., seniors housing).

This system works well when amenity needs are clearly defined and prioritized by the community (i.e., the Village did this with the inclusion of Schedule 2 in the Official Community Plan attached as **Appendix D**), where developers see a financial incentive to obtain the bonus density. One drawback of this approach can occur if a developer chooses to simply build at the base density and therefore no amenity contribution would be negotiated.

The Village of Pemberton has utilized density bonusing in the Hillside Area, specifically the Sunstone Residential (Amenity) Zones: RSA-1 and RTA-1 and the Ridge Residential (Amenity) Zones: RSA-2 and RTA-2. In these examples, the density bonus provision of these zones allowed the developers to obtain extra density based on a stated amenity contribution. In both cases, the amenity is specified as providing contributions of \$9,165 per single family lot or \$6,110 per townhouse unit, payable either in cash to be held in a reserve fund by the Village for the purpose of future recreational capital costs on sports fields, a multi-sports facility, an ice arena or aquatic centre and ancillary uses; and/or in-kind works and services provided they are approved by the Village and used for the same purposes as noted above.

To date, the Village has been able to obtain significant community amenity contributions in lieu of cash from the Hillside Developments by employing density bonusing. The following is a summary to highlight the amenities that have been provided to date from the two developments to support recreation:

## Sunstone Ridge Developments

- Dedicating future land and/or cash to construct a community garden and public washroom
- Density Bonusing Contributions:

| Contributions to Date     | \$500,678   | In-kind earth works for Soccer Field<br>No. 1 and 2 and cash contribution |
|---------------------------|-------------|---|
| Remaining to be Collected | \$1,151,735 | Based on conceptual phasing and<br>zoning                                 |

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## The Ridge at Pemberton

• Density Bonusing Contributions:

| Contributions to Date     | \$479,977 | In-kind earth works for Soccer Field<br>No. 1 |
|---------------------------|-----------|---|
| Remaining to be Collected | \$195,520 | Based on conceptual phasing and<br>zoning     |

## 2. Negotiated amenity contributions or public benefits at the time of rezoning

Another approach commonly used by municipalities in BC is to negotiate for community amenities as part of a proposed rezoning. The *Local Government Act* does not enable municipalities to impose a fee or tax on rezoning, but rezoning is a discretionary act of Council. When exercising this discretion, Council should consider whether a rezoning will impose unacceptable impacts or financial burdens on the community. Therefore, it has become common practice by many municipalities for developers to propose, or municipalities to seek, amenities from projects that are applying for changes in use or density in order to help address the needs or impacts of new development.

These amenity contributions are often negotiated site-by-site, but sometimes municipalities provide to developers a clear indication of the community's desires for the amenities, be it recreational amenities, or cash-in-lieu that they hope to achieve in rezoning. These targets are based on an evaluation of the impacts of new projects, the needs of new residents, and the ability of the project to provide amenities while remaining financially attractive for landowners and developers.

When evaluating a CAC by way of negotiation, it is important to ensure that applicants/developers see CAC's as fair and reasonable. CAC's also help community members to be more accepting of new development. This can be done by applying the principles of *nexus* and *proportionality* to the negotiation practice. As explained in the Ministry Guide - amenities adhere to the principle of *"nexus"* when there is a direct, demonstrable link between the CAC and the impacts of the new development. As an example, if neighbourhood recreation services are already limited or lacking, both the applicant/developer and existing residents are far more likely to support CAC's targeted for the expansion of recreational facilities, rather than for an undetermined project or in another area of the Village not proximate to the impacted area.

The principle of "proportionality" is met when a CAC from an applicant/developer is proportional to the impact that their development generates and is consistent with the CAC's made by other similar developments. Staff are aware that the size, nature, or location of a certain new development may impact the community's need for amenities more than others. As such, a developer cannot be expected to volunteer an amount higher than the share that their development may have or is expected to have upon the community's requirement for the new amenity. The use of the principles of *nexus* and *proportionality* address the requirement to consider the specific needs and character of a development in a specific neighbourhood and the impacts that it may have on a neighbourhood or the overall community.

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## **Pemberton's Needs for Amenities**

Table 1.

The Village of Pemberton has several plans, policies, and bylaws that call for important community amenities. **Table 1** below summarizes some of the major anticipated amenities and facilities to meet the needs of this growing community that have been previously identified in various policies, plans and bylaws. Those items denoted with an  $(\sqrt{)}$  have been or are soon to be realized.

| Table 1:  |   |
|---|---|
| Policy, Plan, or Bylaw  | Community Needs   |
| Official Community Plan 2011<br>(Schedule B – Amenity<br>Zoning Priorities) | <ul> <li>Top Priorities <ul> <li>Arena</li> <li>Indoor Pool</li> <li>Public Washrooms (√)</li> <li>Parks (refer to Parks and Open Spaces Master Plan) (√)</li> <li>Trails (refer to Pemberton and Area C Trails Master Plan)</li> <li>Agri-tourism amenities including a downtown multiuse public facility [Downtown Barn] (√) and community greenhouses</li> <li>Affordable and special needs housing</li> </ul> </li> </ul> |
|   | <ul> <li>Medium Priorities</li> <li>Curling Rink</li> <li>Performing Arts Studio</li> <li>Outdoor Pool</li> <li>Seniors Centre (√)</li> <li>Regulation Indoor Gym</li> <li>Seniors Housing/care</li> </ul>  |
|   | <ul> <li>Other Amenities</li> <li>Community Kitchen (√)</li> <li>Outdoor Skating Rink</li> <li>Public Use Airport Building (√)</li> <li>Squash/Racquet ball</li> <li>Bus Shelters (√)</li> <li>Track</li> <li>Public Shower facility (√)</li> <li>Indoor Tennis</li> <li>Campground</li> <li>Equestrian Stadium</li> <li>Clubhouses at Playing Fields (√)</li> </ul>  |

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| Pemberton & Area Recreation<br>Facilities Implementation Plan<br>2013 | <ul> <li>Top Preferred Facilities (cumulative score):         <ol> <li>Standalone Arena</li> <li>Standalone Field House</li> <li>Soccer (√), Lacrosse/Football Field</li> <li>Arena/Field House</li> <li>Indoor Pool</li> </ol> </li> </ul>   |
|---|---|
| Parks and Open Spaces<br>Master Plan 2007                             | <ul> <li>Expansion of parks, playgrounds, bike trails, and outdoor recreation facilities at a variety of locations in the community (√)</li> <li>Improvements to trail network throughout the community (√)</li> <li>Enhancements to One Mile Lake Park including washroom facilities, signage, garbage facilities (√)</li> </ul>   |
| Downtown Enhancement<br>Strategy 2009                                 | <ul> <li>Focused &amp; designed open spaces (√)</li> <li>Activated park land in downtown area</li> <li>Appropriate Parking and Transit facilities (√)</li> <li>Traffic changes to enhance pedestrian movement(√)</li> <li>Development of a downtown iconic building (√)</li> <li>Art, cultural &amp; heritage pieces that showcase our authentic identity (√)</li> <li>Improved signage, landscaping, lighting, street furniture (√)</li> </ul> |
| One Mile Lake Park Master<br>Plan 2016                                | <ul> <li>Park improvements to the main beach, cliff dock, and dog beach including expanded green space (√), public seating (√), bike racks (√), lake amenities such as a swim raft (√), additional dock space (√), garbage and recycling containers (√), better signage, trail improvements (√)</li> </ul>  |
| Agricultural Parks Master<br>Plan 2016                                | <ul> <li>Development of new community gardens/outdoor<br/>classrooms/communal orchards/community<br/>supported agriculture on identified crown tenured<br/>and crown granted properties (i.e., Lot 13) with<br/>infrastructure including raised beds, hoop houses,<br/>tool sheds, bicycle racks, seating, garbage<br/>receptacles, new trail connections, water supply,<br/>electric fencing, etc.</li> </ul>                                  |
| Draft Public Art Policy* (still in draft form)                        | <ul> <li>Public art contributions and other site<br/>enhancements from new developments in the<br/>downtown to provide a more vibrant environment<br/>for businesses, residents and visitors</li> </ul>   |
| Village of Pemberton Cycling<br>Network Plan                          | <ul> <li>Provide a continuous bicycle network through a phased implementation approach</li> <li>Prioritize the safety of active transportation users at intersection and crossings</li> </ul>   |

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| <ul> <li>Ensure streets designated as part of the network are maintained and in good repair and that the Village has the equipment to maintain all types of proposed bicycle infrastructure</li> <li>Provision of safe and secure bicycle parking within Village rights-of-way and Village owned and operated facilities</li> <li>Provision of public end-of-trip facilities such as change rooms, showers, bicycle repair stands and</li> </ul> |
|--|
| storage space  |
| <ul> <li>Development of Cycling Wayfinding</li> </ul>  |
| <ul> <li>Support and promotion of Cycling Education</li> </ul>   |
| Programs   |

## **Recommended Approach**

Staff is recommending an approach that utilizes a combination of density bonus zoning (where appropriate) and case by case negotiation as the preferred method for obtaining community amenities and has prepared the attached Draft Policy for discussion purposes.

The recommended approach (Draft Policy) lays out the basis for the negotiation. Please note that this does not contain "targets", rates, or anticipated amounts for the following reasons:

- i. CACs should not be presented as a fixed charge they need to be negotiated on a case by case approach.
- ii. Setting a target can be seen as a sign that the Council is trying to sell rezoning applications or use them to generate a revenue stream.
- iii. The public could lose faith in the zoning bylaw and the overall confidence of the development process if a rezoning application is perceived to be up for sale. (The use of a CAC has no express authority under the *LGA* and cannot be imposed or required, but Council does however have discretionary authority through the rezoning process to expect community amenities in the case of density bonusing).

The recommended approach also does not use land lift as a means of calculating an anticipated amount. Land lift is a concept that many other municipalities have used to calculate appropriate CAC's; it refers to the financial value gained by the developer as a result of rezoning and increased floor space/density. This approach is not recommended as a best practice.

The Draft Policy permits in-kind contributions by way of a Land Use Agreement registered on Title. To date, the Village has collected CAC's by cash and in-kind contributions. Although the funds have been allocated to a reserve account, it is recommended that the Village establish a formal *Community Amenity Contribution Reserve Fund Bylaw* for those contributions received by cash.

With respect to providing predictability for the development industry on this issue and to ensure that the respective developers are treated equally, Staff suggests that the Draft Policy be shared with the development industry for their feedback prior to further consideration by Council.

Regular Council Meeting No. 1518 Revised Community Amenity Contribution Policy June 30, 2020 Page **9** of **10** 

## COMMUNICATIONS

It is recommended that Staff consult with the development industry to gain their comments on the recommended approach. In this regard, the Draft Policy will be distributed to the development industry via email with the option to follow-up through a telephone call or Zoom focus group meeting.

## LEGAL CONSIDERATIONS

There are three (3) specific legal risks that local governments should avoid with respect to CAC's:

- 1. **Imposing an unauthorized fee, charge or tax on re-zonings:** Section 462, *LGA* states that a local government must not impose a fee, charge or tax or require a work or service to be provided unless these are expressly provided for in the legislation. A CAC is a voluntary contribution; it cannot be construed as an obligatory payment.
- 2. Not keeping an open mind: Councils exercise their legislative discretion to approve zoning and should not pre-determine how they will vote until they consider the merits of an application on a case-by-case basis and hear from the affected residents during a public hearing. In other words, rejecting a rezoning proposal unless a proponent provides a certain contribution or noting acceptability that a rezoning will pass if a proponent provides a certain contribution would not be indicative of keeping an open mind.
- 3. Using technical reviews such as building and subdivision approvals to obtain amenities: Certain development approval decisions are undertaken by unelected officials like the Building Inspector or Subdivision Approving Officer. The legislation does not allow these types of reviews to be made or influenced by elected officials, and therefore it would be inappropriate for Council to use these approval processes to expect contributions from a developer.

The Draft Policy considers each of these legal risks and presents an approach that Staff understands to be legally sound. The Policy will be presented for legal review before being presented to Council for adoption.

## **IMPACT ON BUDGET & STAFFING**

This report and Draft Policy were prepared in-house with the assistance of the Village's Contract Planner. Further review of the CAC Policy and consultation with developers can be accommodated in the Development Services Department 2020 Work Plan.

## **INTERDEPARTMENTAL IMPACT & APPROVAL**

There are no interdepartmental impacts or approvals required at this time.

## IMPACT ON THE REGION OR NEIGHBOURING JURISDICTIONS

A review of this initiative has no impact on other jurisdictions.

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## **ALTERNATIVE OPTIONS**

Alternative Options for consideration are as follows:

**Option One**: Support the Draft Policy that establishes guidelines for negotiating CAC's on a case by case basis and direct Staff to seek input from the development industry, on the understanding that going forward the Village will use a combination of negotiations and amenity zoning where most applicable.

This option is recommended.

**Option Two**: Do not support the attached Draft Policy and direct Staff to only use amenity zoning (density bonusing) as permitted in the *Local Government Act*.

This option is not supported as it limits the Village's ability to obtain tangible community amenities in cases where developers choose to develop at the allowable base density.

**Option Three**: Maintain the current CAC policy as adopted in 2007 and continue to negotiate with potential developers based on the current practice.

This option is not recommended as it does not meet the legislative requirements and limits the type of amenities to which contributions can be applied/allocated.

## RECOMMENDATION

**THAT** Council Support the Draft Policy that establishes guidelines for negotiating Community Amenity Contributions (CACs) on a case by case basis and direct Staff to seek input from the development industry, on the understanding that going forward the Village will use a combination of negotiations and amenity zoning where most applicable.

## Attachments:

**Appendix A**: Draft Policy for discussion purposes

**Appendix B**: Community Amenity Policy – 2007

**Appendix C**: The Ministry's short guide to CAC's

**Appendix D**: OCP Schedule 2 – Amenity Zoning Priorities

| Prepared by:     | Lisa Pedrini, Manager of Development Services<br>Cameron Chalmers Consulting, Contract Planner |
|------------------|--|
| CAO Approval by: | Nikki Gilmore, Chief Administrative Officer  |

|                 |                      |              | Appendix               |
|-----------------|----------------------|--------------|------------------------|
| Village of P    | EMBERTON             | •            | / Amenity<br>on Policy |
| Department:     | Development Services | Policy No.:  | DEV-009                |
| Sub-department: | Planning             | Created By:  | Development Services   |
| Approved By:    | Council              | Amended By:  |                        |
| Approved Date:  |                      | Amendment:   |                        |
| Meeting No.:    |                      | Meeting No.: |                        |

## INTENT

Village Council has established a Community Amenity Policy (Policy) in order for Village to capitalize on the opportunity to gain public facilities, services and amenities through voluntary contributions from proponents in the rezoning process. This policy is intended as a framework for how the Village of Pemberton will define community amenities, and a framework for establishing and securing Community Amenity Contributions through the rezoning process.

## DEFINITIONS

**Community Amenity Contribution**: means a voluntary contribution made by a proponent of a residential or mixed-use rezoning application to provide land, improvements to land, or funds provided in lieu of land or improvements for a public or community benefit. Community Amenity Contributions are over and above any land dedications, works or services required under provincial legislation or municipal policy to service the development. Examples of Community Amenities include, but are not limited to, affordable housing, recreation land and facilities development, public buildings or attractions, public art, and other improvements deemed by the Village to provide broad public benefit over and above what is required to service the development, as determined by the Village of Pemberton.

**Community Benefit Contribution**: means lands, improvements to land for a public benefit, or other contributions towards the community which are a required component of a development project, but provide broader public benefits. Examples of Community Benefits include, but are not limited to, onsite trail connections, excess usable park dedication, significant park and playground improvements on public park-land, off-site utility services that improve existing public infrastructure, or other improvements made by the proponent that are deemed to add benefit to the public beyond what is required to service the development as determined by the Village of Pemberton.

**Required Service**: means any land, improvement to land, or other contribution required to service an individual development in accordance with provincial and municipal regulations, or generally accepted engineering practices. Examples may include, but not be limited to, park dedications under provincial legislation, road dedications and improvements, habitat setback areas, utilities and infrastructure. Required Services also include excess or extended works and services, or other works or services subject to a Latecomer's Agreement, Development Cost Charge Bylaw offsets, or any other means of cost recovery.



## INTRODUCTION

Land development in the Village of Pemberton provides an opportunity to realize the vision for the community contained in the Village of Pemberton Official Community Plan (OCP). The OCP describes a community of diverse people living in a community rich with opportunity and amenity. Often the physical amenities that help form a community are delivered through voluntary contributions from developers through rezoning processes that add value to their land.

In recent years, the *Local Government Act* has given increasing authority to municipalities to negotiate community amenity contributions through the rezoning process. Specifically, there is a legislated ability to secure community amenities in specific amenity zones, and the range of tools available to municipalities to secure affordable housing contributions continues to grow.

This Policy describes how the Village of Pemberton will define, negotiate, and secure community amenity contributions through the residential and mixed-use rezoning process. It is intended to acknowledge that community amenities are an important component of the rezoning process, while also recognizing that land development in small communities often involves the potential for different costs and different market responses than in large cities. The goal is to ensure the Village of Pemberton has a predictable process for assessing community amenities on a case-by-case basis that ensures a balance between the *Community Amenity Contribution negotiations* and the financial capability of each project to contribute.

## PURPOSE

The purpose of this policy is to serve as a framework for negotiating voluntary *Community Amenity Contributions* with developers of residential and mixed-use development projects applying for rezoning. It establishes definitions around which contributions will qualify as community amenities, a framework for how the amenities will be negotiated and expectations for how the Community Amenity Contributions will be secured in advance of the rezoning process.

The intent of this policy is to provide greater certainty and a fair and equitable approach for community amenity negotiations to provide clarity to Council, the community, and the development industry.

## APPLICABILITY

- 1. This Policy applies to all rezoning applications for residential or mixed-use development that propose an increase in density, development opportunity, or any other zoning change that will increase the land value of land subject to the application.
- 2. This Policy is companion to other municipal policies and bylaws that may impose development requirements or suggest amenities, such as any Affordable Housing policies, recreation and trails plans and policies.
- 3. This Policy does not apply to rezoning applications to facilitate affordable housing, seniors housing, or other non-market housing projects as determined by the Village of Pemberton.
- 4. This Policy supersedes any and all previous Community Amenity Contribution policies.

## ROLES AND RESPONSIBILITIES

5. Council of the Village of Pemberton is responsible for the formal acceptance of *Community Amenity Contributions* through the rezoning process.

| Department:    | Development Services | Policy No.: | DEV-009 | Page 4 of 4            |
|----------------|----------------------|-------------|---------|------------------------|
| Approved Date: |                      | Created By: | DS      | Village of Pemberton   |
|                |                      |             |         | Village of Ferribertor |



6. The Manager of Development Services and/or Chief Administrative Officer is responsible for leading the *Community Amenity Contribution* negotiations in the context of other *Community Benefits* and project *Servicing Requirements*, and making recommendations to Council on the nature and type of amenities offered and the recommended means of securing them contemporaneously with the rezoning process.

## PROCESS FOR NEGOTIATING COMMUNITY AMENITY CONTRIBUTIONS

- 7. Potential *Community Amenity Contributions* will form part of the pre-application process for rezoning applications, and Staff shall make prospective applicants aware of Council's *Community Amenity Contribution* Policy and initiate discussion of potential amenity options to be considered in the application.
- 8. Upon acceptance of an eligible rezoning application, Staff shall commence negotiations on possible *Community Amenity Contributions*, with particular regard to bylaws and policies of the Village that may direct consideration of affordable housing, recreation amenities, or any other policy guidance regarding potential amenities for each application.
- 9. Community Amenity Contributions will be analyzed for each application in the context of project Servicing Requirements and Community Benefits that emerge through the application review process to establish a reasonable opportunity for Community Amenity Contributions.
- 10. Community Amenity Contributions will utilize a cost-based approach in which the estimated cost of each Servicing Requirement, Community Benefit, and Community Amenity Contribution will be analyzed in determining Community Amenity Contributions.
- 11. For large rezoning applications, Staff may request or prepare an estimate of the increase in land value proposed in the rezoning to assess reasonable levels of *Community Amenity Contribution* in relation to the land-value increase expected through the rezoning process.
- 12. In considering *Community Benefits* in the context of a *Community Amenity Contribution* negotiation, Staff shall estimate the proportionate cost of benefit allocated to the project and the proportionate providing benefit to the broader community.
- 13. In considering *Community Benefits* and *Community Amenity Contributions*, Staff shall assess the long-term and lifecycle cost burdens imposed on the Village by receiving and maintaining the amenity.
- 14. At the conclusion of the *Community Amenity Contribution* negotiations, Staff shall seek formal agreement in the form a *Community Amenity Contribution* offer letter or other summary from the Applicant clearly stating the proposed *Community Amenity Contributions* offered through the rezoning process.

## PROCESS FOR DETERMINING COMMUNITY AMENITIES

15. At consideration of First Reading of an eligible rezoning bylaw, Staff shall provide Council with a summary of the *Community Amenity Contribution* negotiation, identifying all relevant *Servicing Requirements, Community Benefits,* and *Community Amenity Contributions* associated with the project used to determine the *Community Amenity Contribution* offer.

| Department:    | Development Services | Policy No.: | DEV-009 | Page 4 of 4         |
|----------------|----------------------|-------------|---------|---------------------|
| Approved Date: |                      | Created By: | DS      | Village of Pemberto |



- 16. At consideration of First Reading, Staff are encouraged to provide Council a *Community Amenity Contribution* offer summary from the Applicant wherever appropriate.
- 17. At consideration of First Reading, Staff will advise Council of the means by which the *Community Amenity Contributions* will be secured, and the estimated time to delivery of each amenity.
- 18. If necessary, Staff may seek a resolution of Council establishing any pre-requisites to zoning bylaw adoption necessary to secure and implement a *Community Amenity Contribution*.
- 19. A summary of proposed *Community Benefits* and *Community Amenity Contributions*, including the nature and type of contribution and the means to deliver or secure, shall be made available to the public in advance of Public Hearing to any eligible rezoning bylaw.
- 20. The *Community Amenity Contribution* negotiation shall be deemed complete upon Third Reading to the proposed rezoning bylaw.

## SECURING DELIVERY OF COMMUNITY AMENITY CONTRIBUTIONS

- 21. At any point before granting Third Reading to a proposed eligible rezoning bylaw, Council may establish pre-requisites to zoning bylaw adoption to direct the security of the *Community Amenity Contributions* by way of delivery, or agreement to deliver *Community Amenity Contributions* through the development.
- 22. Any necessary agreements in relation to *Community Benefit* and *Community Amenity Contribution* negotiations shall be executed by the proponents and delivered to the Village in a registerable form in advance of consideration of zoning bylaw adoption.

## TRANSFER OF COMMUNITY AMENITY CONTRIBUTIONS

- 23. Unless otherwise secured through a zoning bylaw amendment, servicing agreement, land development agreement or other agreement acceptable to the Village of Pemberton, all *Community Amenity Contributions* shall be provided prior to adoption of the eligible rezoning bylaw.
- 24. Any funds received by the Village in satisfaction of the *Community Amenity Contributions* of any rezoning application shall be deposited in the appropriate reserve account as determined by the Village prior to adoption of the rezoning bylaw. Should the rezoning bylaw not be adopted, the funds be to returned in full.

## **COUNCIL DISCRETION**

25. Nothing in this policy is intended to impair or fetter the discretion of Council with respect to adopting any bylaw or amendment thereof.

| Department:    | Development Services | Policy No.: | DEV-009 |
|----------------|----------------------|-------------|---------|
| Approved Date: |                      | Created By: | DS      |

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Adopted: Council No. 1185 July 10, 2007

## PURPOSE

Village Council has established a Community Amenity Policy (Policy) in order for Village to address the burden which residential development imposes on the demand for public facilities, services and amenities. As part of the Village Council exercising its discretion to rezone land, and the Approving Officer considering subdivision applications, the Policy addresses certain public interest considerations.

## COMMUNITY AMENITY POLICY

- 1. Proponents of **rezoning applications**, which include a residential component of more than 3 units, are requested by Council to address the burden which residential development imposes on demand for public facilities, services and amenities by contributing to a fund for their provision, improvement and expansion through the payment of a *Community Amenity Contribution*. If the proponent does not offer to contribute to the fund, Council may deny the application because the proposed development would impose a special burden, which the Village is not in a position to financially contend with.
- 2. Proponents of **subdivision applications**, which have not been the subject of a rezoning application, are requested by Council to address the burden which residential development imposes on demand for public facilities, services and amenities by contributing to a fund for their provision, improvement and expansion through the payment of a *Community Amenity Contribution*. If the proponent does not offer to contribute to the fund, the Approving Officer may deny the application because the proposed development would impose a special burden, which the Village is not in a position to financially contend with.
- 3. The *Community Amenity Charge* is **\$9165 / building lot** and **\$6110 / multiple family dwelling.** The detail of the manner in which this charge has been determined is outlined in Appendix A of this Policy.
- 4. At the time of submission of a rezoning application, the proponent shall submit a *Confirmation of Contribution Form*, a copy of which is attached as Appendix B of this Policy.

- 5. Prior to adoption of the bylaw that will rezone the proponent's land, proponents will be requested to enter into a 219 restrictive covenant agreement with the Village that will require that the *Community Amenity Policy* contribution will be payable to the Village of Pemberton by way of certified cheque at the time of application for building permit for multi-family projects, or at the time of subdivision for single-family lots.
- 6. Prior to the approval of a subdivision, the *Community Amenity Policy* contribution shall be payable to the Village of Pemberton by way of certified cheque.
- 7. The *Community Amenity Policy* will be deposited in a Community Amenity Reserve Fund that will only be used by Council to assist in the financing of the following types of community amenities that includes but is not limited to:
  - an indoor swimming pool complex;
  - □ an arena;
  - outdoor skating rink
  - □ a water park;
  - □ a skateboard park; and
  - □ bike park
- 8. Council will review the *Community Amenity Policy* every two years.
- 9. This policy was adopted as presented at Regular Council Meeting No. 1185, held Tuesday, July 10, 2007.

## APPENDIX A

## DETAILS ON THE CALCULATION OF THE COMMUNITY AMENITY CONTRIBUTION

- Projected cost of community amenities as per Lot 12 and 15 Master Plan skateboard and bike park \$660,000; water park \$150,000; skating rink \$150,000; and, youth centre and landscaping on Lot 15 \$660,000. Total \$1.62 million
- Assume a split of 50% Village of Pemberton and 50% SLRD \$ 810,000 each of the cost of amenities as per Lot 12 and 15 of the Master Plan
- New Swimming Pool \$8 million<sup>1</sup>
- ➢ New Arena − \$5.6 million<sup>2</sup>
- > Total Projected Cost of Community Amenities \$14.41 million
- > Estimate of projected amount of development (20 years): 840 Dwelling Units
- > Assume \$ 14.41 million split 53% existing residents and 47% new residents
- > Cost of community amenities attributed to New Development \$6.77 million
- Estimated Dwelling Unit Mix 66.3% single family, 33.3% multi family
- ➢ Assume Single Family Dwelling Premium Factor − 1.5<sup>3</sup>
- Proposed Community Amenity Contribution: \$9165 per building lot
   \$6110 per multiple family dwelling

<sup>&</sup>lt;sup>1</sup> Based on 2005 Pemberton and Electoral Area C Master Plan Update Focus on Major Facilities

<sup>&</sup>lt;sup>2</sup> Based on 2005 Pemberton and Electoral Area C Master Plan Update Focus on Major Facilities

<sup>&</sup>lt;sup>3</sup> The Community Amenity Charge is 50% higher for single family building lots

## APPENDIX B

## CONFIRMATION OF CONTRIBUTION TO OFFSET BURDEN OF REZONING AND SUBDIVISION

| By:  |                   |  |
|------|-------------------|--|
|      |                   |  |
|      |                   |  |
|      | (the "Applicant") |  |
| Re:  |                   |  |
| 1101 |                   |  |
|      |                   |  |

VILLAGE OF PEMBERTON

To:

("the Lands")

WHEREAS the Applicant has applied to rezone and/or subdivide the lands so as to permit a residential development greater than three dwelling units;

AND WHEREAS the Applicant acknowledges that such a rezoning and/or subdivision imposes a special burden on the Municipality in relation to public facilities, services and amenities required to support such development;

THEREFORE, the Applicant volunteers and agrees to contribute the sum of **\$9165 per building lot** and **\$6110 per multiple family dwelling unit** permitted by the rezoning in order to help offset this special burden in the event that the rezoning is approved by the Council of the Village of Pemberton, or a subdivision is approved by the Village of Pemberton Approving Officer.

The Applicant acknowledges that this contribution is being made voluntarily and that it is not in lieu of development cost charges, or any other contribution, fee, charge or levy which the Village of Pemberton is authorized to impose.

Dated this \_\_\_\_\_\_, \_\_\_\_\_,

Signature \_\_\_\_\_

(Applicant)

Adopted: Council Meeting No. 1185 July 10, 2007

Appendix C

The Short Guide - Community Amenity Contributions: Balancing Community Planning, Public Benefits and Housing Affordability

Ministry of Community, Sport and Cultural Development



## March 2014



#### Acknowledgements

This guide was drafted in consultation with numerous local governments, the development and building sectors, and the legal and academic communities. The Ministry would like to thank everyone who contributed to the development of this guide.

## Ministry of Community, Sport and Cultural Development

Contact the Ministry of Community, Sport and Cultural Development for answers to questions about the material contained in this guide or other aspects of community amenity contributions.

Ministry of Community, Sport and Cultural Development Local Government Division Intergovernmental Relations and Planning PO Box 9841 Stn. Prov. Govt. Victoria, B.C. V8W 9T2 Phone: 250 387-4037 Website: www.cscd.gov.bc.ca/lgd/contacts/department.htm

#### Disclaimer

The information contained in this guide is provided as general reference and, while all attempts have been made to ensure the accuracy of the material, the guide is not a substitute for provincial legislation and it does not constitute legal advice.

Ministry of Community, Sport and Cultural Development

> Village of Pemberton Regular Council Meeting No. 1518 Tuesday, June 30, 2020 61 of 279

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## **Community Amenity Contributions: Balancing Community Planning, Public Benefits and Housing Affordability**

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| CACs Can Impact Housing Affordability                                  | 1 |
| Exhibit 1: Impact of CACs on the price developers can pay for the land | 2 |
| Exhibit 2: A simplified comparison - impact of CACs on housing prices  | 2 |
| Summary of Recommended Practices for CACs                              | 3 |

## Purpose of the Short Guide to Community Amenity Contributions

When a local government rezones land, it usually increases the land's value which provides a financial benefit to the applicant, usually the owner or a developer. Increasingly, local governments are seeking to capture part of that financial benefit in order to help fund new infrastructure or provide other public benefits. While rezoning land presents an opportunity to obtain these "community amenity contributions" (CACs), there are also some important legal and public policy risks that need to be considered.

To help local governments appreciate the opportunities and risks of obtaining CACs, the Ministry of Community, Sport and Cultural Development has produced a guide, *"Community Amenity Contributions: Balancing Community Planning, Public Benefits and Housing Affordability"*. The purpose of this Short Guide is to provide the highlights of the full length guide. Those interested in more detailed information should view the full length document available on the Ministry's website: <u>http://www.cscd.gov.bc.ca/lgd/intergov\_relations/library/CAC\_Guide\_Full.pdf</u>

## CACs Are Both an Opportunity and a Risk

Growth creates demands for new or expanded infrastructure and amenities. The cost of meeting these demands can be substantial. While provincial legislation allows local governments to require developers to provide infrastructure, such as roads, parks, water, drainage and sewer facilities, not all impacts of development are fully covered by the legislation. Local governments wanting to recover the full costs of providing infrastructure and community amenities associated with growth, such as recreation facilities or fire halls, are increasingly looking for alternative means of funding, including CACs secured during the rezoning process.

Before deciding if and how to pursue CACs, however, local governments need to ensure that these CACs are obtained legally, fairly and in a way that maintains public confidence in the local government and its community plan.

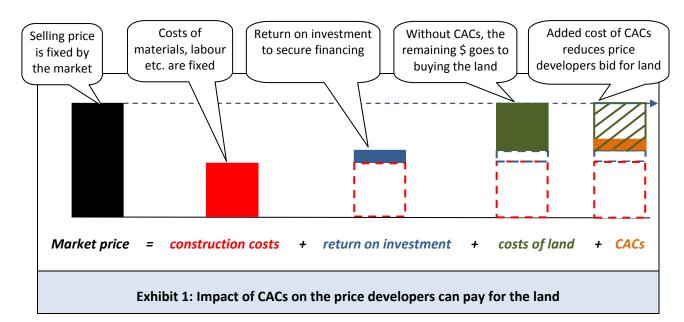
Local governments do not have legal authority to require applicants for rezoning to pay CACs. They must ensure that any CACs are obtained as part of a negotiation process. Local governments must also not commit to pass a rezoning bylaw on the condition that CACs are provided. Council and regional board members are legally required to remain open-minded on a proposed rezoning, until they have heard the public's perspectives at the public hearing.

It is important to keep in mind that zoning is intended to implement the community plan and should not be seen as a revenue source. Being perceived to be "selling zoning" can undermine public confidence in the community plan and the council/regional board's commitment to the plan.

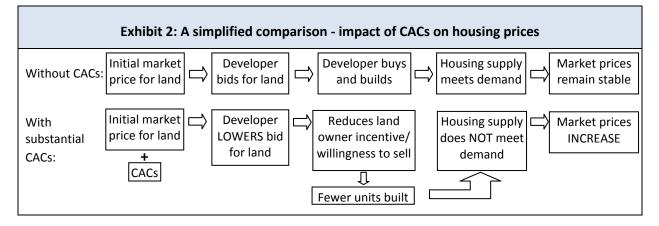
## **CACs Can Impact Housing Affordability**

Another important consideration is the relationship between CACs and housing affordability. If not managed carefully, CACs have the potential to decrease the supply of new housing and increase housing prices. In a nutshell, a housing developer faced with significant CACs cannot simply increase the selling price of the units, as the selling price is set by the market.

Ministry of Community, Sport and Cultural Development Labour, materials and other construction costs are also fixed. Choosing to reduce their return on investment to absorb these additional costs is also not usually an option. To secure financing, a developer needs to ensure that their *pro forma* shows a normal financial return. As illustrated in Exhibit 1, the only practical option for the developer is to try and offset the cost of CACs by reducing the amount they offer to land owners to buy the site.



In land markets where supply is limited, as in many of B.C.'s growing communities, large CACs leave fewer dollars for developers to purchase land. If land owners are reluctant to sell for a reduced price, developers do not proceed to develop, resulting in a reduction in the supply of new housing, which in turn contributes to higher housing prices (as illustrated below in Exhibit 2).



The above diagrams show that while CACs cannot directly increase the price of housing for a particular development, if they are widely used, CACs can push up prices in the overall market.

To ensure that housing affordability is not being compromised, local governments need to ensure that CACs are kept at a modest level. A policy of trying to maximize the amount of CACs risks driving up housing prices.

## **Summary of Recommended Practices for CACs**

The following outlines recommended practices for local governments currently, or considering, using, CACs:

## 1. Avoid Legal Risk and Maintain Public Confidence

- Negotiate, do not impose CACs. A common misperception is that local governments have authority to **impose** CACs as a condition of rezoning. In fact, the *Local Government Act* [s. 931(6)] prohibits this. CACs must be negotiated.
- Avoid the perception that zoning is for sale. Elected officials must remain "open-minded" during the rezoning process, and must not *commit* to approving a rezoning subject to CACs. Zoning should not be considered a revenue stream. The perception of "selling zoning" undermines public confidence in the local government and the community plan.

## 2. Plan Ahead

• Identify potential amenities that could be partly funded through CACs when preparing or updating the community plan, ideally identifying the priorities at the neighbourhood level.

## 3. Seek Modest Contributions and Follow an Approach that Balances Community Amenities and Housing Affordability

- The potential impact of CACs on housing affordability is higher where CACs are a significant portion of the cost of the development.
- Since CACs increase the cost of a project, it is important to consider who ultimately pays for these additional costs, and how they may affect housing supply and housing prices. This issue is of particular concern in areas where land is in short supply.
- Strategies that facilitate an increase in the supply of housing have a positive effect on affordability.
- The impact of CACs will be different in different areas or circumstances, so a flexible approach is best.

## 4. Apply Development Cost Charge (DCC) Principles to CACs

- Ensure a direct, demonstrable link ('nexus') between CACs and the impacts of new development.
- Ensure CACs are proportional to the impact of the development and consistent with the CACs made by other applicants/developers.
- Be transparent about the amount of CACs and how they will be used.
- Borrow the principles and practices that apply to DCCs to develop (tables of/schedules of) estimated CAC amounts.
- CACs should only be used for capital costs. Local governments should be sure that they have the budget capacity to deal with operational and repair costs over time.

## 5. Engage the Development Community

• Be aware of how CACs could impact projects and their viability, to avoid contributing to higher housing prices.

- **6.** Choosing an Approach to Obtaining Amenities It is recommended that local governments consider the following strategies (in order):
  - Adopt an "affordability by design" approach to writing zoning bylaws i.e. zones that allow for design features that reduce the costs of producing housing units and/or encourage additional units. Examples include reducing or eliminating setbacks and parking requirements.
  - Use density bonus zoning modest levels of density bonus tied to modest contributions, encourage new development while minimizing the impact on housing affordability.
  - Set targets for CACs and be open to negotiation at time of rezoning. These targets should be modest to minimize impact on housing affordability.
  - Negotiating CACs based on a "lift" approach is inconsistent with the principles set out in this Guide, and is the approach most likely to reduce the supply of developable land and housing, thereby contributing to higher housing costs. The CAC principles set out in this Guide, including 'planning ahead', nexus and proportionality, support an approach that clearly identifies community needs and the impacts associated with new development, and links the CAC not to the "lift" in land value, but rather to the cost of providing a package of amenities that makes sense given the development being proposed.

This Short Guide has outlined for B.C. local governments some of the risks, challenges and recommended practices related to obtaining CACs. Most of the recommended principles and practices apply equally to CAC and density bonus approaches. The guide has also described the relationship between CACs and housing affordability, and encourages practices that do not risk inadvertently causing housing prices to increase. Since the impact of CACs will vary, it is suggested that BC local governments be flexible in their approach to obtaining CACs.

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# Schedule B - Amenity Zoning Priorities

The following are important community amenities, required to address both short and long term community needs. It is the intent that these amenities in part be achieved through bonus density provisions in the zoning bylaw (Section 904, **Local Government Act**).

The weighing of the amenities with the bonusing has not yet been determined, as some developments may lend themselves to certain amenities more than others. Cash contributions may also be considered in the density bonusing provision.



## Top Priorities:

- Arena
- Indoor Pool
- Public Washrooms
- Parks (refer to Parks and Open Space Master Plan/Map G)
- Trails (refer to Pemberton and Area C Trails Master Plan/Map H)
- Agri-tourism amenities including a downtown multiuse public facility and community greenhouses
- Affordable and Special Needs Housing

## Medium Priorities:

- Curling Rink
- Performing Arts Stage
- Outdoor Pool
  - Seniors Centre
- Regulation indoor gym
- Seniors housing/care

## **Other Amenities:**

- Community kitchen
- Outdoor skating rink
- Public use airport building
- Squash/racquet ball
- Bus shelters
- Track
- Public shower facility
- Indoor tennis
- Campground
- Equestrian stadium
- Clubhouses at playing fields

Village of Pemberton Regular Council Meeting No. 1518 Tuesday, June 30, 2020 68 of 279





| Date:    | Tuesday, June 30, 2020                        |
|----------|---|
| То:      | Nikki Gilmore, Chief Administrative Officer   |
| From:    | Tom Csima, Manager of Operations and Projects |
| Subject: | 2019 Drinking Water System Annual Report      |

**REPORT TO** 

COUNCIL

## **PURPOSE**

To present to Council the Village of Pemberton 2019 Drinking Water System Annual Report.

#### BACKGROUND

Each year, in the first half of the subsequent year, municipalities are required by the Provincial *Action Plan for Safe Drinking Water in British Columbia (2002)* to prepare a Drinking Water System Annual Report. This report is filed with Vancouver Coastal Health Authority and, once reported to Council, made available on the local governments' website.

#### **DISCUSSION & COMMENTS**

This report outlines the consumption data for the Village of Pemberton water supply, as well as information on various sampling results including Chlorination, chemistry, pH, Alkalinity, trihalomethane (THM), and bacteriological tests.

For a more thorough comparison, the previous ten (10) years' (2009 – 2018) reports are also available on the Village Website at: https://www.pemberton.ca/municipal-services/utilities/pemberton-water

## COMMUNICATIONS

The Village continues to educate residents on the importance of conserving water through notices and information on the Village website, Facebook Page, ENEWS and signage. Water restriction signage is erected each spring at the entrance of the Village and in neighbourhoods around the Village which establishes the four water restriction levels with an arrow indicating the current level.

## **LEGAL CONSIDERATIONS**

There are no legal, legislative or regulatory considerations at this time. Receipt by Council and posting of the 2019 Drinking Water System Annual Report meets with the requirements as set out in the *Action Plan for Safe Drinking Water in British Columbia* and the Vancouver Coastal Health Authority.

Regular Council Meeting No. 1518 2019 Annual Drinking Water Report Tuesday, June 30<sup>th</sup>, 2020 Page 2 of 2

## **IMPACT ON BUDGET & STAFFING**

The preparation of the 2019 Drinking Water System Annual Report is an annual task of the Operations Department and has been accommodated in the departmental work plan.

## **INTERDEPARTMENTAL IMPACT & APPROVAL**

There are no interdepartmental impacts at this time.

## IMPACT ON THE REGION OR NEIGHBOURING JURISDICTIONS

This report has no impact on other jurisdictions.

## ALTERNATIVE OPTIONS

There are no alternative options for consideration.

#### **RECOMMENDATIONS**

**THAT** Council receives the 2019 Drinking Water System Annual Report for information.

#### Attachments:

Appendix A: 2019 Drinking Water System Annual Report.

| Submitted by:    | Tom Csima, Manager of Operations and Projects |
|------------------|---|
| CAO Approval by: | Nikki Gilmore, Chief Administrative Officer   |

## **APPENDIX A**



Box 100 | 7400 Prospect Street Pemberton, BC V0N 2L0 P: 604.894.6135 | F: 604.894.6136 Email: admin@pemberton.ca Website: www.pemberton.ca

# Village of Pemberton Water System

Annual Report - 2019

## **INTRODUCTION**

This report has been prepared for the consumers of the Drinking Water System of the Village of Pemberton (VOP) to provide basic information on water quality and compliance with health standards. Public feedback and comments are always welcomed and should be directed to VOP staff or Vancouver Coastal Health (Squamish) officials.

## **CONSUMPTION (CUBIC METERS/DAY):**

Daily flow is recorded at the Wellhouse located in Pioneer Park. Table 1 displays the maximum, minimum, average, and total water flows for 2019 and includes the previous two years for comparison. The volumes are fairly consistent over the past three years. Variations can be attributed to population growth, climatic factors, conservation efforts and leak detection and repairs. For daily results, please refer to **Appendix I.** 

|                      | 2017 Consumption                                | 2018 Consumption                                 | 2019 Consumption                           |
|----------------------|---|--|--|
| Average<br>Flow/day: | 1,883 m <sup>3</sup>                            | 1,800 m <sup>3</sup>                             | 1,838 m³                                   |
| High Flow/day:       | 3,579 m <sup>3</sup><br>( <i>July 7, 2017</i> ) | 3,570 m <sup>3</sup><br>( <i>July 30, 2018</i> ) | 3,527 m <sup>3</sup><br>(June 17, 2019)    |
| Low Flow/day:        | 1,102 m³<br>(January 11, 2017)                  | 1,001 m <sup>3</sup><br>(September 26, 2018)     | 1,067 m <sup>3</sup><br>(January 19, 2019) |
| Total Annual         | 686,254 m <sup>3</sup>                          | 656,756 m <sup>3</sup>                           | 667,727 m <sup>3</sup>                     |

## Table 1 - Overall Water Consumption Summary

## **CHLORINATION:**

Chlorination is a condition of the Village of Pemberton's operating permit and has been in effect since March 2009. The objective is to have a positive residual chlorine reading throughout the water distribution system. The Fire Hall chlorine analyzer serves as the central measuring point, where a minimum residual of 0.20 mg/L is desired.



The chlorine residual is monitored continuously by a dedicated computer and alarm set points ensure consistent dosing. Daily readings of the previous 24 hour minimum residuals are recorded. The annual numbers are shown in Table 2.

Table 2 - 2019 Chlorine Residual Summary

|          | Residual (mg/L) |
|----------|-----------------|
| Average: | 0.28            |
| High:    | 0.36            |
| Low:     | 0.08            |

To ensure that target chlorine residuals are achieved within the distribution system, the VOP also carries out manual sampling at 9 sites throughout the distribution system each week.

For daily results, please refer to Appendix I and for weekly sample results Appendix III.

## WATER CHEMISTRY:

The Annual Total Metals, Volatile Organic Compounds and Trihalomethane sampling was performed February 21, 2019. Sampling was conducted on production Well #3, Oak St. and the Industrial Park sample stations. The test results indicate that all of the items tested are within Health Canada Maximum Acceptable Concentration (MAC) limits. Emergency Backup Well #2 was also tested and has shown a decline in water quality exceeding the Aesthetic Objectives (AO) for Iron. Aesthetic quality guidelines address parameters such as taste, odour and colour and are not considered a health concern. Recently, the guidelines for manganese were changed to a MAC of 0.12 mg/L (120  $\mu$ g/L) and an AO of 0.02 mg/L (20  $\mu$ g/L) for total manganese in drinking water. 2019 samples from Well #2 have surpassed these new guidelines. As such, the Village has begun investigating the development of a new well with test wells planned to be drilled in early 2020. Depending on the results of these test wells, and with increased frequency of testing on current wells, a decision will be made for how to best manage these noted increases. For full water quality test results from 2019, please refer to **Appendix II**.

## **CORROSION CONTROL:**

In June of 2016, the Village of Pemberton undertook a water sampling program to determine the best course of action to mitigate the corrosion of metallic plumbing systems and fixtures. The results indicated a need to adjust the pH and alkalinity of the well water which is considered slightly acidic. A water conditioning plant was designed and constructed using Sodium Carbonate (Soda Ash) to increase the pH and Alkalinity of Pemberton's well water, prior

Village of Pemberton Water System Annual Report - 2019

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to distribution. In October 2017, the Village established a target pH of 7 and a target CaCO3 concentration (alkalinity) between 40 and 80mg/L. In addition to the automated control system, water samples are tested weekly from 7 sample stations throughout the distribution system, and pH and alkalinity are recorded. For results, please refer to **Appendix IV**.

# FLUSH MESSAGE

In 2015 Vancouver Coastal Health Authority requested that the following message be communicated to residents:

Anytime the water in a particular faucet has not been used for six hours or longer, "flush" your cold-water pipes by running the water until cold and you notice a change in temperature. (This could take as little as five to thirty seconds if there has been recent heavy water use such as showering or toilet flushing. Otherwise, it could take two minutes or longer.) The more time water has been sitting in your home's pipes, the more lead it may contain. Use only water from the cold-tap for drinking, cooking, and especially making baby formula. Hot water is likely to contain higher levels of lead. The two actions recommended above are very important to the health of your family. They will probably be effective in reducing lead levels because most of the lead in household water usually comes from the plumbing in your house, not from the local water supply. Conserving water is still important. Rather than just running the water down the drain you could use the water for things such as watering your plants (Zubel, 2014). If residents have any questions, they are encouraged to contact the Vancouver Coastal Health Authorities Drinking Water Officer at 604-892-2293.

# **CROSS CONNECTION CONTROL**

To maintain safe drinking water and remain in compliance with the Vancouver Coastal Health Authority (VCH), the Village of Pemberton has begun a utility-wide Cross Connection Control / Backflow Prevention Program. A cross connection is any actual or potential connection between drinking water and a non-potable substance (contaminant). Backflow is the reverse flow from normal within a piping system. When a cross connection and backflow are combined, often the result is a contaminant entering our drinking water.

In 2018, the Cross Connection Control Bylaw was passed by council and an initial assessment and database was completed for VOP infrastructure. In 2020, the program will be expanded to incorporate Industrial, Commercial and Institutional buildings in the Village that could pose a threat to the water system in the event of a backflow.

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# **BACTERIOLOGICAL ANALYSIS:**

Water samples are collected and submitted weekly to the laboratory at Vancouver Coastal Health for Bacteriological analysis. These samples are taken directly from both active sources (Well #2 and #3), as well as the following locations:

- Oak St
- Village Office
- Health Centre
- Treatment Plant
- Pemberton Plateau
- Industrial Park (Mount Currie water source)
- Collins Rd
- Pemberton Meadows Rd.
- Pemberton Farm Rd (West)
- Urdal Rd.

All results for the 2019 period were negative for Escherichia coli.

The individual results are on file at Vancouver Coastal Health (Squamish) and the Village Office, and are posted regularly online at:

www.healthspace.ca/Clients/VCHA/CoastGaribaldi/CoastGaribaldi Website.nsf

For Sample Range Reports, please refer to **Appendix V**.

# 2019 Daily Total Consumption and

# **Chlorine Residual**

| Date          | Daily   | Daily Cl2      |
|---------------|---------|----------------|
|               | Cubic M | Residual (ppm) |
| January       |         |                |
| 1             | 1,317   | 0.28           |
| 2             | 1,286   | 0.29           |
| 3             | 1,266   | 0.27           |
| 4             | 1,433   | 0.25           |
| 5             | 2,470   | 0.24           |
| 6             | 2,498   | 0.28           |
| 7             | 2,497   | 0.31           |
| 8             | 1,698   | 0.29           |
| 9             | 1,276   | 0.28           |
| 10            | 1,300   | 0.27           |
| 11            | 1,087   | 0.28           |
| 12            | 1,265   | 0.28           |
| 13            | 1,245   | 0.29           |
| 14            | 1,264   | 0.29           |
| 15            | 1,194   | 0.28           |
| 16            | 1,172   | 0.28           |
| 17            | 1,238   | 0.29           |
| 18            | 1,221   | 0.30           |
| 19            | 1,067   | 0.29           |
| 20            | 1,245   | 0.28           |
| 21            | 1,251   | 0.30           |
| 22            | 1,121   | 0.29           |
| 23            | 1,143   | 0.29           |
| 24            | 1,150   | 0.30           |
| 25            | 1,231   | 0.31           |
| 26            | 1,250   | 0.31           |
| 27            | 1,239   | 0.31           |
| 28            | 1,195   | 0.31           |
| 29            | 1,211   | 0.30           |
| 30            | 1,263   | 0.30           |
| 31            | 1,181   | 0.30           |
| Monthly Total | 42,274  |                |
| February      | ×       |                |
| 1             | 1,244   | 0.31           |
| 2             | 1,128   | 0.31           |
| 3             | 1,284   | 0.29           |
| 4             | 1,293   | 0.31           |
| 5             | 1,243   | 0.30           |
| 6             | 1,196   | 0.29           |
| 7             | 1,291   | 0.27           |

| 4.05.4  | 0.00   |
|---|--|
|   | 0.30   |
|   | 0.30   |
|   | 0.31   |
|   | 0.31   |
|   | 0.30   |
|   | 0.29   |
|   | 0.28   |
|   | 0.27   |
|   | 0.26   |
| 1,310   | 0.25   |
| 1,335   | 0.27   |
| 1,364   | 0.28   |
| 1,330   | 0.24   |
| 1,285   | 0.27   |
| 1,163   | 0.28   |
| 1,312   | 0.28   |
| 1,304   | 0.29   |
| 1,138   | 0.29   |
| 1,284   | 0.28   |
| 1,280   | 0.28   |
| 1,164   | 0.18   |
| 35,084  |  |
|   |  |
| 1,273   | 0.28   |
| 1,135   | 0.28   |
| 1,320   | 0.28   |
| 1,345   | 0.27   |
| 1,349   | 0.28   |
| 1,338   | 0.28   |
| 1,267   | 0.27   |
| 1,201   | 0.27   |
| 1,203   | 0.26   |
| 1,369   | 0.26   |
| 1,376   | 0.27   |
| 1,431   | 0.26   |
| 1,386   | 0.26   |
|   |  |
| 1,404   | 0.26   |
| 1,404<br>1,364  | 0.26   |
|   |  |
| 1,364   | 0.25   |
| 1,364<br>1,384  | 0.25<br>0.25   |
| 1,364<br>1,384<br>1,343                                     | 0.25<br>0.25<br>0.25   |
| 1,364<br>1,384<br>1,343<br>1,420                            | 0.25<br>0.25<br>0.25<br>0.26   |
| 1,364<br>1,384<br>1,343<br>1,420<br>1,262<br>1,346          | 0.25<br>0.25<br>0.25<br>0.26<br>0.24   |
| 1,364<br>1,384<br>1,343<br>1,420<br>1,262                   | 0.25<br>0.25<br>0.25<br>0.26<br>0.24<br>0.25   |
| 1,364<br>1,384<br>1,343<br>1,420<br>1,262<br>1,346<br>1,314 | 0.25<br>0.25<br>0.25<br>0.26<br>0.24<br>0.25<br>0.25   |
|   | 1,330<br>1,285<br>1,163<br>1,312<br>1,304<br>1,138<br>1,284<br>1,280<br>1,164<br>35,084<br>1,273<br>1,164<br>35,084<br>1,273<br>1,135<br>1,320<br>1,345<br>1,349<br>1,338<br>1,267<br>1,201<br>1,203<br>1,369<br>1,376<br>1,431<br>1,386 |

| 25            | 1,385  | 0.22 |
|---------------|--------|------|
| 26            | 1,315  | 0.22 |
| 20            | 1,192  | 0.25 |
| 28            | 1,205  | 0.25 |
| 29            | 1,205  | 0.25 |
| 30            | 1,281  | 0.25 |
| 31            | 1,281  | 0.25 |
| Monthly Total | 40,797 | 0.25 |
| April         |        |      |
| 1             | 1,303  | 0.26 |
| 2             | 1,187  | 0.25 |
| 3             | 1,351  | 0.25 |
| 4             | 1,314  | 0.24 |
| 5             | 1,279  | 0.24 |
| 6             | 1,302  | 0.25 |
| 7             | 2,046  | 0.25 |
| 8             | 2,992  | 0.26 |
| 9             | 1,860  | 0.26 |
| 10            | 1,285  | 0.25 |
| 11            | 1,312  | 0.25 |
| 12            | 1,274  | 0.25 |
| 13            | 1,324  | 0.26 |
| 14            | 1,297  | 0.24 |
| 15            | 1,317  | 0.25 |
| 16            | 1,325  | 0.23 |
| 17            | 1,367  | 0.24 |
| 18            | 1,378  | 0.24 |
| 19            | 1,394  | 0.24 |
| 20            | 1,322  | 0.23 |
| 21            | 1,301  | 0.23 |
| 22            | 1,292  | 0.23 |
| 23            | 1,296  | 0.26 |
| 24            | 1,326  | 0.23 |
| 25            | 1,209  | 0.26 |
| 26            | 1,376  | 0.26 |
| 27            | 1,455  | 0.25 |
| 28            | 1,386  | 0.27 |
| 29            | 1,658  | 0.26 |
| 30            | 1,407  | 0.27 |
| Monthly Total | 42,935 |      |
| May           |        |      |
| 1             | 1,556  | 0.31 |
| 2             | 1,366  | 0.30 |
| 3             | 2,370  | 0.27 |
| 4             | 2,143  | 0.25 |
| 5             | 2,236  | 0.25 |
| 6             | 2,077  | 0.28 |

| 2 077  | 0.27  |
|--|---|
|  | 0.27  |
|  | 0.26  |
|  | 0.35  |
|  | 0.28  |
|  | 0.28  |
|  | 0.27  |
|  | 0.28  |
|  | 0.26  |
|  | 0.30  |
|  | 0.30  |
| 2,569  | 0.34  |
| 2,067  | 0.30  |
| 2,368  | 0.30  |
| 2,449  | 0.28  |
| 2,428  | 0.28  |
| 2,426  | 0.34  |
| 2,224  | 0.32  |
| 2,568  | 0.30  |
| 2,477  | 0.30  |
| 2,409  | 0.28  |
| 2,408  | 0.28  |
| 2,547  | 0.30  |
| 2,853  | 0.27  |
| 2,741  | 0.28  |
| 3,006  | 0.26  |
| 72,585   |   |
|  |   |
| 3,025  | 0.30  |
| 3,199  | 0.30  |
|  | 0.20  |
| 3,136  | 0.30  |
| 3,136<br>2,774   | 0.30  |
|  |   |
| 2,774  | 0.28  |
| 2,774<br>2,741   | 0.28<br>0.28  |
| 2,774<br>2,741<br>2,434  | 0.28<br>0.28<br>0.27  |
| 2,774<br>2,741<br>2,434<br>2,584   | 0.28<br>0.28<br>0.27<br>0.27  |
| 2,774<br>2,741<br>2,434<br>2,584<br>2,280  | 0.28<br>0.28<br>0.27<br>0.27<br>0.26  |
| 2,774<br>2,741<br>2,434<br>2,584<br>2,280<br>2,388   | 0.28<br>0.28<br>0.27<br>0.27<br>0.26<br>0.26  |
| 2,774<br>2,741<br>2,434<br>2,584<br>2,280<br>2,388<br>2,980  | 0.28<br>0.28<br>0.27<br>0.27<br>0.26<br>0.26<br>0.25  |
| 2,774<br>2,741<br>2,434<br>2,584<br>2,280<br>2,388<br>2,980<br>2,515   | 0.28<br>0.28<br>0.27<br>0.27<br>0.26<br>0.26<br>0.25<br>0.25  |
| 2,774<br>2,741<br>2,434<br>2,584<br>2,280<br>2,388<br>2,980<br>2,515<br>2,827  | 0.28<br>0.28<br>0.27<br>0.27<br>0.26<br>0.26<br>0.25<br>0.25<br>0.25<br>0.24  |
| 2,774<br>2,741<br>2,434<br>2,584<br>2,280<br>2,388<br>2,980<br>2,515<br>2,827<br>3,028<br>3,375                            | 0.28<br>0.28<br>0.27<br>0.27<br>0.26<br>0.26<br>0.25<br>0.25<br>0.25<br>0.24<br>0.30  |
| 2,774<br>2,741<br>2,434<br>2,584<br>2,280<br>2,388<br>2,980<br>2,515<br>2,827<br>3,028<br>3,375<br>3,129                   | 0.28<br>0.28<br>0.27<br>0.27<br>0.26<br>0.26<br>0.25<br>0.25<br>0.25<br>0.24<br>0.30<br>0.31  |
| 2,774<br>2,741<br>2,434<br>2,584<br>2,280<br>2,388<br>2,980<br>2,515<br>2,827<br>3,028<br>3,375<br>3,129<br>3,130          | 0.28<br>0.27<br>0.27<br>0.27<br>0.26<br>0.26<br>0.25<br>0.25<br>0.25<br>0.24<br>0.30<br>0.31<br>0.31  |
| 2,774<br>2,741<br>2,434<br>2,584<br>2,280<br>2,388<br>2,980<br>2,515<br>2,827<br>3,028<br>3,375<br>3,129                   | 0.28<br>0.28<br>0.27<br>0.27<br>0.26<br>0.26<br>0.25<br>0.25<br>0.25<br>0.24<br>0.30<br>0.31  |
| 2,774<br>2,741<br>2,434<br>2,584<br>2,280<br>2,388<br>2,980<br>2,515<br>2,827<br>3,028<br>3,375<br>3,129<br>3,130<br>3,527 | 0.28<br>0.28<br>0.27<br>0.27<br>0.26<br>0.26<br>0.25<br>0.25<br>0.25<br>0.25<br>0.24<br>0.30<br>0.31<br>0.31<br>0.31<br>0.33                  |
|  | 2,368<br>2,449<br>2,428<br>2,426<br>2,224<br>2,568<br>2,477<br>2,409<br>2,408<br>2,547<br>2,853<br>2,741<br>3,006<br>72,585<br>3,025<br>3,199 |

| 21            | 2,555          | 0.27 |
|---------------|----------------|------|
| 22            | 2,335          | 0.27 |
| 23            | 2,745          | 0.27 |
| 23            | 2,745          | 0.27 |
| 25            | 2,745          | 0.27 |
| 26            | 2,933          | 0.27 |
| 20            |                | 0.28 |
| 27            | 2,766<br>2,620 | 0.30 |
| 29            | 2,620          | 0.30 |
| 30            | 2,664          | 0.30 |
| Monthly Total | 85,160         | 0.50 |
| July          | 03,100         |      |
| 1             | 2,664          | 0.30 |
| 2             | 2,664          | 0.31 |
| 3             | 2,708          | 0.31 |
| 4             | 2,908          | 0.33 |
| 5             | 2,792          | 0.29 |
| 6             | 2,553          | 0.29 |
| 7             | 2,553          | 0.29 |
| 8             | 2,314          | 0.30 |
| 9             | 2,490          | 0.27 |
| 10            | 2,370          | 0.28 |
| 11            | 2,303          | 0.28 |
| 12            | 2,212          | 0.27 |
| 13            | 2,575          | 0.28 |
| 14            | 2,444          | 0.28 |
| 15            | 2,641          | 0.27 |
| 16            | 2,670          | 0.27 |
| 17            | 2,402          | 0.29 |
| 18            | 2,375          | 0.26 |
| 19            | 2,272          | 0.29 |
| 20            | 2,577          | 0.24 |
| 21            | 2,726          | 0.28 |
| 22            | 2,973          | 0.28 |
| 23            | 3,104          | 0.30 |
| 24            | 2,876          | 0.27 |
| 25            | 2,728          | 0.31 |
| 26            | 2,916          | 0.29 |
| 27            | 2,076          | 0.25 |
| 28            | 2,556          | 0.28 |
| 29            | 2,920          | 0.27 |
| 30            | 3,017          | 0.30 |
| 31            | 2,671          | 0.31 |
| Monthly Total | 81,050         |      |
| August        |                |      |
| 1             | 2,699          | 0.30 |
| 2             | 2,671          | 0.30 |

| 3             | 2,404  | 0.27 |
|---------------|--------|------|
| 4             | 2,714  | 0.27 |
| 5             | 2,998  | 0.27 |
| 6             | 3,033  | 0.27 |
| 7             | 3,007  | 0.30 |
| 8             | 3,007  | 0.30 |
| 9             | 3,412  | 0.32 |
| 10            | 3,137  | 0.30 |
| 10            | 2,928  | 0.30 |
| 12            | 2,520  | 0.28 |
| 13            | 2,535  | 0.25 |
| 14            | 2,702  | 0.23 |
| 15            | 2,759  | 0.21 |
| 16            | 3,226  | 0.23 |
| 17            | 2,973  | 0.20 |
| 18            | 2,745  | 0.24 |
| 19            | 2,945  | 0.26 |
| 20            | 3,033  | 0.23 |
| 21            | 2,701  | 0.21 |
| 22            | 2,623  | 0.23 |
| 23            | 2,972  | 0.20 |
| 24            | 2,657  | 0.19 |
| 25            | 2,637  | 0.18 |
| 26            | 2,965  | 0.21 |
| 27            | 2,993  | 0.22 |
| 28            | 2,785  | 0.36 |
| 29            | 2,782  | 0.30 |
| 30            | 3,136  | 0.30 |
| 31            | 3,003  | 0.29 |
| Monthly Total | 88,898 |      |
| September     |        |      |
| 1             | 2,698  | 0.27 |
| 2             | 2,837  | 0.30 |
| 3             | 3,062  | 0.30 |
| 4             | 2,628  | 0.32 |
| 5             | 2,480  | 0.31 |
| 6             | 2,895  | 0.28 |
| 7             | 2,733  | 0.25 |
| 8             | 2,609  | 0.25 |
| 9             | 2,509  | 0.29 |
| 10            | 2,270  | 0.29 |
| 11            | 2,262  | 0.28 |
| 12            | 2,262  | 0.27 |
| 13            | 2,333  | 0.26 |
| 14            | 1,877  | 0.26 |
| 15            | 1,928  | 0.26 |
| 16            | 1,848  | 0.26 |

| 17            | 1 702  | 0.20 |
|---------------|--------|------|
|               | 1,782  | 0.28 |
| 18            | 1,860  | 0.27 |
| 19            | 1,887  | 0.26 |
| 20            | 1,868  | 0.27 |
| 21            | 1,816  | 0.27 |
| 22            | 1,778  | 0.27 |
| 23            | 1,649  | 0.28 |
| 24            | 1,639  | 0.27 |
| 25            | 1,751  | 0.25 |
| 26            | 1,637  | 0.27 |
| 27            | 1,522  | 0.28 |
| 28            | 1,597  | 0.28 |
| 29            | 1,555  | 0.28 |
| 30            | 1,476  | 0.34 |
| Monthly Total | 63,048 |      |
| October       |        |      |
| 1             | 1,396  | 0.31 |
| 2             | 1,535  | 0.32 |
| 3             | 1,492  | 0.35 |
| 4             | 1,452  | 0.33 |
| 5             | 1,359  | 0.33 |
| 6             | 1,324  | 0.33 |
| 7             | 1,541  | 0.33 |
| 8             | 1,318  | 0.31 |
| 9             | 1,334  | 0.30 |
| 10            | 1,349  | 0.30 |
| 11            | 1,452  | 0.31 |
| 12            | 1,398  | 0.31 |
| 13            | 1,329  | 0.29 |
| 14            | 1,352  | 0.29 |
| 15            | 1,374  | 0.31 |
| 16            | 1,393  | 0.34 |
| 17            | 1,366  | 0.29 |
| 18            | 1,349  | 0.29 |
| 19            | 1,351  | 0.29 |
| 20            | 1,321  | 0.29 |
| 21            | 1,321  | 0.31 |
| 22            | 1,207  | 0.30 |
| 23            | 1,342  | 0.30 |
| 23            | 1,378  | 0.30 |
| 25            | 1,378  | 0.33 |
| 26            | 1,230  | 0.32 |
| 20            | 1,323  | 0.32 |
| 27            | 1,301  | 0.32 |
| 28            | 1,328  | 0.32 |
| 30            |        |      |
|               | 1,284  | 0.30 |
| 31            | 1,332  | 0.30 |

| Monthly Total | 42,118 |      |
|---------------|--------|------|
| November      |        |      |
| 1             | 1,269  | 0.30 |
| 2             | 1,312  | 0.30 |
| 4             | 1,336  | 0.31 |
| 5             | 1,338  | 0.30 |
| 6             | 1,712  | 0.28 |
| 7             | 1,316  | 0.33 |
| 8             | 1,297  | 0.29 |
| 9             | 1,265  | 0.29 |
| 10            | 1,125  | 0.29 |
| 11            | 1,289  | 0.29 |
| 12            | 1,201  | 0.28 |
| 13            | 1,284  | 0.29 |
| 14            | 1,129  | 0.29 |
| 15            | 1,131  | 0.29 |
| 16            | 1,271  | 0.29 |
| 17            | 1,267  | 0.29 |
| 18            | 1,116  | 0.29 |
| 19            | 1,301  | 0.30 |
| 20            | 1,290  | 0.30 |
| 21            | 1,178  | 0.29 |
| 22            | 1,319  | 0.30 |
| 23            | 1,281  | 0.30 |
| 24            | 1,303  | 0.30 |
| 25            | 1,203  | 0.32 |
| 26            | 1,250  | 0.29 |
| 27            | 1,156  | 0.29 |
| 28            | 1,253  | 0.30 |
| 29            | 1,275  | 0.27 |
| Monthly Total | 35,467 |      |
| December      |        |      |
| 1             | 1,318  | 0.26 |
| 2             | 1,319  | 0.28 |
| 3             | 1,286  | 0.28 |
| 4             | 1,371  | 0.30 |
| 5             | 1,135  | 0.30 |
| 6             | 1,253  | 0.28 |
| 7             | 1,136  | 0.29 |
| 8             | 1,279  | 0.30 |
| 9             | 1,281  | 0.30 |
| 10            | 1,113  | 0.30 |
| 11            | 1,266  | 0.33 |
| 12            | 1,163  | 0.31 |
| 13            | 1,250  | 0.31 |
| 14            | 1,130  | 0.30 |
| 15            | 1,264  | 0.32 |

| 16            | 1,220   | 0.32 |
|---------------|---------|------|
| 17            | 1,159   | 0.33 |
| 18            | 1,288   | 0.32 |
| 19            | 1,126   | 0.32 |
| 20            | 1,256   | 0.31 |
| 21            | 1,282   | 0.32 |
| 22            | 1,121   | 0.35 |
| 23            | 1,284   | 0.34 |
| 24            | 1,261   | 0.33 |
| 25            | 1,178   | 0.34 |
| 26            | 1,251   | 0.34 |
| 27            | 1,131   | 0.34 |
| 28            | 1,264   | 0.29 |
| 29            | 1,302   | 0.16 |
| 30            | 1,308   | 0.08 |
| 31            | 1,316   | 0.14 |
| Monthly Total | 38,311  |      |
| Total m3      | 667,727 |      |
| Daily Average | 1,838   | 0.28 |
| Max Day       | 3,527   | 0.36 |
| Min Day       | 1,067   | 0.08 |
|               |         |      |

Success Through Science®

Your C.O.C. #: 577009-01-01

#### Attention: Jeff Westlake

VILLAGE OF PEMBERTON Box 100 7400 Prospect St Pemberton, BC CANADA VON 2L0

> Report Date: 2019/02/28 Report #: R2692130 Version: 1 - Final

#### **CERTIFICATE OF ANALYSIS**

#### MAXXAM JOB #: B912925

#### Received: 2019/02/22, 08:15

Sample Matrix: DRINKING WATER # Samples Received: 4

|  |          | Date       | Date       |                     |                      |
|--|----------|------------|------------|---------------------|----------------------|
| Analyses                                 | Quantity | Extracted  | Analyzed   | Laboratory Method   | Analytical Method    |
| Alkalinity - Water                       | 4        | N/A        | 2019/02/23 | BBY6SOP-00026       | SM 22 2320 B m       |
| Chloride by Automated Colourimetry       | 4        | N/A        | 2019/02/25 | BBY6SOP-00011       | SM 22 4500-Cl- E m   |
| True Colour (1, 2)                       | 4        | N/A        | 2019/02/24 | EENVSOP-00065       | SM 23 2120 C m       |
| Conductance - water                      | 4        | N/A        | 2019/02/23 | BBY6SOP-00026       | SM 22 2510 B m       |
| Fluoride                                 | 4        | N/A        | 2019/02/25 | BBY6SOP-00048       | SM 22 4500-F C m     |
| Hardness Total (calculated as CaCO3) (3) | 4        | N/A        | 2019/02/28 | BBY WI-00033        | Auto Calc            |
| Mercury (Total) by CVAF                  | 4        | 2019/02/26 | 2019/02/26 | BBY7SOP-00015       | BCMOE BCLM Oct2013 m |
| Na, K, Ca, Mg, S by CRC ICPMS (total)    | 4        | N/A        | 2019/02/28 | BBY WI-00033        | Auto Calc            |
| Elements by CRC ICPMS (total)            | 4        | N/A        | 2019/02/27 | BBY7SOP-00003,      | EPA 6020b R2 m       |
| Nitrate + Nitrite (N)                    | 4        | N/A        | 2019/02/23 | BBY6SOP-00010       | SM 23 4500-NO3- I m  |
| Nitrite (N) by CFA                       | 4        | N/A        | 2019/02/23 | BBY6SOP-00010       | SM 22 4500-NO3- I m  |
| Nitrogen - Nitrate (as N)                | 4        | N/A        | 2019/02/27 | BBY WI-00033        | Auto Calc            |
| pH @25°C (1, 4)                          | 4        | N/A        | 2019/02/26 | AB SOP-00005        | SM 23 4500 H+ B m    |
| pH Water (5)                             | 4        | N/A        | 2019/02/23 | BBY6SOP-00026       | SM 22 4500-H+ B m    |
| Sulphate by Automated Colourimetry       | 4        | N/A        | 2019/02/25 | BBY6SOP-00017       | SM 22 4500-SO42- E m |
| Total Dissolved Solids (Filt. Residue)   | 4        | 2019/02/27 | 2019/02/28 | BBY6SOP-00033       | SM 23 2540 C m       |
| Turbidity                                | 4        | N/A        | 2019/02/22 | BBY6SOP-00027       | SM 22 2130 B m       |
| VOCs, VH, F1, LH in Water by HS GC/MS    | 4        | N/A        | 2019/02/23 | BBY8SOP-00009/11/12 | BCMOE BCLM Jul 2017  |
| Volatile HC-BTEX (6)                     | 4        | N/A        | 2019/02/23 | BBY WI-00033        | Auto Calc            |

#### Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report.



Maxia Stranger Maria Stranger Maria Maria

Your C.O.C. #: 577009-01-01

#### Attention: Jeff Westlake

VILLAGE OF PEMBERTON Box 100 7400 Prospect St Pemberton, BC CANADA VON 2L0

> Report Date: 2019/02/28 Report #: R2692130 Version: 1 - Final

### **CERTIFICATE OF ANALYSIS**

#### MAXXAM JOB #: B912925

#### Received: 2019/02/22, 08:15

Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing. Maxxam is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Maxxam, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

\* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Edmonton Environmental

(2) Analysis completed within 48h after laboratory receipt to a maximum of five days from sampling is satisfactory for compliance purposes.

(3) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).

(4) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Maxxam endeavours to analyze samples as soon as possible after receipt.

(5) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

(6) VPH = VH - (Benzene + Toluene + Ethylbenzene + m & p-Xylene + o-Xylene + Styrene)

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Morgan Melnychuk, Burnaby Project Manager

Email: MMelnychuk@maxxam.ca

Phone# (604)638-8034 Ext:8034

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This report has been generated and distributed using a secure automated process.

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total Cover Pages : 2 Page 2 of 14





#### VILLAGE OF PEMBERTON

# **RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER**

| Maxxam ID        |                                 |                              |         | VG4516       | VG4517       | VG4518        | VG4519       |  |
|------------------|---------------------------------|------------------------------|---------|--------------|--------------|---------------|--------------|--|
| Comulius Data    |                                 |                              |         | 2019/02/21   | 2019/02/21   | 2019/02/21    | 2019/02/21   |  |
| Sampling Date    |                                 |                              |         | 09:45        | 09:00        | 09:15         | 09:30        |  |
| COC Number       |                                 |                              |         | 577009-01-01 | 577009-01-01 | 577009-01-01  | 577009-01-01 |  |
|                  | UNITS OG                        |                              | WELL #2 | WELL #3      | OAK ST       | INDUSTRIAL P. | QC Batch     |  |
| Misc. Inorganics |                                 |                              |         |              |              |               |              |  |
| рН               |                                 | pH 7.0:10.5 7.07             |         | 7.06         | 7.55         | 7.37          | 9332499      |  |
| No Fill          | No Exceedance                   |                              |         |              |              |               |              |  |
| Grey             | Exceeds 1 criteria policy/level |                              |         |              |              |               |              |  |
| Black            | Exceed                          | Exceeds both criteria/levels |         |              |              |               |              |  |



Maxxam Job #: B912925 Report Date: 2019/02/28

#### Success Through Science®

#### VILLAGE OF PEMBERTON

| Maxxam ID                   |               |                |            |            | VG4516              | VG4517              | VG4518              |        |          |
|-----------------------------|---------------|----------------|------------|------------|---------------------|---------------------|---------------------|--------|----------|
| Sampling Date               |               |                |            |            | 2019/02/21<br>09:45 | 2019/02/21<br>09:00 | 2019/02/21<br>09:15 |        |          |
| COC Number                  |               |                |            |            | 577009-01-01        | 577009-01-01        | 577009-01-01        |        |          |
|                             | UNITS         | MAC            | AO         | OG         | WELL #2             | WELL #3             | OAK ST              | RDL    | QC Batch |
| ANIONS                      |               |                |            |            |                     |                     |                     | •      |          |
| Nitrite (N)                 | mg/L          | 1              | -          | -          | <0.0050             | <0.0050             | <0.0050             | 0.0050 | 9330619  |
| Calculated Parameters       | 0,            |                |            |            |                     | 1                   |                     |        |          |
| Total Hardness (CaCO3)      | mg/L          | -              | -          | -          | 69.1                | 24.3                | 23.2                | 0.50   | 9329057  |
| Nitrate (N)                 | mg/L          | 10             | -          | -          | 0.186               | 0.114               | 0.119               | 0.020  | 9329833  |
| Misc. Inorganics            |               |                |            |            |                     | I                   |                     |        |          |
| Fluoride (F)                | mg/L          | 1.5            | -          | -          | 0.026               | <0.020              | <0.020              | 0.020  | 9331178  |
| Alkalinity (Total as CaCO3) | mg/L          | -              | -          | -          | 33.8                | 12.8                | 45.2                | 1.0    | 9330273  |
| Alkalinity (PP as CaCO3)    | mg/L          | -              | -          | -          | <1.0                | <1.0                | <1.0                | 1.0    | 9330273  |
| Bicarbonate (HCO3)          | mg/L          | -              | -          | -          | 41.2                | 15.6                | 55.1                | 1.0    | 9330273  |
| Carbonate (CO3)             | mg/L          | -              | -          | -          | <1.0                | <1.0                | <1.0                | 1.0    | 9330273  |
| Hydroxide (OH)              | mg/L          | -              | -          | -          | <1.0                | <1.0                | <1.0                | 1.0    | 9330273  |
| Anions                      |               |                |            |            |                     |                     |                     |        |          |
| Dissolved Sulphate (SO4)    | mg/L          | -              | 500        | -          | 19.2                | 8.7                 | 8.6                 | 1.0    | 9332443  |
| Dissolved Chloride (Cl)     | mg/L          | -              | 250        | -          | 39                  | 7.1                 | 7.8                 | 1.0    | 9332442  |
| Nutrients                   |               |                |            |            |                     |                     |                     |        |          |
| Nitrate plus Nitrite (N)    | mg/L          | -              | -          | -          | 0.186               | 0.114               | 0.119               | 0.020  | 9330618  |
| Physical Properties         | •             |                | •          | •          |                     | •                   |                     | •      | •        |
| True Colour                 | PtCo units    | -              | 15         | -          | <2.0                | <2.0                | 4.9                 | 2.0    | 9330779  |
| Conductivity                | uS/cm         | -              | -          | -          | 237                 | 74.7                | 132                 | 2.0    | 9330272  |
| рН                          | рН            | -              | -          | 7.0:10.5   | 7.05                | 6.84                | 7.44                |        | 9330271  |
| Physical Properties         | •             |                | •          |            |                     |                     |                     |        |          |
| Total Dissolved Solids      | mg/L          | -              | 500        | -          | 150                 | 42                  | 64                  | 10     | 9333634  |
| Turbidity                   | NTU           | see remark     | see remark | see remark | 2.23                | 0.26                | 0.11                | 0.10   | 9329985  |
| Elements                    | •             |                | •          | •          |                     | •                   |                     | •      | •        |
| Total Mercury (Hg)          | ug/L          | 1              | -          | -          | <0.0020             | 0.0028              | <0.0020             | 0.0020 | 9332171  |
| Total Metals by ICPMS       | •             |                | •          |            |                     | •                   |                     |        |          |
| Total Aluminum (Al)         | ug/L          | -              | -          | 100        | 106                 | 8.3                 | 4.3                 | 3.0    | 9331696  |
| Total Antimony (Sb)         | ug/L          | 6              | -          | -          | <0.50               | <0.50               | <0.50               | 0.50   | 9331696  |
| Total Arsenic (As)          | ug/L          | 10             | -          | -          | 0.27                | <0.10               | <0.10               | 0.10   | 9331696  |
| Total Barium (Ba)           | ug/L          | 1000           | -          | -          | 42.9                | 15.8                | 14.7                | 1.0    | 9331696  |
| Total Boron (B)             | ug/L          | 5000           | -          | -          | 121                 | <50                 | <50                 | 50     | 9331696  |
| Total Cadmium (Cd)          | ug/L          | 5              | -          | -          | 0.016               | 0.021               | 0.010               | 0.010  | 9331696  |
| Total Chromium (Cr)         | ug/L          | 50             | -          | -          | <1.0                | <1.0                | <1.0                | 1.0    | 9331696  |
| Total Cobalt (Co)           | ug/L          | -              | -          | -          | 0.60                | <0.20               | <0.20               | 0.20   | 9331696  |
| No Fill No                  | Exceedance    | !              |            |            |                     |                     |                     |        |          |
|                             | ceeds 1 crite | ria policy/lev | el         |            |                     |                     |                     |        |          |
| /                           |               | riteria/levels |            |            |                     |                     |                     |        |          |
| DIGUN                       |               |                |            |            |                     |                     |                     |        |          |



VILLAGE OF PEMBERTON

| Maxxam ID                  |                 |                |      |    | VG4516       | VG4517       | VG4518       |       |          |
|----------------------------|-----------------|----------------|------|----|--------------|--------------|--------------|-------|----------|
| Sampling Date              |                 |                |      |    | 2019/02/21   | 2019/02/21   | 2019/02/21   |       |          |
|                            |                 |                |      |    | 09:45        | 09:00        | 09:15        |       |          |
| COC Number                 |                 |                |      |    | 577009-01-01 | 577009-01-01 | 577009-01-01 |       |          |
|                            | UNITS           | MAC            | AO   | OG | WELL #2      | WELL #3      | OAK ST       | RDL   | QC Batch |
| Total Copper (Cu)          | ug/L            | -              | 1000 | -  | 3.86         | 4.66         | 2.55         | 0.20  | 9331696  |
| Total Iron (Fe)            | ug/L            | -              | 300  | -  | 903          | 11.5         | 8.7          | 5.0   | 9331696  |
| Total Lead (Pb)            | ug/L            | 10             | -    | -  | 0.54         | 0.24         | 0.34         | 0.20  | 9331696  |
| Total Manganese (Mn)       | ug/L            | -              | 50   | -  | 121          | 15.3         | 4.6          | 1.0   | 9331696  |
| Total Molybdenum (Mo)      | ug/L            | -              | -    | -  | 3.2          | <1.0         | <1.0         | 1.0   | 9331696  |
| Total Nickel (Ni)          | ug/L            | -              | -    | -  | <1.0         | <1.0         | <1.0         | 1.0   | 9331696  |
| Total Selenium (Se)        | ug/L            | 50             | -    | -  | <0.10        | <0.10        | <0.10        | 0.10  | 9331696  |
| Total Silicon (Si)         | ug/L            | -              | -    | -  | 5260         | 3740         | 3720         | 100   | 9331696  |
| Total Silver (Ag)          | ug/L            | -              | -    | -  | <0.020       | <0.020       | <0.020       | 0.020 | 9331696  |
| Total Uranium (U)          | ug/L            | 20             | -    | -  | <0.10        | <0.10        | <0.10        | 0.10  | 9331696  |
| Total Vanadium (V)         | ug/L            | -              | -    | -  | <5.0         | <5.0         | <5.0         | 5.0   | 9331696  |
| Total Zinc (Zn)            | ug/L            | -              | 5000 | -  | 12.2         | <5.0         | <5.0         | 5.0   | 9331696  |
| Total Calcium (Ca)         | mg/L            | -              | -    | -  | 25.4         | 8.98         | 8.55         | 0.050 | 9329827  |
| Total Magnesium (Mg)       | mg/L            | -              | -    | -  | 1.38         | 0.450        | 0.447        | 0.050 | 9329827  |
| Total Potassium (K)        | mg/L            | -              | -    | -  | 2.35         | 0.861        | 0.846        | 0.050 | 9329827  |
| Total Sodium (Na)          | mg/L            | -              | 200  | -  | 12.0         | 3.05         | 16.4         | 0.050 | 9329827  |
| Total Sulphur (S)          | mg/L            | -              | -    | -  | 6.0          | <3.0         | <3.0         | 3.0   | 9329827  |
| No Fill                    | No Exceedance   | 1              |      |    |              |              |              |       |          |
| Grey                       | Exceeds 1 crite | ria policy/lev | el   |    |              |              |              |       |          |
| Black                      | Exceeds both c  | riteria/levels |      |    |              |              |              |       |          |
| RDL = Reportable Detection | on Limit        |                |      |    |              |              |              |       |          |





#### VILLAGE OF PEMBERTON

| Maxxam ID                   |                 |             |            |            | VG4519              |        |          |
|-----------------------------|-----------------|-------------|------------|------------|---------------------|--------|----------|
| Sampling Date               |                 |             |            |            | 2019/02/21<br>09:30 |        |          |
| COC Number                  |                 |             |            |            | 577009-01-01        |        |          |
|                             | UNITS           | MAC         | AO         | OG         | INDUSTRIAL P.       | RDL    | QC Batch |
| ANIONS                      |                 |             |            |            |                     |        |          |
| Nitrite (N)                 | mg/L            | 1           | -          | -          | <0.0050             | 0.0050 | 9330619  |
| Calculated Parameters       |                 |             |            |            |                     |        |          |
| Total Hardness (CaCO3)      | mg/L            | -           | -          | -          | 29.4                | 0.50   | 9329057  |
| Nitrate (N)                 | mg/L            | 10          | -          | -          | 0.058               | 0.020  | 9329833  |
| Misc. Inorganics            |                 |             |            |            |                     |        |          |
| Fluoride (F)                | mg/L            | 1.5         | -          | -          | 0.022               | 0.020  | 9331178  |
| Alkalinity (Total as CaCO3) | mg/L            | -           | -          | -          | 24.2                | 1.0    | 9330273  |
| Alkalinity (PP as CaCO3)    | mg/L            | -           | -          | -          | <1.0                | 1.0    | 9330273  |
| Bicarbonate (HCO3)          | mg/L            | -           | -          | -          | 29.5                | 1.0    | 9330273  |
| Carbonate (CO3)             | mg/L            | -           | -          | -          | <1.0                | 1.0    | 9330273  |
| Hydroxide (OH)              | mg/L            | -           | -          | -          | <1.0                | 1.0    | 9330273  |
| Anions                      | •               |             |            |            |                     |        |          |
| Dissolved Sulphate (SO4)    | mg/L            | -           | 500        | -          | 9.3                 | 1.0    | 9332443  |
| Dissolved Chloride (Cl)     | mg/L            | -           | 250        | -          | 1.5                 | 1.0    | 9332442  |
| Nutrients                   |                 |             |            |            |                     |        |          |
| Nitrate plus Nitrite (N)    | mg/L            | -           | -          | -          | 0.058               | 0.020  | 9330618  |
| Physical Properties         | -               |             |            |            |                     | -      |          |
| True Colour                 | PtCo units      | -           | 15         | -          | <2.0                | 2.0    | 9330779  |
| Conductivity                | uS/cm           | -           | -          | -          | 74.3                | 2.0    | 9330272  |
| рН                          | рН              | -           | -          | 7.0:10.5   | 7.15                |        | 9330271  |
| Physical Properties         |                 |             |            |            |                     |        |          |
| Total Dissolved Solids      | mg/L            | -           | 500        | -          | 40                  | 10     | 9333634  |
| Turbidity                   | NTU             | see remark  | see remark | see remark | 0.15                | 0.10   | 9329985  |
| Elements                    |                 |             |            |            |                     | -      |          |
| Total Mercury (Hg)          | ug/L            | 1           | -          | -          | 0.0049              | 0.0020 | 9332171  |
| Total Metals by ICPMS       |                 | -           |            | -          |                     | -      |          |
| Total Aluminum (Al)         | ug/L            | -           | -          | 100        | <3.0                | 3.0    | 9331696  |
| Total Antimony (Sb)         | ug/L            | 6           | -          | -          | <0.50               | 0.50   | 9331696  |
| Total Arsenic (As)          | ug/L            | 10          | -          | -          | 0.14                | 0.10   | 9331696  |
| Total Barium (Ba)           | ug/L            | 1000        | -          | -          | 5.9                 | 1.0    | 9331696  |
| Total Boron (B)             | ug/L            | 5000        | -          | -          | <50                 | 50     | 9331696  |
| Total Cadmium (Cd)          | ug/L            | 5           | -          | -          | <0.010              | 0.010  | 9331696  |
| Total Chromium (Cr)         | ug/L            | 50          | -          | -          | 1.0                 | 1.0    | 9331696  |
| Total Cobalt (Co)           | ug/L            | -           | -          | -          | <0.20               | 0.20   | 9331696  |
| No Fill No Exc              | eedance         |             |            |            |                     |        |          |
| Grey Exceed                 | s 1 criteria po | olicy/level |            |            |                     |        |          |
| Black Exceed                | s both criteri  | a/levels    |            |            |                     |        |          |
| RDL = Reportable Detection  |                 |             |            |            |                     |        |          |
|                             |                 |             |            |            |                     |        |          |





#### VILLAGE OF PEMBERTON

| Maxxam ID                     |               |            |      |    | VG4519        |       |          |
|-------------------------------|---------------|------------|------|----|---------------|-------|----------|
| Sampling Date                 |               |            |      |    | 2019/02/21    |       |          |
|                               |               |            |      |    | 09:30         |       |          |
| COC Number                    |               |            |      |    | 577009-01-01  |       |          |
|                               | UNITS         | MAC        | AO   | OG | INDUSTRIAL P. | RDL   | QC Batch |
| Total Copper (Cu)             | ug/L          | -          | 1000 | -  | 2.87          | 0.20  | 9331696  |
| Total Iron (Fe)               | ug/L          | -          | 300  | -  | 13.6          | 5.0   | 9331696  |
| Total Lead (Pb)               | ug/L          | 10         | -    | -  | <0.20         | 0.20  | 9331696  |
| Total Manganese (Mn)          | ug/L          | -          | 50   | -  | <1.0          | 1.0   | 9331696  |
| Total Molybdenum (Mo)         | ug/L          | -          | -    | -  | <1.0          | 1.0   | 9331696  |
| Total Nickel (Ni)             | ug/L          | -          | -    | -  | <1.0          | 1.0   | 9331696  |
| Total Selenium (Se)           | ug/L          | 50         | -    | -  | 0.11          | 0.10  | 9331696  |
| Total Silicon (Si)            | ug/L          | -          | -    | -  | 2630          | 100   | 9331696  |
| Total Silver (Ag)             | ug/L          | -          | -    | -  | <0.020        | 0.020 | 9331696  |
| Total Uranium (U)             | ug/L          | 20         | -    | -  | <0.10         | 0.10  | 9331696  |
| Total Vanadium (V)            | ug/L          | -          | -    | -  | <5.0          | 5.0   | 9331696  |
| Total Zinc (Zn)               | ug/L          | -          | 5000 | -  | <5.0          | 5.0   | 9331696  |
| Total Calcium (Ca)            | mg/L          | -          | -    | -  | 10.3          | 0.050 | 9329827  |
| Total Magnesium (Mg)          | mg/L          | -          | -    | -  | 0.871         | 0.050 | 9329827  |
| Total Potassium (K)           | mg/L          | -          | -    | -  | 0.465         | 0.050 | 9329827  |
| Total Sodium (Na)             | mg/L          | -          | 200  | -  | 1.30          | 0.050 | 9329827  |
| Total Sulphur (S)             | mg/L          | -          | -    | -  | 3.2           | 3.0   | 9329827  |
| No Fill No Excee              | edance        |            |      |    |               |       |          |
| Grey Exceeds                  | 1 criteria po | licy/level |      |    |               |       |          |
| Black Exceeds                 | both criteria | a/levels   |      |    |               |       |          |
| RDL = Reportable Detection Li | mit           |            |      |    |               |       |          |



#### Success Through Science®

#### VILLAGE OF PEMBERTON

# CSR VOC + VPH IN WATER (DRINKING WATER)

| Maxxam ID                           |             |          |      | VG4516              | VG4517              | VG4518              | VG4519              |      |          |
|-------------------------------------|-------------|----------|------|---------------------|---------------------|---------------------|---------------------|------|----------|
| Sampling Date                       |             |          |      | 2019/02/21<br>09:45 | 2019/02/21<br>09:00 | 2019/02/21<br>09:15 | 2019/02/21<br>09:30 |      |          |
| COC Number                          |             |          |      | 577009-01-01        | 577009-01-01        | 577009-01-01        | 577009-01-01        |      |          |
|                                     | UNITS       | MAC      | AO   | WELL #2             | WELL #3             | OAK ST              | INDUSTRIAL P.       | RDL  | QC Batch |
| Calculated Parameters               |             |          |      |                     |                     |                     |                     |      |          |
| VPH (VH6 to 10 - BTEX)              | ug/L        | -        | -    | <300                | <300                | <300                | <300                | 300  | 9330157  |
| Volatiles                           |             |          |      |                     |                     |                     |                     |      |          |
| VH C6-C10                           | ug/L        | -        | -    | <300                | <300                | <300                | <300                | 300  | 9329952  |
| 1,1,1,2-tetrachloroethane           | ug/L        | -        | -    | <0.50               | <0.50               | <0.50               | <0.50               | 0.50 | 9329952  |
| 1,1,1-trichloroethane               | ug/L        | -        | -    | <0.50               | <0.50               | <0.50               | <0.50               | 0.50 | 9329952  |
| 1,1,2,2-tetrachloroethane           | ug/L        | -        | -    | <0.50               | <0.50               | <0.50               | <0.50               | 0.50 | 9329952  |
| 1,1,2Trichloro-1,2,2Trifluoroethane | ug/L        | -        | -    | <2.0                | <2.0                | <2.0                | <2.0                | 2.0  | 9329952  |
| 1,1,2-trichloroethane               | ug/L        | -        | -    | <0.50               | <0.50               | <0.50               | <0.50               | 0.50 | 9329952  |
| 1,1-dichloroethane                  | ug/L        | -        | -    | <0.50               | <0.50               | <0.50               | <0.50               | 0.50 | 9329952  |
| 1,1-dichloroethene                  | ug/L        | 14       | -    | <0.50               | <0.50               | <0.50               | <0.50               | 0.50 | 9329952  |
| 1,2,3-trichlorobenzene              | ug/L        | -        | -    | <2.0                | <2.0                | <2.0                | <2.0                | 2.0  | 9329952  |
| 1,2,4-trichlorobenzene              | ug/L        | -        | -    | <2.0                | <2.0                | <2.0                | <2.0                | 2.0  | 9329952  |
| 1,2-dibromoethane                   | ug/L        | -        | -    | <0.20               | <0.20               | <0.20               | <0.20               | 0.20 | 9329952  |
| 1,2-dichlorobenzene                 | ug/L        | 200      | 3    | <0.50               | <0.50               | <0.50               | <0.50               | 0.50 | 9329952  |
| 1,2-dichloroethane                  | ug/L        | 5        | -    | <0.50               | <0.50               | <0.50               | <0.50               | 0.50 | 9329952  |
| 1,2-dichloropropane                 | ug/L        | -        | -    | <0.50               | <0.50               | <0.50               | <0.50               | 0.50 | 9329952  |
| 1,3,5-trimethylbenzene              | ug/L        | -        | -    | <2.0                | <2.0                | <2.0                | <2.0                | 2.0  | 9329952  |
| 1,3-Butadiene                       | ug/L        | -        | -    | <0.50               | <0.50               | <0.50               | <0.50               | 0.50 | 9329952  |
| 1,3-dichlorobenzene                 | ug/L        | -        | -    | <0.50               | <0.50               | <0.50               | <0.50               | 0.50 | 9329952  |
| 1,3-dichloropropane                 | ug/L        | -        | -    | <1.0                | <1.0                | <1.0                | <1.0                | 1.0  | 9329952  |
| 1,4-dichlorobenzene                 | ug/L        | 5        | 1    | <0.50               | <0.50               | <0.50               | <0.50               | 0.50 | 9329952  |
| Benzene                             | ug/L        | 5        | -    | <0.40               | <0.40               | <0.40               | <0.40               | 0.40 | 9329952  |
| Bromobenzene                        | ug/L        | -        | -    | <2.0                | <2.0                | <2.0                | <2.0                | 2.0  | 9329952  |
| Bromodichloromethane                | ug/L        | -        | -    | <1.0                | <1.0                | 1.1                 | <1.0                | 1.0  | 9329952  |
| Bromoform                           | ug/L        | -        | -    | <1.0                | <1.0                | <1.0                | <1.0                | 1.0  | 9329952  |
| Bromomethane                        | ug/L        | -        | -    | <1.0                | <1.0                | <1.0                | <1.0                | 1.0  | 9329952  |
| Carbon tetrachloride                | ug/L        | 2        | -    | <0.50               | <0.50               | <0.50               | <0.50               | 0.50 | 9329952  |
| Chlorobenzene                       | ug/L        | 80       | 30   | <0.50               | <0.50               | <0.50               | <0.50               | 0.50 | 9329952  |
| Chlorodibromomethane                | ug/L        | -        | -    | <1.0                | <1.0                | 1.5                 | <1.0                | 1.0  | 9329952  |
| Chloroethane                        | ug/L        | -        | -    | <1.0                | <1.0                | <1.0                | <1.0                | 1.0  | 9329952  |
| Chloroform                          | ug/L        | -        | -    | <1.0                | <1.0                | <1.0                | 1.2                 | 1.0  | 9329952  |
| Chloromethane                       | ug/L        | -        | -    | <1.0                | <1.0                | <1.0                | <1.0                | 1.0  | 9329952  |
| cis-1,2-dichloroethene              | ug/L        | -        | -    | <1.0                | <1.0                | <1.0                | <1.0                | 1.0  | 9329952  |
| cis-1,3-dichloropropene             | ug/L        | -        | -    | <1.0                | <1.0                | <1.0                | <1.0                | 1.0  | 9329952  |
| No Fill No Exceeda                  | -           |          |      |                     |                     |                     |                     |      |          |
| Grey Exceeds 1 cr                   | iteria po   | olicv/le | evel |                     |                     |                     |                     |      |          |
| Black Exceeds bot                   | •           |          |      |                     |                     |                     |                     |      |          |
| RDL = Reportable Detection Limit    | in criterio | aneve    | J    |                     |                     |                     |                     |      |          |



Maxxam Job #: B912925 Report Date: 2019/02/28

#### VILLAGE OF PEMBERTON

# CSR VOC + VPH IN WATER (DRINKING WATER)

| Maxxam ID                        |              |          |     | VG4516       | VG4517       | VG4518       | VG4519        |      |          |
|----------------------------------|--------------|----------|-----|--------------|--------------|--------------|---------------|------|----------|
| Sampling Date                    |              |          |     | 2019/02/21   | 2019/02/21   | 2019/02/21   | 2019/02/21    |      |          |
|                                  |              |          |     | 09:45        | 09:00        | 09:15        | 09:30         |      |          |
| COC Number                       |              |          |     | 577009-01-01 | 577009-01-01 | 577009-01-01 | 577009-01-01  |      |          |
|                                  | UNITS        | MAC      | AO  | WELL #2      | WELL #3      | OAK ST       | INDUSTRIAL P. | RDL  | QC Batch |
| Dichlorodifluoromethane          | ug/L         | -        | -   | <2.0         | <2.0         | <2.0         | <2.0          | 2.0  | 9329952  |
| Dichloromethane                  | ug/L         | 50       | -   | <2.0         | <2.0         | <2.0         | <2.0          | 2.0  | 9329952  |
| Ethylbenzene                     | ug/L         | 140      | 1.6 | <0.40        | <0.40        | <0.40        | <0.40         | 0.40 | 9329952  |
| Hexachlorobutadiene              | ug/L         | -        | -   | <0.50        | <0.50        | <0.50        | <0.50         | 0.50 | 9329952  |
| Isopropylbenzene                 | ug/L         | -        | -   | <2.0         | <2.0         | <2.0         | <2.0          | 2.0  | 9329952  |
| Methyl-tert-butylether (MTBE)    | ug/L         | -        | 15  | <4.0         | <4.0         | <4.0         | <4.0          | 4.0  | 9329952  |
| Styrene                          | ug/L         | -        | -   | <0.50        | <0.50        | <0.50        | <0.50         | 0.50 | 9329952  |
| Tetrachloroethene                | ug/L         | 10       | -   | <0.50        | <0.50        | <0.50        | <0.50         | 0.50 | 9329952  |
| Toluene                          | ug/L         | 60       | 24  | <0.40        | <0.40        | <0.40        | <0.40         | 0.40 | 9329952  |
| trans-1,2-dichloroethene         | ug/L         | -        | -   | <1.0         | <1.0         | <1.0         | <1.0          | 1.0  | 9329952  |
| trans-1,3-dichloropropene        | ug/L         | -        | -   | <1.0         | <1.0         | <1.0         | <1.0          | 1.0  | 9329952  |
| Trichloroethene                  | ug/L         | 5        | -   | <0.50        | <0.50        | <0.50        | <0.50         | 0.50 | 9329952  |
| Trichlorofluoromethane           | ug/L         | -        | -   | <4.0         | <4.0         | <4.0         | <4.0          | 4.0  | 9329952  |
| Vinyl chloride                   | ug/L         | 2        | -   | <0.50        | <0.50        | <0.50        | <0.50         | 0.50 | 9329952  |
| m & p-Xylene                     | ug/L         | -        | -   | <0.40        | <0.40        | <0.40        | <0.40         | 0.40 | 9329952  |
| o-Xylene                         | ug/L         | -        | -   | <0.40        | <0.40        | <0.40        | <0.40         | 0.40 | 9329952  |
| Xylenes (Total)                  | ug/L         | 90       | 20  | <0.40        | <0.40        | <0.40        | <0.40         | 0.40 | 9329952  |
| Surrogate Recovery (%)           |              |          |     |              |              |              |               |      |          |
| 1,4-Difluorobenzene (sur.)       | %            | -        | -   | 102          | 102          | 102          | 102           |      | 9329952  |
| 4-Bromofluorobenzene (sur.)      | %            | -        | -   | 87           | 88           | 87           | 87            |      | 9329952  |
| D4-1,2-Dichloroethane (sur.)     | %            | -        | -   | 89           | 90           | 91           | 89            |      | 9329952  |
| No Fill No Exceed                | ance         |          |     |              |              |              |               |      |          |
| Grey Exceeds 1                   | criteria po  | olicy/le | vel |              |              |              |               |      |          |
| Black Exceeds be                 | oth criteria | a/level  | S   |              |              |              |               |      |          |
| RDL = Reportable Detection Limit |              |          |     |              |              |              |               |      |          |



Maxxam Job #: B912925 Report Date: 2019/02/28

#### Success Through Science®

#### VILLAGE OF PEMBERTON

#### **GENERAL COMMENTS**

MAC,AO,OG: The guidelines that have been included in this report have been taken from the Canadian Drinking Water Quality Summary Table, February 2017.

Criteria A = Maximum Acceptable Concentration (MAC) / Criteria B = Aesthetic Objectives (AO) / Criteria C = Operational Guidance Values (OG) It is recommended to consult these guidelines when interpreting your data since there are non-numerical guidelines that are not included on this report.

Turbidity Guidelines:

1. Chemically assisted filtration: less than or equal to 0.3 NTU in 95% of the measurements or 95% of the time each month. Shall not exceed 1.0 NTU at any time.

2. Slow sand / diatomaceous earth filtration: less than or equal to 1.0 NTU in 95% of the measurements or 95% of the time each month. Shall not exceed 3.0 NTU at any time.

3. Membrane filtration: less than or equal to 0.1 NTU in 99% of the measurements made or at least 99% of the time each calendar month. Shall not exceed 0.3 NTU at any time.

4. To ensure effectiveness of disinfection and for good operation of the distribution system, it is recommended that water entering the distribution system have turbidity levels of 1.0 NTU or less.

Measurement of Uncertainty has not been accounted for when stating conformity to the selected criteria, where applicable.

Results relate only to the items tested.



Maxxam Job #: B912925

Report Date: 2019/02/28

### QUALITY ASSURANCE REPORT

E

VILLAGE OF PEMBERTON

|          |                                     |            | Matrix     | Spike     | Spiked     | Blank     | Method E | Blank | RPI       | D         |
|----------|-------------------------------------|------------|------------|-----------|------------|-----------|----------|-------|-----------|-----------|
| QC Batch | Parameter                           | Date       | % Recovery | QC Limits | % Recovery | QC Limits | Value    | UNITS | Value (%) | QC Limits |
| 9329952  | 1,4-Difluorobenzene (sur.)          | 2019/02/22 | 100        | 50 - 140  | 100        | 50 - 140  | 101      | %     |           |           |
| 9329952  | 4-Bromofluorobenzene (sur.)         | 2019/02/22 | 100        | 50 - 140  | 100        | 50 - 140  | 89       | %     |           |           |
| 9329952  | D4-1,2-Dichloroethane (sur.)        | 2019/02/22 | 94         | 50 - 140  | 93         | 50 - 140  | 87       | %     |           |           |
| 9329952  | 1,1,1,2-tetrachloroethane           | 2019/02/22 | 94         | 50 - 140  | 91         | 60 - 130  | <0.50    | ug/L  | NC        | 30        |
| 9329952  | 1,1,1-trichloroethane               | 2019/02/22 | 102        | 50 - 140  | 97         | 60 - 130  | <0.50    | ug/L  | NC        | 30        |
| 9329952  | 1,1,2,2-tetrachloroethane           | 2019/02/22 | 93         | 50 - 140  | 87         | 60 - 130  | <0.50    | ug/L  | NC        | 30        |
| 9329952  | 1,1,2Trichloro-1,2,2Trifluoroethane | 2019/02/22 | 107        | 50 - 140  | 102        | 60 - 130  | <2.0     | ug/L  | NC        | 30        |
| 9329952  | 1,1,2-trichloroethane               | 2019/02/22 | 98         | 50 - 140  | 94         | 60 - 130  | <0.50    | ug/L  | NC        | 30        |
| 9329952  | 1,1-dichloroethane                  | 2019/02/22 | 106        | 50 - 140  | 100        | 60 - 130  | <0.50    | ug/L  | NC        | 30        |
| 9329952  | 1,1-dichloroethene                  | 2019/02/22 | 109        | 50 - 140  | 101        | 60 - 130  | <0.50    | ug/L  | NC        | 30        |
| 9329952  | 1,2,3-trichlorobenzene              | 2019/02/22 | 117        | 50 - 140  | 110        | 60 - 130  | <2.0     | ug/L  |           |           |
| 9329952  | 1,2,4-trichlorobenzene              | 2019/02/22 | 115        | 50 - 140  | 109        | 60 - 130  | <2.0     | ug/L  |           |           |
| 9329952  | 1,2-dibromoethane                   | 2019/02/22 | 96         | 50 - 140  | 92         | 60 - 130  | <0.20    | ug/L  |           |           |
| 9329952  | 1,2-dichlorobenzene                 | 2019/02/22 | 112        | 50 - 140  | 106        | 60 - 130  | <0.50    | ug/L  | NC        | 30        |
| 9329952  | 1,2-dichloroethane                  | 2019/02/22 | 97         | 50 - 140  | 93         | 60 - 130  | <0.50    | ug/L  | NC        | 30        |
| 9329952  | 1,2-dichloropropane                 | 2019/02/22 | 99         | 50 - 140  | 95         | 60 - 130  | <0.50    | ug/L  | NC        | 30        |
| 9329952  | 1,3,5-trimethylbenzene              | 2019/02/22 | 112        | 50 - 140  | 108        | 60 - 130  | <2.0     | ug/L  |           |           |
| 9329952  | 1,3-Butadiene                       | 2019/02/22 | 88         | 50 - 140  | 85         | 60 - 130  | <0.50    | ug/L  | NC        | 30        |
| 9329952  | 1,3-dichlorobenzene                 | 2019/02/22 | 114        | 50 - 140  | 108        | 60 - 130  | <0.50    | ug/L  | NC        | 30        |
| 9329952  | 1,3-dichloropropane                 | 2019/02/22 | 99         | 50 - 140  | 94         | 60 - 130  | <1.0     | ug/L  |           |           |
| 9329952  | 1,4-dichlorobenzene                 | 2019/02/22 | 110        | 50 - 140  | 105        | 60 - 130  | <0.50    | ug/L  | NC        | 30        |
| 9329952  | Benzene                             | 2019/02/22 | 99         | 50 - 140  | 95         | 60 - 130  | <0.40    | ug/L  | NC        | 30        |
| 9329952  | Bromobenzene                        | 2019/02/22 | 105        | 50 - 140  | 101        | 60 - 130  | <2.0     | ug/L  | NC        | 30        |
| 9329952  | Bromodichloromethane                | 2019/02/22 | 98         | 50 - 140  | 92         | 60 - 130  | <1.0     | ug/L  | NC        | 30        |
| 9329952  | Bromoform                           | 2019/02/22 | 99         | 50 - 140  | 95         | 60 - 130  | <1.0     | ug/L  | NC        | 30        |
| 9329952  | Bromomethane                        | 2019/02/22 | 101        | 50 - 140  | 95         | 60 - 130  | <1.0     | ug/L  | NC        | 30        |
| 9329952  | Carbon tetrachloride                | 2019/02/22 | 104        | 50 - 140  | 99         | 60 - 130  | <0.50    | ug/L  | NC        | 30        |
| 9329952  | Chlorobenzene                       | 2019/02/22 | 95         | 50 - 140  | 92         | 60 - 130  | <0.50    | ug/L  | NC        | 30        |
| 9329952  | Chlorodibromomethane                | 2019/02/22 | 102        | 50 - 140  | 96         | 60 - 130  | <1.0     | ug/L  | NC        | 30        |
| 9329952  | Chloroethane                        | 2019/02/22 | 90         | 50 - 140  | 87         | 60 - 130  | <1.0     | ug/L  | NC        | 30        |
| 9329952  | Chloroform                          | 2019/02/22 | 100        | 50 - 140  | 95         | 60 - 130  | <1.0     | ug/L  | NC        | 30        |
| 9329952  | Chloromethane                       | 2019/02/22 | 103        | 50 - 140  | 98         | 50 - 140  | <1.0     | ug/L  | NC        | 30        |
| 9329952  | cis-1,2-dichloroethene              | 2019/02/22 | 100        | 50 - 140  | 95         | 60 - 130  | <1.0     | ug/L  | NC        | 30        |
| 9329952  | cis-1,3-dichloropropene             | 2019/02/22 | 97         | 50 - 140  | 92         | 50 - 140  | <1.0     | ug/L  | NC        | 30        |

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Maxxam Job #: B912925

Report Date: 2019/02/28

# QUALITY ASSURANCE REPORT(CONT'D)

VILLAGE OF PEMBERTON

|          |                               |            | Matrix     | Spike     | Spiked     | Blank     | Method  | Blank      | RPI       | D         |
|----------|-------------------------------|------------|------------|-----------|------------|-----------|---------|------------|-----------|-----------|
| QC Batch | Parameter                     | Date       | % Recovery | QC Limits | % Recovery | QC Limits | Value   | UNITS      | Value (%) | QC Limits |
| 9329952  | Dichlorodifluoromethane       | 2019/02/22 | 115        | 50 - 140  | 111        | 50 - 140  | <2.0    | ug/L       | NC        | 30        |
| 9329952  | Dichloromethane               | 2019/02/22 | 123        | 50 - 140  | 115        | 60 - 130  | <2.0    | ug/L       | NC        | 30        |
| 9329952  | Ethylbenzene                  | 2019/02/22 | 99         | 50 - 140  | 96         | 60 - 130  | <0.40   | ug/L       | NC        | 30        |
| 9329952  | Hexachlorobutadiene           | 2019/02/22 | 110        | 50 - 140  | 105        | 60 - 130  | <0.50   | ug/L       |           |           |
| 9329952  | Isopropylbenzene              | 2019/02/22 | 107        | 50 - 140  | 103        | 60 - 130  | <2.0    | ug/L       |           |           |
| 9329952  | m & p-Xylene                  | 2019/02/22 | 107        | 50 - 140  | 103        | 60 - 130  | <0.40   | ug/L       | NC        | 30        |
| 9329952  | Methyl-tert-butylether (MTBE) | 2019/02/22 | 103        | 50 - 140  | 98         | 60 - 130  | <4.0    | ug/L       | NC        | 30        |
| 9329952  | o-Xylene                      | 2019/02/22 | 103        | 50 - 140  | 99         | 60 - 130  | <0.40   | ug/L       | NC        | 30        |
| 9329952  | Styrene                       | 2019/02/22 | 102        | 50 - 140  | 98         | 60 - 130  | <0.50   | ug/L       | NC        | 30        |
| 9329952  | Tetrachloroethene             | 2019/02/22 | 103        | 50 - 140  | 98         | 60 - 130  | <0.50   | ug/L       | NC        | 30        |
| 9329952  | Toluene                       | 2019/02/22 | 101        | 50 - 140  | 97         | 60 - 130  | <0.40   | ug/L       | NC        | 30        |
| 9329952  | trans-1,2-dichloroethene      | 2019/02/22 | 108        | 50 - 140  | 102        | 60 - 130  | <1.0    | ug/L       | NC        | 30        |
| 9329952  | trans-1,3-dichloropropene     | 2019/02/22 | 96         | 50 - 140  | 91         | 50 - 140  | <1.0    | ug/L       | NC        | 30        |
| 9329952  | Trichloroethene               | 2019/02/22 | 108        | 50 - 140  | 102        | 60 - 130  | <0.50   | ug/L       | NC        | 30        |
| 9329952  | Trichlorofluoromethane        | 2019/02/22 | 107        | 50 - 140  | 101        | 60 - 130  | <4.0    | ug/L       | NC        | 30        |
| 9329952  | VH C6-C10                     | 2019/02/22 |            |           | 71         | 70 - 130  | <300    | ug/L       | NC        | 30        |
| 9329952  | Vinyl chloride                | 2019/02/22 | 130        | 50 - 140  | 124        | 50 - 140  | <0.50   | ug/L       | NC        | 30        |
| 9329952  | Xylenes (Total)               | 2019/02/22 |            |           |            |           | <0.40   | ug/L       | NC        | 30        |
| 9329985  | Turbidity                     | 2019/02/22 |            |           | 98         | 80 - 120  | <0.10   | NTU        | 5.8       | 20        |
| 9330271  | рН                            | 2019/02/23 |            |           | 101        | 97 - 103  |         |            |           |           |
| 9330272  | Conductivity                  | 2019/02/23 |            |           | 100        | 80 - 120  | <2.0    | uS/cm      |           |           |
| 9330273  | Alkalinity (PP as CaCO3)      | 2019/02/23 |            |           |            |           | <1.0    | mg/L       |           |           |
| 9330273  | Alkalinity (Total as CaCO3)   | 2019/02/23 |            |           | 97         | 80 - 120  | <1.0    | mg/L       |           |           |
| 9330273  | Bicarbonate (HCO3)            | 2019/02/23 |            |           |            |           | <1.0    | mg/L       |           |           |
| 9330273  | Carbonate (CO3)               | 2019/02/23 |            |           |            |           | <1.0    | mg/L       |           |           |
| 9330273  | Hydroxide (OH)                | 2019/02/23 |            |           |            |           | <1.0    | mg/L       |           |           |
| 9330618  | Nitrate plus Nitrite (N)      | 2019/02/23 | NC         | 80 - 120  | 107        | 80 - 120  | <0.020  | mg/L       | 0.86      | 25        |
| 9330619  | Nitrite (N)                   | 2019/02/23 | 97         | 80 - 120  | 102        | 80 - 120  | <0.0050 | mg/L       | 7.5       | 20        |
| 9330779  | True Colour                   | 2019/02/24 |            |           | 99         | 80 - 120  | <2.0    | PtCo units | 4.7       | 20        |
| 9331178  | Fluoride (F)                  | 2019/02/25 | NC         | 80 - 120  | 110        | 80 - 120  | <0.020  | mg/L       | 0         | 20        |
| 9331696  | Total Aluminum (Al)           | 2019/02/27 | 98         | 80 - 120  | 102        | 80 - 120  | <3.0    | ug/L       |           |           |
| 9331696  | Total Antimony (Sb)           | 2019/02/27 | 102        | 80 - 120  | 101        | 80 - 120  | <0.50   | ug/L       |           |           |
| 9331696  | Total Arsenic (As)            | 2019/02/27 | 107        | 80 - 120  | 108        | 80 - 120  | <0.10   | ug/L       |           |           |
| 9331696  | Total Barium (Ba)             | 2019/02/27 | 104        | 80 - 120  | 105        | 80 - 120  | <1.0    | ug/L       |           |           |

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Maxxam Job #: B912925

Report Date: 2019/02/28

# QUALITY ASSURANCE REPORT(CONT'D)

#### VILLAGE OF PEMBERTON

|          |                          |            | Matrix     | Spike     | Spiked     | Blank     | Method E | Blank | RPI       | כ         |
|----------|--------------------------|------------|------------|-----------|------------|-----------|----------|-------|-----------|-----------|
| QC Batch | Parameter                | Date       | % Recovery | QC Limits | % Recovery | QC Limits | Value    | UNITS | Value (%) | QC Limits |
| 9331696  | Total Boron (B)          | 2019/02/27 | 106        | 80 - 120  | 104        | 80 - 120  | <50      | ug/L  |           |           |
| 9331696  | Total Cadmium (Cd)       | 2019/02/27 | 103        | 80 - 120  | 102        | 80 - 120  | <0.010   | ug/L  |           |           |
| 9331696  | Total Chromium (Cr)      | 2019/02/27 | 97         | 80 - 120  | 96         | 80 - 120  | <1.0     | ug/L  |           |           |
| 9331696  | Total Cobalt (Co)        | 2019/02/27 | 97         | 80 - 120  | 97         | 80 - 120  | <0.20    | ug/L  |           |           |
| 9331696  | Total Copper (Cu)        | 2019/02/27 | NC         | 80 - 120  | 96         | 80 - 120  | <0.20    | ug/L  |           |           |
| 9331696  | Total Iron (Fe)          | 2019/02/27 | 103        | 80 - 120  | 106        | 80 - 120  | <5.0     | ug/L  |           |           |
| 9331696  | Total Lead (Pb)          | 2019/02/27 | 103        | 80 - 120  | 105        | 80 - 120  | <0.20    | ug/L  | 1.1       | 20        |
| 9331696  | Total Manganese (Mn)     | 2019/02/27 | 96         | 80 - 120  | 98         | 80 - 120  | <1.0     | ug/L  |           |           |
| 9331696  | Total Molybdenum (Mo)    | 2019/02/27 | 105        | 80 - 120  | 100        | 80 - 120  | <1.0     | ug/L  |           |           |
| 9331696  | Total Nickel (Ni)        | 2019/02/27 | 99         | 80 - 120  | 97         | 80 - 120  | <1.0     | ug/L  |           |           |
| 9331696  | Total Selenium (Se)      | 2019/02/27 | 105        | 80 - 120  | 102        | 80 - 120  | <0.10    | ug/L  |           |           |
| 9331696  | Total Silicon (Si)       | 2019/02/27 | 104        | 80 - 120  | 108        | 80 - 120  | <100     | ug/L  |           |           |
| 9331696  | Total Silver (Ag)        | 2019/02/27 | 103        | 80 - 120  | 103        | 80 - 120  | <0.020   | ug/L  |           |           |
| 9331696  | Total Uranium (U)        | 2019/02/27 | 102        | 80 - 120  | 103        | 80 - 120  | <0.10    | ug/L  |           |           |
| 9331696  | Total Vanadium (V)       | 2019/02/27 | 99         | 80 - 120  | 96         | 80 - 120  | <5.0     | ug/L  |           |           |
| 9331696  | Total Zinc (Zn)          | 2019/02/27 | 99         | 80 - 120  | 99         | 80 - 120  | <5.0     | ug/L  |           |           |
| 9332171  | Total Mercury (Hg)       | 2019/02/26 | 91         | 80 - 120  | 98         | 80 - 120  | <0.0020  | ug/L  | NC        | 20        |
| 9332442  | Dissolved Chloride (Cl)  | 2019/02/25 | 99         | 80 - 120  | 105        | 80 - 120  | <1.0     | mg/L  | NC        | 20        |
| 9332443  | Dissolved Sulphate (SO4) | 2019/02/25 | 90         | 80 - 120  | 99         | 80 - 120  | <1.0     | mg/L  | 2.5       | 20        |
| 9332499  | рН                       | 2019/02/26 |            |           | 100        | 97 - 103  |          |       | 0.37      | N/A       |
| 9333634  | Total Dissolved Solids   | 2019/02/28 | 103        | 80 - 120  | 93         | 80 - 120  | <10      | mg/L  | 1.8       | 20        |

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

| ÷          | e 1                    | INVOICE TO:                             |                |              |                     | Report Info       | ormatio   | n  |                                |          |            |             | Project Inf  | formation            |                       |                  |  | У                                |
|------------|------------------------|---|----------------|--------------|---------------------|-------------------|-----------|--|--------------------------------|----------|------------|-------------|--------------|----------------------|-----------------------|------------------|--|----------------------------------|
| npany Na   | ne #99020 VILL/        | AGE OF PEMBERTON                        |                | Company Na   | me                  |                   | _         |  |                                |          | Quotan     | on#         | B80135       |                      |                       |                  | 81 83 90 00 00 00 00 00 00 00 00 00 00 00 00                                   | Bottle Order #:                  |
| tact Nam   |                        |   |                | Contact Nam  |                     |                   |           |  |                                |          | P.0.#      |             |              |                      |                       | D0120            | 25 COC   |                                  |
| 995        | Box 100 7400           |   |                | Address      | C - 60.             | 1-90              | 5-        | 892  | 4                              |          | Project    | #           |              |                      |                       | 091294           |  | 577009                           |
|            | Pemberton BC           |   |                | C            | 10 604 8            | 94-6              | 13        | 5  |                                |          | Project    | Name        |              |                      |                       |                  | Grann or Grannay record  | Project Manager                  |
| wa<br>il   | (604) 894-681          | 1 Fax: (604) 894                        |                |              | iwestlake@          |                   |           | Fax  |                                |          | Site #     |             | -            |                      |                       | -                |  | Morgan Meinychu                  |
| 22/1-1-1-1 | - 2 comes              | newperior.ca                            |                | Email        |                     | penibello         | 1.08      |  | _                              |          | Sample     |             | BE SPECIFIC) |                      |                       |                  | C#577009-01-01<br>Turnaround Time (TAT) Ret                                    | neilinger!                       |
| guiatory   | Criteria               |   |                |              | al Instructions     |                   |           | - 1  |                                | ANALY    | SIS REQUES | TED (PLEASE | BE SPECIFIC) | - T                  | 1                     | III CALCORE      | Please provide advance notice for ru   |                                  |
| CSR        |                        |   | PLO            | CASE         | PLO<br>O + N        | T                 |           |  |                                |          |            |             | 1 1          |                      |                       |                  |  | ou professe.                     |
|            |                        |   | 14 127         | A            | otr                 | AC                |           | without                                    | ater                           |          |            |             |              |                      |                       | (10)(2)(2)(2)(2) | Standard) TAT:   | Г                                |
| 1 cus      | E                      |   |                | C (1)        |                     |                   | ~         | with                                       | Na                             | 5        |            |             | 1 1          |                      |                       | 1010000000       | oplied if Rush TAT is not specified):<br>TAT = 5-7 Working days for most tests | L                                |
| BCV        | Vater Quality          |   | 1DE            | NTIF         | ILD.                |                   | z         |  | ei (e                          | ate      |            |             |              |                      |                       | 100000000        | the Standard TAT for certain tests such as BO                                  | D and Dickins/Furans at          |
| 1.00       |                        |   |                |              |                     |                   | 2(1       | Drinking Water Package<br>Microbiologicals | Trihalomethanes (THM) in Water | in Water |            |             |              |                      |                       | days - cor       | ntact your Project Manager for details   | References and the second second |
| 1 0.00     |                        | ALL |                |              |                     |                   | pau       | e ba                                       | SS (                           | NPH I    |            |             |              |                      |                       | Job Spe          | cific Rush TAT (If applies to entire submise                                   | ion)                             |
|            |                        | 7                                       |                |              |                     |                   |           | ater                                       | ane                            | + VE     |            |             |              |                      |                       | 1 DAY            | 2 Day 3 Day Date Requ  | ired.                            |
| -          |                        |   | 1.1.1.1.1.1.1  |              | A REAL PROPERTY AND | Conception of the | 물         | N Golo                                     | net                            | VOC      |            |             |              |                      |                       | Rush Co          | infirmation Number:  | l                                |
|            | SAMPLES MUST BE KE     | PT COOL ( < 10°C ) FROM TIME OF S       | AMPLING UNTIL  | L DELIVERY 1 | TO MAXXAM           |                   | 12        | king<br>obje                               | alon                           | ž        |            |             |              |                      |                       |                  |  | all lab for #)                   |
| Sar        | nple Barcode Label     | Sample (Location) Identification        | Date           | Sampled      | Time Sampled        | Matrix            | Met       | Micr                                       | 4EL                            | CSR      |            |             |              |                      |                       | # of Bottle      | es Comments  |                                  |
| 0.00       |                        | 11/10, # 0                              | Fe             | B21          | 9:45 Am             |                   | Ħ         | ~  |                                | ~        |            |             |              |                      |                       | 6                |  |                                  |
|            |                        | well of                                 | 0.55           |              | 1.1.2 1973          |                   | ++        | ~  | V                              | -        |            |             |              |                      | -                     | 4                |  |                                  |
|            | Ũ                      | WELL # 3                                | FE             |              | 9:00 Am             |                   | $\square$ | V  | V                              | ~        |            |             |              |                      |                       | 6                |  |                                  |
|            |                        | OAK ST<br>INDUSTRIAL                    | FE             | 021          | 9:15 AM             |                   |           | V  | V                              | 1        |            | _           |              |                      |                       | 6                |  |                                  |
|            |                        | INDUSTRIAL                              | P. FF          | B21          | 9:30Am              |                   |           | V  | 1                              | V        |            |             |              |                      |                       | 6                |  |                                  |
|            | -                      |   |                |              |                     |                   |           |  |                                |          |            |             |              |                      |                       |                  |  |                                  |
|            |                        | 1 E E                                   |                |              | 4                   |                   | Ħ         |  |                                |          |            |             |              |                      |                       |                  |  |                                  |
|            | -                      |   |                |              |                     |                   |           |  |                                |          |            |             |              |                      |                       |                  |  |                                  |
|            |                        |   |                |              |                     |                   | ++        |  |                                |          |            |             |              |                      |                       |                  |  |                                  |
|            |                        |   |                |              |                     |                   |           |  |                                |          |            |             |              |                      | -                     | -                |  |                                  |
|            | 1                      |   |                |              |                     |                   |           |  |                                |          |            |             |              |                      |                       |                  |  |                                  |
|            |                        |   |                |              |                     |                   |           |  |                                |          |            |             |              |                      |                       |                  |  |                                  |
| • RE       | LINQUISHED BY: (Signat | ure/Print)                              | ate: (YY/MWDD) | ) Time       | 0                   | RECEN             | VED BY:   | : (Signatur                                | and the second second          |          |            | (TANWARD)   | Time         | # jars used a        | and the second second |                  | Lab Use Only   | 1                                |
|            |                        | 10                                      | 102/21         | 10:0         | m                   | Hude              | ANI.      | 115  | w                              | 1/1      | 2010       | 1022        | N DX : K     | C Out a destablished | Time Se               | risitive Te      | emperature (°C) og Receipt Custod  | Seal Intac In Cooler?            |

Maxxam Analytics International Corporation o/a Maxxam Analytics

| Location         | Date          | Cl2  | РН               | Temp C | Alkalinity | Notes  |
|------------------|---------------|------|------------------|--------|------------|--------|
| WWTP             | 1/14/2019     |      |                  |        |            |        |
| Health Centre    | 1/14/2019     |      |                  | 9.3    | 40         |        |
| Village Office   | 1/14/2019     |      | 6.7              | 8      | 40         |        |
| Plateau/Ridge    | 1/14/2019     |      |                  | 8.2    | 35         |        |
| Oak St           | 1/14/2019     | 0.30 | 6.8              | 8.6    | 36         |        |
| Pemberton Nort   | h             |      |                  |        |            |        |
| Collins Rd       | 1/14/2019     |      |                  |        |            | frozen |
| Meadows Rd       | 1/14/2019     |      |                  |        |            | frozen |
| Farm Rd          | 1/14/2019     | 0.28 | 6.6              | 8.5    | 30         |        |
| Urdal Rd         | 1/14/2019     |      |                  |        |            | frozen |
| Distrib total    |               | 0.27 | 6.7              | 8.5    | 36         |        |
| Industrial Park  | 1/14/2019     |      |                  |        |            |        |
|                  |               |      |                  |        |            |        |
| Location         | Date          | Cl2  | PH               | Temp C | Alkalinity | Notes  |
| WWTP             | 1/21/2019     |      |                  |        |            |        |
| Health Centre    | 1/21/2019     |      | 7.2              | 9.8    | 60         |        |
| Village Office   | 1/21/2019     | 0.28 | 7.1              | 8.3    | 51         |        |
| Plateau/Ridge    | 1/21/2019     | 0.22 | 7.2              | 8.5    | 47         |        |
| Oak St           | 1/21/2019     |      | 7.1              | 8.5    | 60         |        |
| Pemberton Nort   |               |      |                  |        |            |        |
| Collins Rd       | 1/21/2019     |      |                  |        |            | frozen |
| Meadows Rd       | 1/21/2019     |      |                  |        |            | frozen |
| Farm Rd          | 1/21/2019     |      |                  |        |            | frozen |
| Urdal Rd         | 1/21/2019     |      |                  |        |            | frozen |
| Distrib total    |               | 0.28 | 7.2              | 8.8    | 55         |        |
| Industrial Park  | 1/21/2019     |      |                  |        | 21         |        |
|                  |               |      |                  |        |            |        |
| Location         | Date          | CI2  | РН               | Temp C | Alkalinity | Notes  |
| WWTP             | 1/29/2019     |      |                  | •      |            |        |
| Health Centre    | 1/29/2019     |      | 7.2              | 8.5    | 43         |        |
| Village Office   | 1/29/2019     |      | 7.2              |        | 47         |        |
| Plateau/Ridge    | 1/29/2019     |      |                  |        | 47         |        |
| Oak St           | 1/29/2019     |      |                  |        | 48         |        |
| Pemberton Nort   |               |      |                  |        |            |        |
| Collins Rd       | 1/29/2019     |      |                  |        |            | frozen |
| Meadows Rd       | 1/29/2019     |      |                  |        |            | frozen |
| Farm Rd          | 1/29/2019     |      |                  |        |            | frozen |
| Urdal Rd         | 1/29/2019     |      |                  |        |            | frozen |
| Distrib total    |               | 0.28 | 7.2              | 8.2    | 46         |        |
| Industrial Park  | 1/29/2019     |      |                  |        | 27         |        |
|                  |               |      |                  |        |            |        |
| Location         | Date          | Cl2  | РН               | Temp C | Alkalinity | Notes  |
|                  |               |      |                  |        |            |        |
| Location<br>WWTP | Date 2/4/2019 |      | <b>РН</b><br>7.1 |        |            | inotes |

# 2019 Village of Pemberton Water Sampling Program

| Health Centre   | 2/4/2019   | 0.31  | 7.2   | 8  | 66   |  |
|---|--|---|---|--|--|--|
| Village Office  | 2/4/2019   | 0.27  | 7.2   | 8.2  | 59   |  |
| Plateau/Ridge   | 2/4/2019   | 0.14  | 7.2   | 8.2  | 47   |  |
| Oak St  | 2/4/2019   | 0.31  | 7.2   | 8.1  | 60   |  |
| Pemberton Nort  |  | 0.01  |   |  |  |  |
| Collins Rd  | 2/4/2019   |   |   |  |  | frozen   |
| Meadows Rd  | 2/4/2019   |   |   |  |  | frozen   |
| Farm Rd   | 2/4/2019   |   |   |  |  | frozen   |
| Urdal Rd  | 2/4/2019   |   |   |  |  | frozen   |
| Distrib total   |  | 0.21  | 7.2   | 8.0  | 58   |  |
| Industrial Park   | 2/4/2019   |   |   |  | 23   |  |
|   |  |   |   |  |  |  |
| Location  | Date   | Cl2   | РН  | Temp C   | Alkalinity   | Notes  |
| WWTP  | 2/11/2019  | 0.16  | 7.2   | 9  |  |  |
| Health Centre   | 2/11/2019  | 0.24  | 7.2   | 9  | 63   |  |
| Village Office  | 2/11/2019  | 0.26  | 7.3   | 8.8  | 56   |  |
| Plateau/Ridge   | 2/11/2019  | 0.16  | 7.2   | 8.8  | 47   |  |
| Oak St  | 2/11/2019  | 0.30  | 7.3   | 8.8  | 49   |  |
| Pemberton Nort  | h  |   |   |  |  |  |
| Collins Rd  | 2/11/2019  |   |   |  |  | frozen   |
| Meadows Rd  | 2/11/2019  |   |   |  |  | frozen   |
| Farm Rd   | 2/11/2019  |   |   |  |  | frozen   |
| Urdal Rd  | 2/11/2019  |   |   |  |  | frozen   |
| Distrib total   |  | 0.22  | 7.2   | 0.0  | Г 4  |  |
|   |  | 0.22  | 1.2   | 8.9  | 54   |  |
| Industrial Park   | 2/11/2019  | 0.22  | 1.2   | 8.9  | 25   |  |
|   | 2/11/2019  |   |   |  |  |  |
|   | Date   | CI2   | PH  | Temp C   | 25<br>Alkalinity   | Notes  |
| Industrial Park<br>Location<br>WWTP   | Date<br>19-Feb   | <b>Cl2</b><br>0.03  | <b>РН</b><br>7.0  | <b>Temp C</b><br>9.4   | 25   | Notes  |
| Industrial Park<br>Location<br>WWTP<br>Health Centre  | Date<br>19-Feb<br>19-Feb   | Cl2<br>0.03<br>0.25   | <b>РН</b><br>7.0<br>7.1   | <b>Temp C</b><br>9.4<br>9.8  | 25<br><b>Alkalinity</b><br>63<br>49  | Notes  |
| Industrial Park<br>Location<br>WWTP   | Date<br>19-Feb   | <b>Cl2</b><br>0.03  | <b>РН</b><br>7.0  | <b>Temp C</b><br>9.4   | 25<br>Alkalinity<br>63   | Notes  |
| Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge   | Date<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb   | Cl2<br>0.03<br>0.25<br>0.28<br>0.16   | PH<br>7.0<br>7.1<br>7.2<br>7.2  | <b>Temp C</b><br>9.4<br>9.8<br>8.9<br>8.5  | 25<br>Alkalinity<br>63<br>49<br>63<br>58   |  |
| Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St   | Date<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb   | CI2<br>0.03<br>0.25<br>0.28   | <b>РН</b><br>7.0<br>7.1<br>7.2  | <b>Temp C</b><br>9.4<br>9.8<br>8.9   | 25<br>Alkalinity<br>63<br>49<br>63   |  |
| Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort   | Date<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb   | CI2<br>0.03<br>0.25<br>0.28<br>0.16<br>0.3  | PH<br>7.0<br>7.1<br>7.2<br>7.2  | <b>Temp C</b><br>9.4<br>9.8<br>8.9<br>8.5  | 25<br>Alkalinity<br>63<br>49<br>63<br>58   |  |
| Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd   | Date<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>h<br>19-Feb  | CI2<br>0.03<br>0.25<br>0.28<br>0.16<br>0.3  | PH<br>7.0<br>7.1<br>7.2<br>7.2  | <b>Temp C</b><br>9.4<br>9.8<br>8.9<br>8.5  | 25<br>Alkalinity<br>63<br>49<br>63<br>58   | frozen   |
| Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd   | Date<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>h<br>19-Feb<br>19-Feb  | CI2<br>0.03<br>0.25<br>0.28<br>0.16<br>0.3  | PH<br>7.0<br>7.1<br>7.2<br>7.2  | <b>Temp C</b><br>9.4<br>9.8<br>8.9<br>8.5  | 25<br>Alkalinity<br>63<br>49<br>63<br>58   | frozen<br>frozen                               |
| Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd  | Date<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>h<br>19-Feb<br>19-Feb<br>19-Feb  | CI2<br>0.03<br>0.25<br>0.28<br>0.16<br>0.3  | PH<br>7.0<br>7.1<br>7.2<br>7.2  | <b>Temp C</b><br>9.4<br>9.8<br>8.9<br>8.5  | 25<br>Alkalinity<br>63<br>49<br>63<br>58   | frozen<br>frozen<br>frozen                     |
| Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd  | Date<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>h<br>19-Feb<br>19-Feb  | CI2<br>0.03<br>0.25<br>0.28<br>0.16<br>0.3  | PH<br>7.0<br>7.1<br>7.2<br>7.2<br>7.2   | Temp C<br>9.4<br>9.8<br>8.9<br>8.5<br>9.3  | 25<br>Alkalinity<br>63<br>49<br>63<br>58<br>52   | frozen<br>frozen                               |
| Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total   | Date<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb   | CI2<br>0.03<br>0.25<br>0.28<br>0.16<br>0.3  | PH 7.0 7.1 7.2 7.2 7.2 7.2 7.2  | Temp C<br>9.4<br>9.8<br>8.9<br>8.5<br>9.3  | 25<br>Alkalinity<br>63<br>49<br>63<br>58<br>52<br>52   | frozen<br>frozen<br>frozen                     |
| Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd  | Date<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>h<br>19-Feb<br>19-Feb<br>19-Feb  | CI2<br>0.03<br>0.25<br>0.28<br>0.16<br>0.3  | PH<br>7.0<br>7.1<br>7.2<br>7.2<br>7.2   | Temp C<br>9.4<br>9.8<br>8.9<br>8.5<br>9.3  | 25<br>Alkalinity<br>63<br>49<br>63<br>58<br>52   | frozen<br>frozen<br>frozen                     |
| Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park                                      | Date<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb   | CI2<br>0.03<br>0.25<br>0.28<br>0.16<br>0.3  | PH 7.0 7.1 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2  | Temp C<br>9.4<br>9.8<br>8.9<br>8.5<br>9.3<br>9.3   | 25<br>Alkalinity<br>63<br>49<br>63<br>58<br>52<br>52<br>   | frozen<br>frozen<br>frozen<br>frozen<br>frozen |
| Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location                          | Date<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb                               | CI2<br>0.03<br>0.25<br>0.28<br>0.16<br>0.3<br>0.3<br>0.20<br>0.11<br>CI2                                | PH 7.0 7.1 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 PH   | Temp C<br>9.4<br>9.8<br>8.9<br>8.5<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3 | 25<br>Alkalinity<br>63<br>49<br>63<br>58<br>52<br>52<br>52<br>52<br>52<br>52<br>52<br>52<br>52<br>52<br>52<br>52<br>52 | frozen<br>frozen<br>frozen                     |
| Industrial Park Location WWTP Health Centre Village Office Plateau/Ridge Oak St Pemberton Nort Collins Rd Meadows Rd Farm Rd Urdal Rd Distrib total Industrial Park Location WWTP   | Date<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br><b>Date</b><br>25-Feb                | CI2<br>0.03<br>0.25<br>0.28<br>0.16<br>0.3<br>0.3<br>0.20<br>0.11<br>CI2<br>0.21                        | PH 7.0<br>7.1<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>9<br>9<br>9<br>9<br>9<br>9<br>7.3 | Temp C<br>9.4<br>9.8<br>8.9<br>8.5<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3 | 25<br>Alkalinity<br>63<br>49<br>63<br>58<br>52<br>52<br>   | frozen<br>frozen<br>frozen<br>frozen<br>frozen |
| Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre | Date<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br><b>Date</b><br>25-Feb                | CI2<br>0.03<br>0.25<br>0.28<br>0.16<br>0.3<br>0.3<br>0.3<br>0.3<br>0.11<br>CI2<br>0.21<br>0.21<br>0.26  | PH 7.0<br>7.1<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2                               | Temp C<br>9.4<br>9.8<br>8.9<br>8.5<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3 | 25<br>Alkalinity<br>63<br>49<br>63<br>58<br>52<br>52<br>   | frozen<br>frozen<br>frozen<br>frozen<br>frozen |
| Industrial Park Location WWTP Health Centre Village Office Plateau/Ridge Oak St Pemberton Nort Collins Rd Meadows Rd Farm Rd Urdal Rd Distrib total Industrial Park Location WWTP Health Centre Village Office                                  | Date<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br><b>Date</b><br><b>Date</b><br>25-Feb<br>25-Feb | CI2<br>0.03<br>0.25<br>0.28<br>0.16<br>0.3<br>0.3<br>0.3<br>0.11<br>CI2<br>0.21<br>0.26<br>0.28         | PH 7.0 7.1 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 PH 7.3 7.3 7.3   | Temp C<br>9.4<br>9.8<br>8.9<br>8.5<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3 | 25<br>Alkalinity<br>63<br>49<br>63<br>58<br>52<br>52<br>   | frozen<br>frozen<br>frozen<br>frozen<br>frozen |
| Industrial Park Location WWTP Health Centre Village Office Plateau/Ridge Oak St Pemberton Nort Collins Rd Meadows Rd Farm Rd Urdal Rd Distrib total Industrial Park Location WWTP Health Centre Village Office Plateau/Ridge                    | Date<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>25-Feb<br>25-Feb<br>25-Feb<br>25-Feb | CI2<br>0.03<br>0.25<br>0.28<br>0.16<br>0.3<br>0.3<br>0.3<br>0.11<br>CI2<br>0.21<br>0.26<br>0.28<br>0.25 | PH 7.0<br>7.1<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2                               | Temp C<br>9.4<br>9.8<br>8.9<br>8.5<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3 | 25<br>Alkalinity<br>63<br>49<br>63<br>58<br>52<br>52<br>52<br>52<br>49<br>Alkalinity<br>52<br>42<br>55<br>43           | frozen<br>frozen<br>frozen<br>frozen<br>frozen |
| Industrial Park Location WWTP Health Centre Village Office Plateau/Ridge Oak St Pemberton Nort Collins Rd Meadows Rd Farm Rd Urdal Rd Distrib total Industrial Park Location WWTP Health Centre Village Office                                  | Date<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>19-Feb<br>25-Feb<br>25-Feb<br>25-Feb<br>25-Feb                     | CI2<br>0.03<br>0.25<br>0.28<br>0.16<br>0.3<br>0.3<br>0.3<br>0.11<br>CI2<br>0.21<br>0.26<br>0.28         | PH 7.0 7.1 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 PH 7.3 7.3 7.3   | Temp C<br>9.4<br>9.8<br>8.9<br>8.5<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3<br>9.3 | 25<br>Alkalinity<br>63<br>49<br>63<br>58<br>52<br>52<br>   | frozen<br>frozen<br>frozen<br>frozen<br>frozen |

| Collins Rd            | 25-Feb           |      |     |             |            | frozen |
|-----------------------|------------------|------|-----|-------------|------------|--------|
| Meadows Rd            | 25-Feb           |      |     |             |            | frozen |
| Farm Rd               | 25-Feb           |      |     |             |            | frozen |
| Urdal Rd              | 25-Feb           |      |     |             |            | frozen |
| Distrib total         | 20100            | 0.26 | 7.3 | 6.5         | 49         |        |
| Industrial Park       | 25-Feb           | 0.12 | 7.3 | 4.6         | 24         |        |
|                       |                  |      |     |             |            |        |
| Location              | Date             | Cl2  | РН  | Temp C      | Alkalinity | Notes  |
| WWTP                  | 4-Mar            | 0    | 7.3 | . 8.6       | 60         |        |
| Health Centre         | 4-Mar            | 0.27 | 7.3 | 8.7         | 57         |        |
| Village Office        | 4-Mar            | 0.28 | 7.3 | 9           | 52         |        |
| Plateau/Ridge         | 4-Mar            | 0.23 | 7.3 | 8.4         | 56         |        |
| Oak St                | 4-Mar            | 0.34 | 7.3 | 8           | 58         |        |
| Pemberton Nort        | h                |      |     |             |            |        |
| Collins Rd            | 4-Mar            |      |     |             |            | frozen |
| Meadows Rd            | 4-Mar            |      |     |             |            | frozen |
| Farm Rd               | 4-Mar            |      |     |             |            | frozen |
| Urdal Rd              | 4-Mar            |      |     |             |            | frozen |
| Distrib total         |                  | 0.22 | 7.3 | 8.54        | 57         |        |
| Industrial Park       | 4-Mar            | 0.16 | 7.3 | 8.4         | 27         |        |
|                       |                  |      |     |             |            |        |
| Location              | Date             | Cl2  | РН  | Temp C      | Alkalinity | Notes  |
| WWTP                  | 11-Mar           | 0    | 7.3 | 8.2         | 58         |        |
| Health Centre         | 11-Mar           | 0.28 | 7.2 | 9.1         | 48         |        |
| Village Office        | 11-Mar           | 0.23 | 7.2 | 8.5         | 55         |        |
| Plateau/Ridge         | 11-Mar           | 0.32 | 7.3 | 7.4         | 46         |        |
| Oak St                | 11-Mar           | 0.31 | 7.2 | 8.4         | 51         |        |
| Pemberton Nort        | 1                |      |     |             |            |        |
| Collins Rd            | 11-Mar           |      |     |             |            | frozen |
| Meadows Rd            | 11-Mar           |      |     |             |            | frozen |
| Farm Rd               | 11-Mar           |      |     |             |            | frozen |
| Urdal Rd              | 11-Mar           |      |     |             |            | frozen |
| Distrib total         | 44.14            | 0.23 | 7.2 | 8.32        | 52         |        |
| Industrial Park       | 11-Mar           | 0.11 | 7.3 | 8.1         | 25         |        |
| Leastien              | Dete             | cia. | DU  | Tama C      |            | Natas  |
| Location              | Date 18 Mar      | Cl2  | PH  | Temp C      | Alkalinity | Notes  |
| WWTP<br>Health Centre | 18-Mar           | 0.32 | 7.3 | 4.2         | 58         |        |
| Village Office        | 18-Mar<br>18-Mar | 0.28 | 7.2 | 7.1         | 62<br>57   |        |
| Plateau/Ridge         | 18-Mar           | 0.28 | 7.2 | 5.3         | 56         |        |
| Oak St                | 18-Mar           | 0.29 | 7.3 | 5.3         | 50         |        |
| Pemberton Nort        |                  | 0.24 | 7.5 | 5.5         | 51         |        |
| Collins Rd            | 18-Mar           |      |     |             |            | frozen |
| Meadows Rd            | 18-Mar           |      |     |             |            | frozen |
| Farm Rd               | 18-Mar           | 0.32 | 7.2 | 4.7         | 53         |        |
| Urdal Rd              | 18-Mar           | 0.52 |     | <u></u> , , |            |        |
| Distrib total         | TO-INIU          | 0.29 | 7.2 | 5.32        | 56         |        |
|                       |                  | 0.29 | 1.2 | 5.52        | 50         |        |

| Village Office  | 4/15/2019   | 0.27   | 7.3   | 9  | 55   |       |
|---|---|--|---|--|--|-------|
| Plateau/Ridge   | 4/15/2019   | 0.24   | 7.3   | 8.7  | 44   |       |
| Oak St  | 4/15/2019   | 0.24   | 7.4   | 9.5  | 53   |       |
| Pemberton Nort  |   | 0.22   | 7.5   | 5.5  | 55   |       |
| Collins Rd  | 4/15/2019   | 0.38   | 7.3   | 7.9  | 55   |       |
| Meadows Rd  | 4/15/2019   | 0.38   | 7.3   | 7.9  | 53   |       |
| Farm Rd   | 4/15/2019   | 0.23   | 7.4   | 9  | 55   |       |
| Urdal Rd  | 4/15/2019   | 0.28   | 7.3   | 9.2  | 52   |       |
| Distrib total   | 4/15/2019   | 0.3  | 7.3   | 9.2  | 52   |       |
| Industrial Park   | 4/15/2019   | 0.27   | 7.3   | 9.6  | 29   |       |
|   | 4/15/2019   | 0.14   | 7.5   | 9.0  | 29   |       |
| Location  | Date  | Cl2  | PH  | Temp C   | Alkalinity   | Notes |
| WWTP  | 4/29/2019   | 0.09   | 7.3   | 11.5   | 54   | NOLES |
| Health Centre   | 4/29/2019   | 0.03   | 7.5   | 11.5   | 54   |       |
|   | 4/29/2019   | 0.32   | 7.3   | 11.3   | 53   |       |
| Village Office<br>Plateau/Ridge   | 4/29/2019   | 0.32   | 7.3   | 11.3   | 53   |       |
| Oak St  | 4/29/2019   | 0.2  | 7.2   | 12   | 54   |       |
| Pemberton Nort  | <u> </u>  | 0.30   | /.Z   | 11.8   | 59   |       |
| Collins Rd  |   | 0.33   | 7.2   | 11.4   | 49   |       |
|   | 4/29/2019   |  | 7.2   |  |  |       |
| Meadows Rd  | 4/29/2019   | 0.34   |   | 11.8   | 55   |       |
| Farm Rd   | 4/29/2019   | 0.32   | 7.2   | 11.1   | 49   |       |
| Urdal Rd  | 4/29/2019   | 0.32   | 7.2   | 11.6   | 48   |       |
| Distrib total   |   | 0.29   | 7.2   | 11.6   | 53   |       |
| Lind, advised Deals   | 1/20/2010   | 0  | 7 0   | 11.0   | 20   |       |
| Industrial Park   | 4/29/2019   | 0  | 7.2   | 11.8   | 30   |       |
|   |   |  |   |  |  | Notos |
| Location  | Date  | Cl2  | PH  | Temp C   | Alkalinity   | Notes |
| Location<br>WWTP  | <b>Date</b><br>5/7/2019   | <b>Cl2</b><br>0.01   | <b>РН</b><br>7.2  | <b>Тетр С</b><br>10  | Alkalinity<br>47   | Notes |
| <b>Location</b><br>WWTP<br>Health Centre  | Date<br>5/7/2019<br>5/7/2019  | Cl2  | PH  | Temp C   | Alkalinity   | Notes |
| Location<br>WWTP<br>Health Centre<br>Village Office   | Date<br>5/7/2019<br>5/7/2019<br>5/7/2019  | Cl2<br>0.01<br>0.28  | <b>РН</b><br>7.2<br>7.3   | Temp C<br>10<br>10.6   | Alkalinity<br>47<br>45   | Notes |
| Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge  | Date<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019  | CI2<br>0.01<br>0.28<br>0.35  | PH<br>7.2<br>7.3<br>7.3   | Temp C<br>10<br>10.6<br>10.2   | Alkalinity<br>47<br>45<br>50   | Notes |
| Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St  | Date<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019  | CI2<br>0.01<br>0.28<br>0.35  | <b>РН</b><br>7.2<br>7.3   | Temp C<br>10<br>10.6<br>10.2   | Alkalinity<br>47<br>45   | Notes |
| Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort  | Date<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>h   | Cl2<br>0.01<br>0.28<br>0.35<br>0.35  | PH<br>7.2<br>7.3<br>7.3<br>7.3  | Temp C<br>10<br>10.6<br>10.2<br>11   | Alkalinity<br>47<br>45<br>50<br>39   | Notes |
| Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd  | Date<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>h<br>5/7/2019   | CI2<br>0.01<br>0.28<br>0.35<br>0.35<br>0.35  | PH 7.2<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3                                       | Temp C<br>10<br>10.6<br>10.2<br>11<br>9.2  | Alkalinity<br>47<br>45<br>50<br>39<br>45   | Notes |
| Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd  | Date<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>h<br>5/7/2019<br>5/7/2019<br>5/7/2019   | Cl2<br>0.01<br>0.28<br>0.35<br>0.35<br>0.35<br>0.36<br>0.33  | PH<br>7.2<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3                             | Temp C<br>10<br>10.6<br>10.2<br>11<br>9.2<br>10.1  | Alkalinity<br>47<br>45<br>50<br>39<br>45<br>45   | Notes |
| Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd   | Date<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>h<br>5/7/2019<br>5/7/2019<br>5/7/2019   | CI2<br>0.01<br>0.28<br>0.35<br>0.35<br>0.35<br>0.33<br>0.33<br>0.32  | PH<br>7.2<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3               | Temp C<br>10<br>10.6<br>10.2<br>11<br>9.2<br>10.1<br>9.9   | Alkalinity<br>47<br>45<br>50<br>39<br>45<br>45<br>45   | Notes |
| Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd   | Date<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>h<br>5/7/2019<br>5/7/2019<br>5/7/2019   | Cl2<br>0.01<br>0.28<br>0.35<br>0.35<br>0.35<br>0.35<br>0.33<br>0.32<br>0.25  | PH 7.2 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3                                  | Temp C<br>10<br>10.6<br>10.2<br>11<br>9.2<br>10.1<br>9.9<br>11.6   | Alkalinity<br>47<br>45<br>50<br>39<br>45<br>45<br>40<br>45   | Notes |
| Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total  | Date<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>h<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019   | CI2<br>0.01<br>0.28<br>0.35<br>0.35<br>0.35<br>0.33<br>0.33<br>0.32<br>0.25<br>0.28  | PH 7.2 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3                                  | Temp C<br>10<br>10.6<br>10.2<br>11<br>9.2<br>10.1<br>9.9<br>11.6<br>10.3   | Alkalinity<br>47<br>45<br>50<br>39<br>45<br>45<br>40<br>45<br>45   |       |
| Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd   | Date<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>h<br>5/7/2019<br>5/7/2019<br>5/7/2019   | CI2<br>0.01<br>0.28<br>0.35<br>0.35<br>0.35<br>0.33<br>0.33<br>0.32<br>0.25<br>0.28  | PH 7.2 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3                                  | Temp C<br>10<br>10.6<br>10.2<br>11<br>9.2<br>10.1<br>9.9<br>11.6   | Alkalinity<br>47<br>45<br>50<br>39<br>45<br>45<br>40<br>45   |       |
| Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park   | Date<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019  | Cl2<br>0.01<br>0.28<br>0.35<br>0.35<br>0.35<br>0.35<br>0.33<br>0.32<br>0.25<br>0.28<br>0.22  | PH 7.2 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3                                  | Temp C<br>10<br>10.6<br>10.2<br>11<br>9.2<br>10.1<br>9.9<br>11.6<br>10.3<br>10.3   | Alkalinity<br>47<br>45<br>50<br>39<br>45<br>45<br>40<br>45<br>45<br>28                                       |       |
| Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location   | Date<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>00000000000000000000000000000000000   | CI2<br>0.01<br>0.28<br>0.35<br>0.35<br>0.35<br>0.33<br>0.32<br>0.25<br>0.28<br>0.22<br>0.22  | PH<br>7.2<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3 | Temp C<br>10<br>10.6<br>10.2<br>11<br>9.2<br>10.1<br>9.9<br>11.6<br>10.3<br>10.3<br>Temp C                                       | Alkalinity<br>47<br>45<br>50<br>39<br>45<br>45<br>45<br>45<br>45<br>28<br>Alkalinity                         |       |
| Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP   | Date<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>Date<br>5/13/2019   | CI2<br>0.01<br>0.28<br>0.35<br>0.35<br>0.35<br>0.35<br>0.32<br>0.25<br>0.28<br>0.22<br>0.22<br>CI2<br>0.08   | PH 7.2 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3                                  | Temp C<br>10<br>10.6<br>10.2<br>10.2<br>11<br>9.2<br>10.1<br>9.9<br>11.6<br>10.3<br>10.3<br>Temp C<br>11.6                       | Alkalinity<br>47<br>45<br>50<br>39<br>45<br>45<br>45<br>40<br>45<br>28<br>Alkalinity<br>47                   |       |
| Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre  | Date<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0                         | CI2<br>0.01<br>0.28<br>0.35<br>0.35<br>0.35<br>0.33<br>0.32<br>0.25<br>0.28<br>0.22<br>0.28<br>0.22<br>CI2<br>0.08<br>0.35                         | PH<br>7.2<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3 | Temp C<br>10<br>10.6<br>10.2<br>11<br>9.2<br>10.1<br>9.9<br>11.6<br>10.3<br>10.3<br>Temp C<br>11.6<br>14.9                       | Alkalinity<br>47<br>45<br>50<br>39<br>45<br>45<br>45<br>45<br>45<br>28<br>Alkalinity<br>47<br>55             |       |
| Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office                            | Date<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/13/2019<br>5/13/2019                            | CI2<br>0.01<br>0.28<br>0.35<br>0.35<br>0.35<br>0.33<br>0.32<br>0.25<br>0.28<br>0.22<br>CI2<br>0.08<br>0.35<br>0.31                                 | PH 7.2 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3                                  | Temp C<br>10<br>10.6<br>10.2<br>11<br>9.2<br>10.1<br>9.9<br>11.6<br>10.3<br>10.3<br>Temp C<br>11.6<br>14.9<br>11                 | Alkalinity<br>47<br>45<br>50<br>39<br>45<br>45<br>45<br>45<br>45<br>45<br>28<br>Alkalinity<br>47<br>55<br>52 |       |
| Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge           | Date<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/13/2019<br>5/13/2019<br>5/13/2019                           | CI2<br>0.01<br>0.28<br>0.35<br>0.35<br>0.35<br>0.33<br>0.32<br>0.25<br>0.28<br>0.22<br>CI2<br>0.08<br>0.35<br>0.31<br>0.34                         | PH<br>7.2<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3 | Temp C<br>10<br>10.6<br>10.2<br>11<br>9.2<br>10.1<br>9.9<br>11.6<br>10.3<br>10.3<br>10.3<br>Temp C<br>11.6<br>14.9<br>11<br>10.9 | Alkalinity<br>47<br>45<br>50<br>39<br>45<br>45<br>45<br>45<br>45<br>28<br>Alkalinity<br>47<br>55<br>52<br>52 |       |
| Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St | Date<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/13/2019<br>5/13/2019<br>5/13/2019<br>5/13/2019<br>5/13/2019 | CI2<br>0.01<br>0.28<br>0.35<br>0.35<br>0.35<br>0.33<br>0.32<br>0.25<br>0.28<br>0.22<br>CI2<br>0.08<br>0.35<br>0.31<br>0.34                         | PH 7.2 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3                                  | Temp C<br>10<br>10.6<br>10.2<br>11<br>9.2<br>10.1<br>9.9<br>11.6<br>10.3<br>10.3<br>Temp C<br>11.6<br>14.9<br>11                 | Alkalinity<br>47<br>45<br>50<br>39<br>45<br>45<br>45<br>45<br>45<br>45<br>28<br>Alkalinity<br>47<br>55<br>52 |       |
| Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge           | Date<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/7/2019<br>5/13/2019<br>5/13/2019<br>5/13/2019<br>5/13/2019<br>5/13/2019 | CI2<br>0.01<br>0.28<br>0.35<br>0.35<br>0.35<br>0.35<br>0.32<br>0.25<br>0.28<br>0.22<br>0.28<br>0.22<br>CI2<br>0.08<br>0.35<br>0.31<br>0.34<br>0.37 | PH<br>7.2<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3<br>7.3 | Temp C<br>10<br>10.6<br>10.2<br>11<br>9.2<br>10.1<br>9.9<br>11.6<br>10.3<br>10.3<br>10.3<br>Temp C<br>11.6<br>14.9<br>11<br>10.9 | Alkalinity<br>47<br>45<br>50<br>39<br>45<br>45<br>45<br>45<br>45<br>28<br>Alkalinity<br>47<br>55<br>52<br>52 |       |

| Meadows Rd      | 5/13/2019 | 0.37 | 7.4 | 10.7   | 54         |       |
|-----------------|-----------|------|-----|--------|------------|-------|
| Farm Rd         | 5/13/2019 |      | 7.4 | 9.5    | 58         |       |
| Urdal Rd        | 5/13/2019 | 0.30 | 7.4 | 10.2   | 49         |       |
| Distrib total   | 5/15/2019 | 0.34 | 7.4 | 10.2   | 53         |       |
| Industrial Park | 5/13/2019 |      | 7.3 | 11.1   | 24         |       |
|                 | 5/15/2019 | 0.04 | 7.3 | 11.0   | 24         |       |
| Location        | Date      | Cl2  | PH  | Temp C | Alkalinity | Notes |
| WWTP            | 5/21/2019 | 0.13 | 7.4 | 11.8   | 63         | NOLES |
| Health Centre   | 5/21/2019 | 0.13 | 7.4 | 11.8   | 55         |       |
| Village Office  | 5/21/2019 | 0.32 | 7.3 | 11.0   | 44         |       |
| Plateau/Ridge   | 5/21/2019 |      | 7.3 | 11.6   | 67         |       |
| Oak St          | 5/21/2019 |      | 7.4 | 11.0   | 47         |       |
| Pemberton Nort  |           | 0.55 | 7.5 | 12.0   |            |       |
| Collins Rd      | 5/21/2019 | 0.33 | 7.2 | 10.4   | 46         |       |
| Meadows Rd      | 5/21/2019 | 0.33 | 7.2 | 10.4   | 40         |       |
| Farm Rd         | 5/21/2019 |      | 7.3 | 11.1   | 44         |       |
| Urdal Rd        | 5/21/2019 | 0.29 | 7.3 | 11.5   | 48         |       |
| Distrib total   | 3/21/2013 | 0.29 | 7.2 | 11.6   | 51         |       |
| Industrial Park | 5/21/2019 |      | 7.4 | 11.0   | 30         |       |
|                 | 3/21/2013 |      |     |        |            |       |
| Location        | Date      | Cl2  | РН  | Temp C | Alkalinity | Notes |
| WWTP            | 5/21/2019 | 0.19 | 7.4 | 14.5   | 52         |       |
| Health Centre   | 5/21/2019 | 0.3  | 7.5 | 9.3    | 45         |       |
| Village Office  | 5/21/2019 |      | 7.5 | 9.9    | 51         |       |
| Plateau/Ridge   | 5/21/2019 |      | 7.5 | 8.8    | 45         |       |
| Oak St          | 5/21/2019 | 0.31 | 7.5 | 8.8    | 51         |       |
| Pemberton Nort  |           | 0.01 |     | 0.0    |            |       |
| Collins Rd      | 5/21/2019 | 0.28 | 7.5 | 8.6    | 46         |       |
| Meadows Rd      | 5/21/2019 | 0.28 | 7.5 | 8.7    | 56         |       |
| Farm Rd         | 5/21/2019 | 0.32 | 7.5 | 9.7    | 42         |       |
| Urdal Rd        | 5/21/2019 |      |     | 9.9    |            |       |
| Distrib total   |           | 0.28 | 7.5 | 9.8    | 49         |       |
| Industrial Park | 5/21/2019 |      | 7.5 | 8.5    | 23         |       |
|                 |           |      |     |        |            |       |
| Location        | Date      | Cl2  | РН  | Temp C | Alkalinity | Notes |
| WWTP            | 5/28/2019 | 0.16 | 7.1 | 16     | 49         |       |
| Health Centre   | 5/28/2019 | 0.29 | 7.2 | 13.9   | 46         |       |
| Village Office  | 5/28/2019 | 0.23 | 7.3 | 15     | 46         |       |
| Plateau/Ridge   | 5/28/2019 | 0.25 | 7.3 | 15.5   | 45         |       |
| Oak St          | 5/28/2019 | 0.31 | 7.2 | 13.6   | 46         |       |
| Pemberton Nort  | h         |      |     |        |            |       |
| Collins Rd      | 5/28/2019 | 0.31 | 7.2 | 14.2   | 47         |       |
| Meadows Rd      | 5/28/2019 | 0.3  | 7.3 | 12.9   | 39         |       |
| Farm Rd         | 5/28/2019 | 0.36 | 7.3 | 14.1   | 44         |       |
| Urdal Rd        | 5/28/2019 | 0.3  | 7.2 | 12.5   | 45         |       |
| Distrib total   |           | 0.28 | 7.2 | 14.2   | 45         |       |
|                 | - / /     |      |     |        |            |       |
| Industrial Park | 5/28/2019 | 0.16 | 7.1 | 16.7   | 23         |       |

| Location        | Date       | CI2  | РН  | Temp C | Alkalinity | Notes |
|-----------------|------------|------|-----|--------|------------|-------|
| WWTP            | 6/3/2019   | 0.19 | 7.4 | 14.5   | 52         |       |
| Health Centre   | 6/3/2019   | 0.3  | 7.5 | 9.3    | 45         |       |
| Village Office  | 6/3/2019   | 0.23 | 7.5 | 9.9    | 51         |       |
| Plateau/Ridge   | 6/3/2019   | 0.32 | 7.5 | 8.8    | 45         |       |
| Oak St          | 6/3/2019   | 0.31 | 7.5 | 8.8    | 51         |       |
| Pemberton Nort  |            | 0.01 |     | 0.0    |            |       |
| Collins Rd      | 6/3/2019   | 0.28 | 7.5 | 8.6    | 46         |       |
| Meadows Rd      | 6/3/2019   | 0.28 | 7.5 | 8.7    | 56         |       |
| Farm Rd         | 6/3/2019   | 0.32 | 7.5 | 9.7    | 42         |       |
| Urdal Rd        | 6/3/2019   | 0.3  | 7.5 | 9.9    | 51         |       |
| Distrib total   | 0, 0, 2020 | 0.28 | 7.5 | 9.8    | 49         |       |
| Industrial Park | 6/3/2019   | 0.13 | 7.5 | 8.5    | 23         |       |
|                 | 0/3/2013   | 0115 | 713 | 0.0    |            |       |
| Location        | Date       | CI2  | РН  | Temp C | Alkalinity | Notes |
| WWTP            | 6/11/2019  |      |     | 14.9   | 56         |       |
| Health Centre   | 6/11/2019  | 0.28 |     | 15.7   | 47         |       |
| Village Office  | 6/11/2019  |      | 7.2 | 13.9   | 55         |       |
| Plateau/Ridge   | 6/11/2019  | 0.18 |     | 14     | 53         |       |
| Oak St          | 6/11/2019  | 0.33 | 7.2 | 13.7   | 49         |       |
| Pemberton Nort  |            | 0.00 | 7.2 | 1017   | 13         |       |
| Collins Rd      | 6/11/2019  | 0.37 | 7.1 | 14.2   | 57         |       |
| Meadows Rd      | 6/11/2019  |      | 7.2 | 12.9   | 58         |       |
| Farm Rd         | 6/11/2019  | 0.34 | 7.2 | 13.9   | 51         |       |
| Urdal Rd        | 6/11/2019  |      | 7.2 | 15.2   | 55         |       |
| Distrib total   | 0,11,2013  | 0.30 | 7.2 | 14.3   | 53         |       |
| Industrial Park | 6/11/2019  |      | 7.3 | 15.9   | 23         |       |
|                 | 0,, _00    |      |     | 10.0   |            |       |
| Location        | Date       | CI2  | РН  | Temp C | Alkalinity | Notes |
| WWTP            | 6/17/2019  | 0.23 | 7.1 | . 14.7 |            |       |
| Health Centre   | 6/17/2019  |      |     | 13.3   | 45         |       |
| Village Office  | 6/17/2019  |      |     | 12.7   | 47         |       |
| Plateau/Ridge   | 6/17/2019  |      |     | 11.6   |            |       |
| Oak St          | 6/17/2019  |      | 7.2 | 10.8   | 50         |       |
| Pemberton Nort  |            |      |     |        |            |       |
| Collins Rd      | 6/17/2019  | 0.4  | 7.2 | 10.6   | 47         |       |
| Meadows Rd      | 6/17/2019  |      |     | 13     | 50         |       |
| Farm Rd         | 6/17/2019  |      |     | 13.1   | 53         |       |
| Urdal Rd        | 6/17/2019  |      | 7.2 | 11.2   | 53         |       |
| Distrib total   | _, _,      | 0.31 | 7.1 | 12.3   | 50         |       |
| Industrial Park | 6/17/2019  |      | 7.3 | 12.9   |            |       |
|                 |            |      |     |        |            |       |
| Location        | Date       | CI2  | РН  | Temp C | Alkalinity | Notes |
| WWTP            | 6/25/2019  |      | 7.2 | 12     | 50         |       |
| Health Centre   | 6/25/2019  |      | 7.2 | 13.2   | 52         |       |
| Village Office  | 6/25/2019  |      |     |        | 46         |       |
| Things Office   |            | 0.27 | /.2 | 12.4   | +0         | I     |

| Plateau/Ridge  | 6/25/2019   | 0.33   | 7.2   | 11.5   | 53   |       |
|--|---|--|---|--|--|-------|
| Oak St   | 6/25/2019   | 0.33   | 7.2   | 11.5   | 43   |       |
| Pemberton Nort   |   | 0.33   | /.1   | 11.5   | 43   |       |
| Collins Rd   | 6/25/2019   | 0.31   | 7.2   | 11   | 54   |       |
| Meadows Rd   | 6/25/2019   | 0.31   | 7.2   | 12.2   | 47   |       |
| Farm Rd  |   | 0.3  | 7.2   | 12.2   | 52   |       |
|  | 6/25/2019   |  | 7.1   |  |  |       |
| Urdal Rd   | 6/25/2019   | 0.31   | 7.1   | 11.9<br>11.9   | 49   |       |
| Distrib total  | 6/25/2010   | 0.30   |   |  | 50   |       |
| Industrial Park  | 6/25/2019   | 0.05   | 7.3   | 13.4   | 23   |       |
| Lesstien   | Dete  | cia.   | PH  | Tamm C   | Allealinity  | Natas |
| Location   | Date  | Cl2  |   | Temp C   | Alkalinity   | Notes |
| WWTP   | 7/2/2019  | 0.3  | 7.3   | 10.4   | 52   |       |
| Health Centre  | 7/2/2019  | 0.27   | 7.3   | 10.2   | 44   |       |
| Village Office   | 7/2/2019  | 0.3  | 7.3   | 11   | 46   |       |
| Plateau/Ridge  | 7/2/2019  | 0.27   | 7.3   | 9.3  | 42   |       |
| Oak St   | 7/2/2019  | 0.35   | 7.3   | 10.2   | 52   |       |
| Pemberton Nort   |   |  |   |  |  |       |
| Collins Rd   | 7/2/2019  | 0.35   | 7.3   | 10   | 49   |       |
| Meadows Rd   | 7/2/2019  | 0.32   | 7.3   | 10.1   | 48   |       |
| Farm Rd  | 7/2/2019  | 0.14   | 7.3   | 9.9  | 47   |       |
| Urdal Rd   | 7/2/2019  | 0.18   | 7.3   | 9.1  | 43   |       |
| Distrib total  |   | 0.28   | 7.3   | 10.0   | 47   |       |
| Industrial Park  | 7/2/2019  | 0.12   | 7.3   | 9.5  | 18   |       |
|  |   |  |   | 5.5  | 10   |       |
|  |   |  |   |  | 10   |       |
| Location   | Date  | Cl2  | PH  | Temp C   | Alkalinity   | Notes |
| Location<br>WWTP   | <b>Date</b><br>7/8/2019   | <b>Cl2</b> 0.2   |   |  |  | Notes |
|  |   |  | PH  | Temp C   | Alkalinity   | Notes |
| WWTP   | 7/8/2019  | 0.2  | <b>PH</b><br>7.1  | <b>Тетр С</b><br>16  | Alkalinity<br>44   | Notes |
| WWTP<br>Health Centre  | 7/8/2019<br>7/8/2019  | 0.2<br>0.3   | <b>PH</b><br>7.1<br>7.1   | Temp C<br>16<br>15.1   | Alkalinity<br>44<br>48   | Notes |
| WWTP<br>Health Centre<br>Village Office  | 7/8/2019<br>7/8/2019<br>7/8/2019  | 0.2<br>0.3<br>0.33   | PH<br>7.1<br>7.1<br>7.1   | Temp C<br>16<br>15.1<br>13.8   | <b>Alkalinity</b><br>44<br>48<br>44  | Notes |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge   | 7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019  | 0.2<br>0.3<br>0.33<br>0.22   | PH<br>7.1<br>7.1<br>7.1<br>7.1  | Temp C<br>16<br>15.1<br>13.8<br>14.6   | Alkalinity<br>44<br>48<br>44<br>44<br>47   | Notes |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St   | 7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019  | 0.2<br>0.3<br>0.33<br>0.22   | PH<br>7.1<br>7.1<br>7.1<br>7.1  | Temp C<br>16<br>15.1<br>13.8<br>14.6   | Alkalinity<br>44<br>48<br>44<br>44<br>47   | Notes |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort   | 7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>h<br>7/8/2019   | 0.2<br>0.3<br>0.33<br>0.22<br>0.35   | PH<br>7.1<br>7.1<br>7.1<br>7.1<br>7.0   | Temp C<br>16<br>15.1<br>13.8<br>14.6<br>14.3   | Alkalinity<br>44<br>48<br>44<br>47<br>46   | Notes |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton North<br>Collins Rd  | 7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>h<br>7/8/2019<br>7/8/2019   | 0.2<br>0.3<br>0.22<br>0.35<br>0.35<br>0.38<br>0.34   | PH<br>7.1<br>7.1<br>7.1<br>7.1<br>7.0<br>7.0  | Temp C<br>16<br>15.1<br>13.8<br>14.6<br>14.3<br>15.3   | Alkalinity<br>44<br>48<br>44<br>47<br>46<br>42   | Notes |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton North<br>Collins Rd<br>Meadows Rd<br>Farm Rd   | 7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>h<br>7/8/2019<br>7/8/2019<br>7/8/2019   | 0.2<br>0.3<br>0.22<br>0.35<br>0.35<br>0.38<br>0.34<br>0.34   | PH<br>7.1<br>7.1<br>7.1<br>7.1<br>7.0<br>7.0<br>7.1<br>7.1<br>7.1   | Temp C<br>16<br>15.1<br>13.8<br>14.6<br>14.3<br>14.3<br>14.3<br>14.3<br>13.7<br>13.7   | Alkalinity<br>44<br>48<br>44<br>47<br>46<br>46<br>42<br>41<br>41<br>44                               | Notes |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd  | 7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>h<br>7/8/2019<br>7/8/2019   | 0.2<br>0.3<br>0.22<br>0.35<br>0.35<br>0.38<br>0.34<br>0.33<br>0.32   | PH<br>7.1<br>7.1<br>7.1<br>7.1<br>7.0<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1  | Temp C<br>16<br>15.1<br>13.8<br>14.6<br>14.3<br>15.3<br>13.7<br>13.9<br>15   | Alkalinity<br>44<br>48<br>44<br>47<br>46<br>46<br>42<br>41<br>41<br>44<br>42                         | Notes |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total   | 7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019  | 0.2<br>0.3<br>0.22<br>0.35<br>0.35<br>0.38<br>0.34<br>0.33<br>0.32<br>0.31   | PH<br>7.1<br>7.1<br>7.1<br>7.1<br>7.0<br>7.0<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1  | Temp C<br>16<br>15.1<br>13.8<br>14.6<br>14.3<br>15.3<br>13.7<br>13.9<br>15<br>14.6   | Alkalinity<br>44<br>48<br>44<br>47<br>46<br>46<br>42<br>41<br>41<br>44<br>42<br>42<br>44             | Notes |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd  | 7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>h<br>7/8/2019<br>7/8/2019<br>7/8/2019   | 0.2<br>0.3<br>0.22<br>0.35<br>0.35<br>0.38<br>0.34<br>0.33<br>0.32   | PH<br>7.1<br>7.1<br>7.1<br>7.1<br>7.0<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1  | Temp C<br>16<br>15.1<br>13.8<br>14.6<br>14.3<br>15.3<br>13.7<br>13.9<br>15   | Alkalinity<br>44<br>48<br>44<br>47<br>46<br>46<br>42<br>41<br>41<br>44<br>42                         | Notes |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total   | 7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019  | 0.2<br>0.3<br>0.22<br>0.35<br>0.35<br>0.38<br>0.34<br>0.33<br>0.32<br>0.31   | PH<br>7.1<br>7.1<br>7.1<br>7.1<br>7.0<br>7.0<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1  | Temp C<br>16<br>15.1<br>13.8<br>14.6<br>14.3<br>15.3<br>13.7<br>13.9<br>15<br>14.6<br>15.1   | Alkalinity<br>44<br>48<br>44<br>47<br>46<br>46<br>42<br>41<br>42<br>41<br>42<br>44<br>23             | Notes |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location  | 7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>00000000000000000000000000000000000   | 0.2<br>0.3<br>0.22<br>0.35<br>0.35<br>0.34<br>0.34<br>0.33<br>0.32<br>0.31<br>0.17<br>Cl2  | PH<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.0<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.2<br>PH                                    | Temp C<br>16<br>15.1<br>13.8<br>14.6<br>14.3<br>15.3<br>13.7<br>13.9<br>15<br>14.6<br>15.1<br>Temp C   | Alkalinity 44 48 48 44 47 46 47 46 42 41 42 41 42 42 43 44 42 43 44 44 44 44 44 44 44 44 44 44 44 44 |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton North<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP   | 7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>Date<br>7/15/2019   | 0.2<br>0.3<br>0.22<br>0.35<br>0.35<br>0.34<br>0.34<br>0.33<br>0.32<br>0.31<br>0.17<br><b>Cl2</b><br>0.2  | PH<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1  | Temp C<br>16<br>15.1<br>13.8<br>14.6<br>14.3<br>15.3<br>13.7<br>13.9<br>15<br>14.6<br>15.1<br>Temp C<br>9.6                                      | Alkalinity 44 48 48 44 47 47 46 42 42 41 42 42 44 23 Alkalinity 50                                   |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Norti<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre  | 7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>Date<br>7/15/2019<br>7/15/2019  | 0.2<br>0.3<br>0.22<br>0.35<br>0.35<br>0.34<br>0.34<br>0.33<br>0.32<br>0.31<br>0.17<br>0.17<br><b>Cl2</b><br>0.2<br>0.35                        | PH<br>7.1<br>7.1<br>7.1<br>7.1<br>7.0<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.2<br>PH<br>7.1<br>7.1                             | Temp C<br>16<br>15.1<br>13.8<br>14.6<br>14.3<br>14.3<br>15.3<br>13.7<br>13.9<br>15<br>14.6<br>15.1<br><b>Temp C</b><br>9.6<br>9.6                | Alkalinity 44 48 48 44 47 47 46 47 46 42 42 41 44 23 Alkalinity 50 40                                |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office   | 7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>Date<br>7/15/2019<br>7/15/2019<br>7/15/2019   | 0.2<br>0.3<br>0.22<br>0.35<br>0.35<br>0.34<br>0.34<br>0.33<br>0.32<br>0.31<br>0.17<br><b>Cl2</b><br>0.2<br>0.2<br>0.2<br>0.35                  | PH<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1  | Temp C<br>16<br>15.1<br>13.8<br>14.6<br>14.3<br>15.3<br>13.7<br>13.9<br>15<br>14.6<br>15.1<br><b>Temp C</b><br>9.6<br>9.6<br>9.2                 | Alkalinity 44 48 48 44 47 47 46 42 42 41 44 42 42 44 50 Alkalinity 50 40 52                          |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Norti<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge   | 7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/15/2019<br>7/15/2019<br>7/15/2019<br>7/15/2019              | 0.2<br>0.3<br>0.22<br>0.35<br>0.35<br>0.38<br>0.34<br>0.33<br>0.32<br>0.31<br>0.17<br><b>Cl2</b><br>0.2<br>0.35<br>0.42<br>0.29                | PH<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.0<br>7.1<br>7.1<br>7.1<br>7.1<br>7.2<br>PH<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1<br>7.1 | Temp C<br>16<br>15.1<br>13.8<br>14.6<br>14.3<br>14.3<br>14.3<br>15.3<br>13.7<br>13.9<br>15<br>14.6<br>15.1<br><b>Temp C</b><br>9.6<br>9.2<br>9.1 | Alkalinity 44 48 48 44 47 47 46 42 42 42 42 42 44 23 44 23 Alkalinity 50 40 52 47                    |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St                            | 7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/15/2019<br>7/15/2019<br>7/15/2019<br>7/15/2019<br>7/15/2019             | 0.2<br>0.3<br>0.22<br>0.35<br>0.35<br>0.34<br>0.34<br>0.33<br>0.32<br>0.31<br>0.17<br><b>Cl2</b><br>0.2<br>0.2<br>0.2<br>0.35                  | PH<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1  | Temp C<br>16<br>15.1<br>13.8<br>14.6<br>14.3<br>15.3<br>13.7<br>13.9<br>15<br>14.6<br>15.1<br><b>Temp C</b><br>9.6<br>9.6<br>9.2                 | Alkalinity 44 48 48 44 47 47 46 42 42 41 44 42 42 44 50 Alkalinity 50 40 52                          |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Norti<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br><b>Location</b><br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Norti | 7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/15/2019<br>7/15/2019<br>7/15/2019<br>7/15/2019<br>7/15/2019 | 0.2<br>0.3<br>0.22<br>0.35<br>0.35<br>0.34<br>0.34<br>0.33<br>0.32<br>0.31<br>0.17<br><b>Cl2</b><br>0.2<br>0.2<br>0.35<br>0.42<br>0.29<br>0.36 | PH 7.1 7.1 7.1 7.1 7.1 7.1 7.1 7.1 7.1 7.1  | Temp C<br>16<br>15.1<br>13.8<br>14.6<br>14.3<br>15.3<br>13.7<br>13.9<br>15<br>14.6<br>15.1<br><b>Temp C</b><br>9.6<br>9.6<br>9.2<br>9.1<br>9.4   | Alkalinity 44 48 48 44 47 47 46 47 46 42 42 41 42 42 44 23 44 23 Alkalinity 50 40 52 47 55           |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St                            | 7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/8/2019<br>7/15/2019<br>7/15/2019<br>7/15/2019<br>7/15/2019<br>7/15/2019             | 0.2<br>0.3<br>0.22<br>0.35<br>0.35<br>0.34<br>0.34<br>0.33<br>0.32<br>0.31<br>0.17<br><b>Cl2</b><br>0.2<br>0.2<br>0.35<br>0.42<br>0.29<br>0.36 | PH<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.0<br>7.1<br>7.1<br>7.1<br>7.1<br>7.2<br>PH<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1<br>7.1 | Temp C<br>16<br>15.1<br>13.8<br>14.6<br>14.3<br>14.3<br>14.3<br>15.3<br>13.7<br>13.9<br>15<br>14.6<br>15.1<br><b>Temp C</b><br>9.6<br>9.2<br>9.1 | Alkalinity 44 48 48 44 47 47 46 42 42 42 42 42 44 23 44 23 Alkalinity 50 40 52 47                    |       |

| Farm Rd         | 7/15/2019    | 0.37 | 7.1 | 8.8    | 55         |       |
|-----------------|--------------|------|-----|--------|------------|-------|
| Urdal Rd        | 7/15/2019    | 0.37 | 7.2 | 8.4    | 55         |       |
| Distrib total   | ., _0, _0 _0 | 0.36 | 7.1 | 8.8    | 52         |       |
| Industrial Park | 7/15/2019    |      | 7.2 | 9.9    | 23         |       |
|                 | , , ,        | _    |     |        | _          |       |
| Location        | Date         | CI2  | РН  | Temp C | Alkalinity | Notes |
| WWTP            | 7/23/2019    | 0.12 | 7.1 | 10.4   | 56         |       |
| Health Centre   | 7/23/2019    |      | 7.1 | 13.4   | 52         |       |
| Village Office  | 7/23/2019    | 0.12 | 7.0 | 13.6   | 52         |       |
| Plateau/Ridge   | 7/23/2019    | 0.26 | 7.0 | 15.8   | 54         |       |
| Oak St          | 7/23/2019    | 0.34 | 7.0 | 10.5   | 54         |       |
| Pemberton Nort  | h            |      |     |        |            |       |
| Collins Rd      | 7/23/2019    | 0.37 | 7.0 | 9.1    | 57         |       |
| Meadows Rd      | 7/23/2019    | 0.31 | 7.0 | 11     | 47         |       |
| Farm Rd         | 7/23/2019    | 0.35 | 7.1 | 12.6   | 55         |       |
| Urdal Rd        | 7/23/2019    | 0.34 | 7.1 | 10.5   | 51         |       |
| Distrib total   |              | 0.28 | 7.0 | 11.9   | 53         |       |
| Industrial Park | 7/23/2019    | 0.16 | 7.2 | 10.1   | 23         |       |
|                 |              |      |     |        |            |       |
| Location        | Date         | Cl2  | PH  | Temp C | Alkalinity | Notes |
| WWTP            | 7/29/2019    | 0.21 | 7.1 | 10.7   | 65         |       |
| Health Centre   | 7/29/2019    | 0.31 | 7.1 | 9.8    | 58         |       |
| Village Office  | 7/29/2019    | 0.27 | 7.1 | 10.1   | 54         |       |
| Plateau/Ridge   | 7/29/2019    | 0.28 | 7.0 | 9.7    | 49         |       |
| Oak St          | 7/29/2019    | 0.29 | 7.1 | 9.8    | 59         |       |
| Pemberton Nort  |              |      |     |        |            |       |
| Collins Rd      | 7/29/2019    | 0.32 | 7.1 | 10.5   | 52         |       |
| Meadows Rd      | 7/29/2019    | 0.26 | 7.1 | 10.1   | 55         |       |
| Farm Rd         | 7/29/2019    |      | 7.1 | 9.7    | 61         |       |
| Urdal Rd        | 7/29/2019    | 0.27 | 7.1 | 10.1   | 58         |       |
| Distrib total   |              | 0.28 |     |        | 57         |       |
| Industrial Park | 7/29/2019    | 0.1  | 7.2 | 10     | 19         |       |
|                 |              |      |     | _      |            |       |
| Location        | Date         | CI2  | PH  | Temp C | Alkalinity | Notes |
| WWTP            | 8/6/2019     |      | 7.2 | 20.2   | 55         |       |
| Health Centre   | 8/6/2019     |      |     | 7.4    | 66         |       |
| Village Office  | 8/6/2019     |      |     | 5.4    | 54         |       |
| Plateau/Ridge   | 8/6/2019     |      | 7.5 | 4.4    | 54         |       |
| Oak St          | 8/6/2019     | 0.35 | 7.4 | 5      | 57         |       |
| Pemberton Nort  | 1            | 0.00 |     |        |            |       |
| Collins Rd      | 8/6/2019     |      |     | 4.8    | 58         |       |
| Meadows Rd      | 8/6/2019     |      | 7.5 | 6.2    | 60         |       |
| Farm Rd         | 8/6/2019     |      |     | 5.1    | 55         |       |
| Urdal Rd        | 8/6/2019     |      |     | 6.2    | 61         |       |
| Distrib total   |              | 0.31 | 7.4 | 7.2    | 58         |       |
| Industrial Park | 8/6/2019     | 0.08 | 7.5 | 5.8    | 19         |       |
|                 |              |      |     |        |            |       |

| Location        | Date                   | Cl2  | PH               | Temp C       | Alkalinity           | Notes |
|-----------------|------------------------|------|------------------|--------------|----------------------|-------|
| WWTP            | 8/12/2019              | 0.22 | 6.9              | 25.1         | 56                   |       |
| Health Centre   | 8/12/2019              | 0.29 | 7.1              | 11.1         | 55                   |       |
| Village Office  | 8/12/2019              | 0.27 | 7.1              | 10.1         | 52                   |       |
| Plateau/Ridge   | 8/12/2019              | 0.25 | 7.1              | 11.5         | 58                   |       |
| Oak St          | 8/12/2019              | 0.35 | 7.1              | 10.9         | 52                   |       |
| Pemberton Nort  |                        | 0.00 | 7.12             | 1013         | 52                   |       |
| Collins Rd      | 8/12/2019              | 0.34 | 7.1              | 10           | 54                   |       |
| Meadows Rd      | 8/12/2019              | 0.33 | 7.1              | 9.6          | 55                   |       |
| Farm Rd         | 8/12/2019              | 0.33 | 7.1              | 14.3         | 55                   |       |
| Urdal Rd        | 8/12/2019              | 0.33 | 7.1              | 9.6          | 51                   |       |
| Distrib total   | 0/12/2015              | 0.30 | 7.1              | 12.5         | 54                   |       |
| Industrial Park | 8/12/2019              | 0.1  | 7.2              | 10.9         | 22                   |       |
| Industrial Fark | 0/12/2013              | 0.1  | 7.2              | 10.5         | 22                   |       |
| Location        | Date                   | Cl2  | PH               | Temp C       | Alkalinity           | Notes |
| WWTP            | 8/20/2019              | 0.23 | 7.0              | 18.7         | <b>Aikaiiiity</b> 64 | NOLES |
| Health Centre   | 8/20/2019              | 0.23 | 7.0              | 13.7         | 49                   |       |
| Village Office  | 8/20/2019              | 0.09 | 7.0              | 13.7         | 49                   |       |
| Plateau/Ridge   | 8/20/2019              | 0.12 | 7.1              | 12.3         | 40                   |       |
| Oak St          |                        |      | 7.0              |              |                      |       |
|                 | 8/20/2019              | 0.17 | 7.0              | 13.1         | 43                   |       |
| Pemberton Nort  | 1                      | 0.20 | 7.0              | 12.0         | 40                   |       |
| Collins Rd      | 8/20/2019              | 0.29 | 7.0              | 12.9         | 48                   |       |
| Meadows Rd      | 8/20/2019              | 0.24 | 7.0              | 13.5         | 54                   |       |
| Farm Rd         | 8/20/2019              | 0.18 | 7.0              | 13.9         | 48                   |       |
| Urdal Rd        | 8/20/2019              | 0.11 | 7.0              | 12.4         | 50                   |       |
| Distrib total   |                        | 0.17 | 7.0              | 13.7         | 49                   |       |
| Industrial Park | 8/20/2019              | 0.19 | 7.1              | 13.3         | 18                   |       |
| Location        | Date                   | Cl2  | PH               | Temp C       | Alkalinity           | Notes |
| WWTP            | 8/26/2019              | 0.08 | 7.0              | 13.6         | 56                   |       |
| Health Centre   | 8/26/2019              |      | 7.0              |              |                      |       |
| Village Office  | 8/26/2019              | 0.21 | 7.0              | 12.3         | 43                   |       |
| Plateau/Ridge   | 8/26/2019              |      | 7.0              | 12.3         |                      |       |
| Oak St          | 8/26/2019              | 0.13 | 7.0              | 13.0         |                      |       |
| Pemberton Nort  |                        | 0.23 | 7.0              | 12.9         | 50                   |       |
| Collins Rd      | 1                      | 0.25 | 7.0              | 11 0         | 12                   |       |
| Meadows Rd      | 8/26/2019<br>8/26/2019 |      | 7.0              | 11.8<br>11.5 | 43<br>49             |       |
|                 |                        |      | 7.0              | 11.5         |                      |       |
| Farm Rd         | 8/26/2019              |      |                  |              | 41                   |       |
| Urdal Rd        | 8/26/2019              | 0.22 | 7.0              | 13.6         |                      |       |
| Distrib total   | 0/20/2040              | 0.20 | 7.0              | 12.8         | 46                   |       |
| Industrial Park | 8/26/2019              | 0    | 7.1              | 12.4         | 19                   |       |
| Location        | Date                   | Cl2  | РН               | Temp C       | Alkalinity           | Notes |
| WWTP            | 9/3/2019               | 0.07 | <b>РП</b><br>7.0 | 12.1         | Alkalinity<br>63     | NULES |
| Health Centre   | 9/3/2019               | 0.07 | 7.0              | 12.1         |                      |       |
| Village Office  |                        | 0.13 | 7.0              | 13.8         | 61                   |       |
|                 | 9/3/2019               |      |                  |              |                      |       |
| Plateau/Ridge   | 9/3/2019               | 0.12 | 7.0              | 13.8         | 56                   |       |

| Oak St   | 9/3/2019  | 0.23  | 7.0   | 13.5  | 59  |       |
|--|---|---|---|---|---|-------|
| Pemberton Nort   |   |   |   |   |   |       |
| Collins Rd   | 9/3/2019  | 0.25  | 7.0   | 13.1  | 54  |       |
| Meadows Rd   | 9/3/2019  | 0.27  | 6.9   | 11.8  | 53  |       |
| Farm Rd  | 9/3/2019  | 0.23  | 7.0   | 12.7  | 58  |       |
| Urdal Rd   | 9/3/2019  | 0.22  | 6.9   | 13.5  | 54  |       |
| Distrib total  |   | 0.18  | 7.0   | 13.0  | 58  |       |
| Industrial Park  | 9/3/2019  | 0.02  | 7.1   | 12.1  | 20  |       |
|  |   |   |   |   |   |       |
| Location   | Date  | Cl2   | РН  | Temp C  | Alkalinity  | Notes |
| WWTP   | 9/9/2019  | 0.16  | 7.0   | 16.2  | 77  |       |
| Health Centre  | 9/9/2019  | 0.2   | 6.9   | 17.6  | 50  |       |
| Village Office   | 9/9/2019  | 0.2   | 7.0   | 16  | 55  |       |
| Plateau/Ridge  | 9/9/2019  | 0.14  | 6.9   | 15.6  | 55  |       |
| Oak St   | 9/9/2019  | 0.27  | 7.0   | 14.6  | 46  |       |
| Pemberton Nort   | h   |   |   |   |   |       |
| Collins Rd   | 9/9/2019  | 0.29  | 6.9   | 14.6  | 53  |       |
| Meadows Rd   | 9/9/2019  | 0.2   | 6.9   | 14.8  | 54  |       |
| Farm Rd  | 9/9/2019  | 0.22  | 6.9   | 15.1  | 51  |       |
| Urdal Rd   | 9/9/2019  | 0.26  | 7.0   | 15.7  | 50  |       |
| Distrib total  |   | 0.22  | 6.9   | 15.6  | 55  |       |
| Industrial Park  | 9/9/2019  | 0   | 7.1   | 15.8  | 22  |       |
|  |   |   |   |   |   |       |
| • • • • •  | <b>-</b> .  |   |   |   |   |       |
| Location   | Date  | Cl2   | PH  | Temp C  | Alkalinity  | Notes |
| Location<br>WWTP   | Date<br>9/16/2019   | 0.2   | <b>РН</b><br>7.1  | <b>Temp C</b> 12  | Alkalinity<br>60  | Notes |
| WWTP<br>Health Centre  | 9/16/2019<br>9/16/2019  | 0.2<br>0.27   | 7.1<br>7.1  | 12<br>11.4  | 60<br>57  | Notes |
| WWTP   | 9/16/2019<br>9/16/2019<br>9/16/2019   | 0.2<br>0.27<br>0.26   | 7.1<br>7.1<br>7.2   | 12<br>11.4<br>10.2  | 60  | Notes |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge   | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019  | 0.2<br>0.27<br>0.26<br>0.2  | 7.1<br>7.1<br>7.2<br>7.1  | 12<br>11.4  | 60<br>57  | Notes |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St   | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019   | 0.2<br>0.27<br>0.26   | 7.1<br>7.1<br>7.2   | 12<br>11.4<br>10.2  | 60<br>57<br>60  | Notes |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort   | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>h  | 0.2<br>0.27<br>0.26<br>0.2<br>0.25  | 7.1<br>7.1<br>7.2<br>7.1  | 12<br>11.4<br>10.2<br>10.9<br>10.8  | 60<br>57<br>60<br>49<br>59  |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton North<br>Collins Rd  | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>n<br>9/16/2019   | 0.2<br>0.27<br>0.26<br>0.2<br>0.25<br>0.25  | 7.1<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1  | 12<br>11.4<br>10.2<br>10.9<br>10.8<br>10.6  | 60<br>57<br>60<br>49<br>59<br>64  |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort   | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>n<br>9/16/2019<br>9/16/2019  | 0.2<br>0.27<br>0.26<br>0.2<br>0.25<br>0.25<br>0.27  | 7.1<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1  | 12<br>11.4<br>10.2<br>10.9<br>10.8  | 60<br>57<br>60<br>49<br>59  |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd  | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019  | 0.2<br>0.27<br>0.26<br>0.2<br>0.25<br>0.25<br>0.27<br>0.27<br>0.25  | 7.1<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1<br>7.1<br>7.1<br>7.1   | 12<br>11.4<br>10.2<br>10.9<br>10.8<br>10.6<br>9.3<br>9.1  | 60<br>57<br>60<br>49<br>59<br>64<br>64<br>61  |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd  | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>n<br>9/16/2019<br>9/16/2019  | 0.2<br>0.27<br>0.26<br>0.2<br>0.25<br>0.25<br>0.27<br>0.27<br>0.25<br>0.28  | 7.1<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.2                                   | 12<br>11.4<br>10.2<br>10.9<br>10.8<br>10.6<br>9.3<br>9.1<br>10.5  | 60<br>57<br>60<br>49<br>59<br>64<br>61<br>61<br>61<br>69  |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton North<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total  | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019   | 0.2<br>0.27<br>0.26<br>0.25<br>0.25<br>0.27<br>0.27<br>0.27<br>0.25<br>0.28<br>0.25   | 7.1<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1<br>7.1<br>7.1<br>7.1<br>7.2<br>7.1                                   | 12<br>11.4<br>10.2<br>10.9<br>10.8<br>10.6<br>9.3<br>9.1<br>10.5<br>10.5  | 60<br>57<br>60<br>49<br>59<br>64<br>61<br>61<br>61<br>69<br>60  |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd  | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019  | 0.2<br>0.27<br>0.26<br>0.25<br>0.25<br>0.27<br>0.27<br>0.27<br>0.25<br>0.28<br>0.25   | 7.1<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.2                                   | 12<br>11.4<br>10.2<br>10.9<br>10.8<br>10.6<br>9.3<br>9.1<br>10.5  | 60<br>57<br>60<br>49<br>59<br>64<br>61<br>61<br>61<br>69<br>60  |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Norti<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park   | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019  | 0.2<br>0.27<br>0.26<br>0.25<br>0.25<br>0.27<br>0.27<br>0.27<br>0.25<br>0.28<br>0.28<br>0.25<br>0.13   | 7.1<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1<br>7.1<br>7.1<br>7.1<br>7.2<br>7.1<br>7.1<br>7.1                     | 12<br>11.4<br>10.2<br>10.9<br>10.8<br>10.6<br>9.3<br>9.1<br>10.5<br>10.5<br>10.5  | 60<br>57<br>60<br>49<br>59<br>64<br>61<br>61<br>61<br>69<br>60<br>23  |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location  | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>0/16/2019<br>Date  | 0.2<br>0.27<br>0.26<br>0.25<br>0.25<br>0.27<br>0.27<br>0.27<br>0.25<br>0.28<br>0.25<br>0.13<br>Cl2  | 7.1<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1                     | 12<br>11.4<br>10.2<br>10.9<br>10.8<br>10.6<br>9.3<br>9.1<br>10.5<br>10.5<br>15.8<br><b>Temp C</b>   | 60<br>57<br>60<br>49<br>59<br>64<br>61<br>61<br>61<br>69<br>60<br>23<br>Alkalinity  |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton North<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br><b>Location</b><br>WWTP  | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/9/2019<br>Date<br>9/23/2019  | 0.2<br>0.27<br>0.26<br>0.25<br>0.25<br>0.27<br>0.27<br>0.25<br>0.28<br>0.28<br>0.28<br>0.25<br>0.13<br><b>Cl2</b><br>0.12                         | 7.1<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>9H<br>6.9 | 12<br>11.4<br>10.2<br>10.9<br>10.8<br>10.6<br>9.3<br>9.1<br>10.5<br>10.5<br>15.8<br><b>Temp C</b><br>14.5   | 60<br>57<br>60<br>49<br>59<br>64<br>61<br>61<br>61<br>69<br>60<br>23<br><b>Alkalinity</b><br>59                               |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Norti<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre  | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/2019<br>Date<br>9/23/2019                             | 0.2<br>0.27<br>0.26<br>0.25<br>0.25<br>0.27<br>0.27<br>0.27<br>0.25<br>0.28<br>0.25<br>0.13<br><b>CI2</b><br>0.12<br>0.36                         | 7.1<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>9H<br>6.9<br>7.0        | 12<br>11.4<br>10.2<br>10.9<br>10.8<br>10.6<br>9.3<br>9.1<br>10.5<br>10.5<br>10.5<br>15.8<br><b>Temp C</b><br>14.5<br>14.4                         | 60<br>57<br>60<br>49<br>59<br>64<br>61<br>61<br>61<br>69<br>60<br>23<br><b>Alkalinity</b><br>59<br>56                         |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office   | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/2019<br>9/23/2019<br>9/23/2019<br>9/23/2019           | 0.2<br>0.27<br>0.26<br>0.25<br>0.25<br>0.27<br>0.27<br>0.27<br>0.25<br>0.28<br>0.25<br>0.13<br><b>Cl2</b><br>0.12<br>0.36<br>0.3                  | 7.1<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1       | 12<br>11.4<br>10.2<br>10.9<br>10.8<br>10.6<br>9.3<br>9.1<br>10.5<br>10.5<br>15.8<br><b>Temp C</b><br>14.5<br>14.4<br>13.2                         | 60<br>57<br>60<br>49<br>59<br>64<br>61<br>61<br>61<br>69<br>60<br>23<br><b>Alkalinity</b><br>59<br>56<br>60                   |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Norti<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge   | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/2019<br>9/23/2019<br>9/23/2019<br>9/23/2019<br>9/23/2019           | 0.2<br>0.27<br>0.26<br>0.25<br>0.25<br>0.27<br>0.27<br>0.27<br>0.27<br>0.25<br>0.28<br>0.28<br>0.25<br>0.13<br><b>Cl2</b><br>0.12<br>0.36<br>0.3  | 7.1<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1       | 12<br>11.4<br>10.2<br>10.9<br>10.8<br>10.6<br>9.3<br>9.1<br>10.5<br>10.5<br>15.8<br><b>Temp C</b><br>14.5<br>14.4<br>13.2<br>13.8                 | 60<br>57<br>60<br>49<br>59<br>64<br>61<br>61<br>61<br>61<br>69<br>60<br>23<br><b>Alkalinity</b><br>59<br>56<br>60<br>49       | Notes |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br><b>Location</b><br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St                                   | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/2019<br>9/2019<br>9/23/2019<br>9/23/2019<br>9/23/2019<br>9/23/2019 | 0.2<br>0.27<br>0.26<br>0.25<br>0.25<br>0.27<br>0.27<br>0.27<br>0.27<br>0.25<br>0.28<br>0.28<br>0.25<br>0.13<br><b>Cl2</b><br>0.12<br>0.36<br>0.3  | 7.1<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1       | 12<br>11.4<br>10.2<br>10.9<br>10.8<br>10.6<br>9.3<br>9.1<br>10.5<br>10.5<br>15.8<br><b>Temp C</b><br>14.5<br>14.4<br>13.2                         | 60<br>57<br>60<br>49<br>59<br>64<br>61<br>61<br>61<br>69<br>60<br>23<br><b>Alkalinity</b><br>59<br>56<br>60                   | Notes |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Norti<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Norti                      | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/23/2019<br>9/23/2019<br>9/23/2019<br>9/23/2019<br>9/23/2019        | 0.2<br>0.27<br>0.26<br>0.25<br>0.25<br>0.27<br>0.27<br>0.27<br>0.25<br>0.28<br>0.28<br>0.28<br>0.25<br>0.13<br><b>Cl2</b><br>0.12<br>0.36<br>0.35 | 7.1<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1       | 12<br>11.4<br>10.2<br>10.9<br>10.8<br>10.6<br>9.3<br>9.1<br>10.5<br>10.5<br>10.5<br>15.8<br><b>Temp C</b><br>14.5<br>14.4<br>13.2<br>13.8<br>13.2 | 60<br>57<br>60<br>49<br>59<br>64<br>61<br>61<br>61<br>61<br>69<br>60<br>23<br><b>Alkalinity</b><br>59<br>56<br>60<br>49<br>48 | Notes |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Norti<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br><b>Location</b><br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Norti<br>Collins Rd | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/2019<br>9/23/2019<br>9/23/2019<br>9/23/2019<br>9/23/2019           | 0.2<br>0.27<br>0.26<br>0.25<br>0.25<br>0.27<br>0.27<br>0.27<br>0.25<br>0.28<br>0.25<br>0.13<br><b>CI2</b><br>0.12<br>0.36<br>0.35<br>0.35         | 7.1<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1       | 12<br>11.4<br>10.2<br>10.9<br>10.8<br>10.6<br>9.3<br>9.1<br>10.5<br>10.5<br>15.8<br><b>Temp C</b><br>14.5<br>14.4<br>13.2<br>13.8<br>13.2         | 60<br>57<br>60<br>49<br>59<br>64<br>61<br>61<br>61<br>61<br>69<br>60<br>23<br><b>Alkalinity</b><br>59<br>56<br>60<br>49<br>48 |       |
| WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Norti<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br><b>Location</b><br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Norti               | 9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/16/2019<br>9/23/2019<br>9/23/2019<br>9/23/2019<br>9/23/2019<br>9/23/2019        | 0.2<br>0.27<br>0.26<br>0.25<br>0.25<br>0.27<br>0.27<br>0.27<br>0.25<br>0.28<br>0.28<br>0.28<br>0.25<br>0.13<br><b>Cl2</b><br>0.12<br>0.36<br>0.35 | 7.1<br>7.1<br>7.2<br>7.1<br>7.2<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1<br>7.1       | 12<br>11.4<br>10.2<br>10.9<br>10.8<br>10.6<br>9.3<br>9.1<br>10.5<br>10.5<br>10.5<br>15.8<br><b>Temp C</b><br>14.5<br>14.4<br>13.2<br>13.8<br>13.2 | 60<br>57<br>60<br>49<br>59<br>64<br>61<br>61<br>61<br>61<br>69<br>60<br>23<br><b>Alkalinity</b><br>59<br>56<br>60<br>49<br>48 |       |

| Urdal Rd        | 9/23/2019  | 0.34 | 7.0        | 14          | 54         |       |
|-----------------|------------|------|------------|-------------|------------|-------|
| Distrib total   | -,,        | 0.30 | 7.0        | 13.9        | 52         |       |
| Industrial Park | 9/23/2019  | 0.22 | 7.0        | 12.7        | 24         |       |
|                 |            |      |            |             |            |       |
| Location        | Date       | Cl2  | РН         | Temp C      | Alkalinity | Notes |
| WWTP            | 9/30/2019  | 0.15 | 6.9        | 7.7         | 59         |       |
| Health Centre   | 9/30/2019  | 0.34 | 7.0        | 11.2        | 56         |       |
| Village Office  | 9/30/2019  | 0.35 | 7.0        | 9.8         | 60         |       |
| Plateau/Ridge   | 9/30/2019  | 0.3  | 7.0        | 7.9         | 49         |       |
| Oak St          | 9/30/2019  | 0.33 | 6.9        | 10          | 48         |       |
| Pemberton Nort  | h          |      |            |             |            |       |
| Collins Rd      | 9/30/2019  | 0.37 | 7.0        | 7.7         | 52         |       |
| Meadows Rd      | 9/30/2019  | 0.32 | 7.0        | 11.5        | 53         |       |
| Farm Rd         | 9/30/2019  | 0.35 | 7.0        | 6.4         | 41         |       |
| Urdal Rd        | 9/30/2019  | 0.36 | 7.0        | 8.2         | 54         |       |
| Distrib total   |            | 0.32 | 7.0        | 8.9         | 52         |       |
| Industrial Park | 9/30/2019  | 0.12 | 7.1        | 7.8         | 24         |       |
|                 |            |      |            |             |            |       |
| Location        | Date       | Cl2  | PH         | Temp C      | Alkalinity | Notes |
| WWTP            | 10/7/2019  | 0.1  | 6.9        | 12.5        | 57         |       |
| Health Centre   | 10/7/2019  | 0.38 | 6.9        | 11          | 67         |       |
| Village Office  | 10/7/2019  | 0.28 | 6.9        | 11.3        | 63         |       |
| Plateau/Ridge   | 10/7/2019  | 0.24 | 7.0        | 8.4         | 62         |       |
| Oak St          | 10/7/2019  | 0.37 | 6.9        | 10          | 61         |       |
| Pemberton Nort  | h          |      |            |             |            |       |
| Collins Rd      | 10/7/2019  | 0.33 | 6.9        | 8.7         | 65         |       |
| Meadows Rd      | 10/7/2019  | 0.26 | 6.9        | 9.5         | 51         |       |
| Farm Rd         | 10/7/2019  | 0.26 | 7.0        | 10.5        | 66         |       |
| Urdal Rd        | 10/7/2019  | 0.23 | 6.9        | 12          | 59         |       |
| Distrib total   |            | 0.27 | 6.9        | 10.4        | 61         |       |
| Industrial Park | 10/7/2019  | 0.07 | 7.1        | 11.5        | 27         |       |
|                 |            | -    |            |             |            |       |
| Location        | Date       | CI2  | PH         | Temp C      | Alkalinity | Notes |
| WWTP            | 10/16/2019 |      | 6.9        | 11          | 47         |       |
| Health Centre   | 10/16/2019 |      | 6.8        | 11.5        | 57         |       |
| Village Office  | 10/16/2019 |      | 6.8        | 10.2        | 64         |       |
| Plateau/Ridge   | 10/16/2019 |      | 6.8        | 11.2        | 61         |       |
| Oak St          | 10/16/2019 | 0.27 | 6.9        | 10.9        | 58         |       |
| Pemberton Nort  | 1          | 0.00 |            | 44.5        |            |       |
| Collins Rd      | 10/16/2019 |      |            | 11.2        | 63         |       |
| Meadows Rd      | 10/16/2019 |      | 6.8        | 11.7        | 54         |       |
| Farm Rd         | 10/16/2019 |      |            | 11.2        | 50         |       |
| Urdal Rd        | 10/16/2019 |      | 6.8        | 11          | 54         |       |
| Distrib total   | 10/16/2010 | 0.29 | 6.8<br>7.0 | <u>11.1</u> | 56<br>25   |       |
| Industrial Park | 10/16/2019 | 0    | 7.0        | 10.8        | 25         |       |
| Location        | Data       | Cl2  | PH         | Tome C      | Alkalinity | Notos |
| Location        | Date       |      | rfi        | Temp C      | Alkalinity | Notes |

| WWTP   | 10/21/2019  | 0.19  | 6.9  | 11   | 74   |         |
|--|---|---|--|--|--|---------|
| Health Centre  | 10/21/2019  | 0.19  | 6.9  | 10.5   | 63   |         |
|  |   | 0.33  | 6.9  | 10.5   | 64   |         |
| Village Office   | 10/21/2019  |   |  |  |  |         |
| Plateau/Ridge  | 10/21/2019  | 0.18  | 6.8  | 10.1   | 61   |         |
| Oak St   | 10/21/2019  | 0.34  | 6.8  | 10.7   | 64   |         |
| Pemberton Nort   |   |   |  |  |  |         |
| Collins Rd   | 10/21/2019  | 0.34  | 6.9  | 9.5  | 75   |         |
| Meadows Rd   | 10/21/2019  | 0.32  | 6.9  | 10.5   | 70   |         |
| Farm Rd  | 10/21/2019  | 0.26  | 6.9  | 9.4  | 68   |         |
| Urdal Rd   | 10/21/2019  | 0.27  | 6.9  | 9.5  | 66   |         |
| Distrib total  |   | 0.28  | 6.9  | 10.2   | 67   |         |
| Industrial Park  | 10/21/2019  | 0.31  | 7.0  | 9  | 26   |         |
|  |   |   |  |  |  |         |
| Location   | Date  | Cl2   | РН   | Temp C   | Alkalinity   | Notes   |
| WWTP   | 10/29/2019  | 0.2   | 6.8  | 11.6   | 66   |         |
| Health Centre  | 10/29/2019  | 0.35  | 6.7  | 11.2   | 64   |         |
| Village Office   | 10/29/2019  | 0.34  | 6.8  | 10.4   | 66   |         |
| Plateau/Ridge  | 10/29/2019  | 0.21  | 6.7  | 10.8   | 68   |         |
| Oak St   | 10/29/2019  | 0.4   | 6.7  | 10.3   | 67   |         |
| Pemberton Nort   |   |   |  |  |  |         |
| Collins Rd   | 10/29/2019  |   |  |  |  | frozen  |
| Meadows Rd   | 10/29/2019  |   |  |  |  | frozen  |
| Farm Rd  | 10/29/2019  |   |  |  |  | frozen  |
| Urdal Rd   | 10/29/2019  |   |  |  |  | frozen  |
| Distrib total  | 10/23/2013  | 0.30  | 6.7  | 10.9   | 66   | 1102011 |
| Industrial Park  | 10/29/2019  | 0.05  | 6.9  | 10.9   | 24   |         |
| maastriarrark  | 10/23/2013  | 0.05  | 0.5  | 10   | 27   |         |
| Location   | Date  | Cl2   | PH   | Temp C   | Alkalinity   | Notes   |
| WWTP   | 11/4/2019   | 0.1   | 7.0  | 9.3  | 67   |         |
| Health Centre  | 11/4/2019   | 0.1   | 7.0  | 7.8  | 66   |         |
| Village Office   | 11/4/2019   |   |  |  | 67   |         |
| Plateau/Ridge  |   |   |  | 5.1  |  |         |
| Flateau/Muge   | 11/////010  | 0.24  | / 1  | 70   | 60   |         |
| Oak St   | 11/4/2019   | 0.24  | 7.1  | 7.9  | 69<br>76   |         |
| Oak St   | 11/4/2019   |   | 7.1  | 7.9<br>5.5   | 69<br>76   |         |
| Pemberton Nort   | 11/4/2019<br>h  | 0.3   | 7.1  | 5.5  | 76   |         |
| Pemberton Nort<br>Collins Rd   | 11/4/2019<br>h<br>11/4/2019   | 0.3   | 7.1  | 5.5<br>8.1   | 76<br>77   |         |
| Pemberton Nort<br>Collins Rd<br>Meadows Rd   | 11/4/2019<br>h<br>11/4/2019<br>11/4/2019  | 0.3 0.33 0.27   | 7.1<br>7.0<br>7.1  | 5.5<br>8.1<br>9  | 76<br>77<br>70   |         |
| Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd  | 11/4/2019<br>h<br>11/4/2019<br>11/4/2019<br>11/4/2019   | 0.3<br>0.33<br>0.27<br>0.26   | 7.1<br>7.0<br>7.1<br>7.0   | 5.5<br>8.1<br>9<br>12.7  | 76<br>77<br>70<br>58   |         |
| Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd  | 11/4/2019<br>h<br>11/4/2019<br>11/4/2019  | 0.3<br>0.33<br>0.27<br>0.26<br>0.32   | 7.1<br>7.0<br>7.1<br>7.0<br>7.0<br>7.1   | 5.5<br>8.1<br>9<br>12.7<br>5.8   | 76<br>77<br>70<br>58<br>63   |         |
| Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total   | 11/4/2019<br>h<br>11/4/2019<br>11/4/2019<br>11/4/2019<br>11/4/2019  | 0.3<br>0.33<br>0.27<br>0.26<br>0.32<br>0.27   | 7.1<br>7.0<br>7.1<br>7.0<br>7.1<br>7.1<br>7.0  | 5.5<br>8.1<br>9<br>12.7<br>5.8<br>8.4  | 76<br>77<br>70<br>58<br>63<br>68   |         |
| Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd  | 11/4/2019<br>h<br>11/4/2019<br>11/4/2019<br>11/4/2019   | 0.3<br>0.33<br>0.27<br>0.26<br>0.32<br>0.27   | 7.1<br>7.0<br>7.1<br>7.0<br>7.0<br>7.1   | 5.5<br>8.1<br>9<br>12.7<br>5.8   | 76<br>77<br>70<br>58<br>63   |         |
| Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park  | 11/4/2019<br>h<br>11/4/2019<br>11/4/2019<br>11/4/2019<br>11/4/2019<br>11/4/2019   | 0.3<br>0.33<br>0.27<br>0.26<br>0.32<br>0.27<br>0.08                                       | 7.1<br>7.0<br>7.1<br>7.0<br>7.1<br>7.0<br>7.1<br>7.1                                       | 5.5<br>8.1<br>9<br>12.7<br>5.8<br>8.4<br>8.5   | 76<br>77<br>70<br>58<br>63<br>68<br>24                                       |         |
| Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location  | 11/4/2019<br>h<br>11/4/2019<br>11/4/2019<br>11/4/2019<br>11/4/2019<br>11/4/2019<br>Date   | 0.3<br>0.33<br>0.27<br>0.26<br>0.32<br>0.27<br>0.08<br>Cl2                                | 7.1<br>7.0<br>7.1<br>7.0<br>7.1<br>7.0<br>7.1<br><b>PH</b>                                 | 5.5<br>8.1<br>9<br>12.7<br>5.8<br>8.4<br>8.5<br><b>Temp C</b>  | 76<br>77<br>70<br>58<br>63<br>63<br>24<br>Alkalinity                         | Notes   |
| Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP                                    | 11/4/2019<br>h<br>11/4/2019<br>11/4/2019<br>11/4/2019<br>11/4/2019<br>11/4/2019<br>Date<br>11/12/2019                             | 0.3<br>0.33<br>0.27<br>0.26<br>0.32<br>0.27<br>0.08<br>Cl2<br>0.12                        | 7.1<br>7.0<br>7.1<br>7.0<br>7.1<br>7.0<br>7.1<br><b>PH</b><br>6.9                          | 5.5<br>8.1<br>9<br>12.7<br>5.8<br>8.4<br>8.5<br><b>7emp C</b><br>10.8                                | 76<br>77<br>70<br>58<br>63<br>68<br>24<br>Alkalinity<br>63                   | Notes   |
| Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre                   | 11/4/2019<br>h<br>11/4/2019<br>11/4/2019<br>11/4/2019<br>11/4/2019<br>11/4/2019<br>Date<br>11/12/2019<br>11/12/2019               | 0.3<br>0.33<br>0.27<br>0.26<br>0.32<br>0.27<br>0.08<br>Cl2<br>0.12<br>0.28                | 7.1<br>7.0<br>7.1<br>7.0<br>7.1<br>7.0<br>7.1<br><b>PH</b><br>6.9<br>7.0                   | 5.5<br>8.1<br>9<br>12.7<br>5.8<br>8.4<br>8.5<br><b>7emp C</b><br>10.8<br>10.8                        | 76<br>77<br>70<br>58<br>63<br>63<br>24<br>Alkalinity<br>63<br>72             | Notes   |
| Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office | 11/4/2019<br>h<br>11/4/2019<br>11/4/2019<br>11/4/2019<br>11/4/2019<br>11/4/2019<br>Date<br>11/12/2019<br>11/12/2019<br>11/12/2019 | 0.3<br>0.33<br>0.27<br>0.26<br>0.32<br>0.27<br>0.08<br>Cl2<br>0.12<br>0.28<br>0.28        | 7.1<br>7.0<br>7.1<br>7.0<br>7.1<br>7.0<br>7.1<br><b>PH</b><br>6.9<br>7.0<br>6.9            | 5.5<br>8.1<br>9<br>12.7<br>5.8<br>8.4<br>8.5<br><b>Temp C</b><br>10.8<br>10.8<br>10.6                | 76<br>77<br>70<br>58<br>63<br>63<br>68<br>24<br>Alkalinity<br>63<br>72<br>60 | Notes   |
| Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre                   | 11/4/2019<br>h<br>11/4/2019<br>11/4/2019<br>11/4/2019<br>11/4/2019<br>11/4/2019<br>Date<br>11/12/2019<br>11/12/2019               | 0.3<br>0.33<br>0.27<br>0.26<br>0.32<br>0.27<br>0.08<br>Cl2<br>0.12<br>0.28<br>0.28<br>0.2 | 7.1<br>7.0<br>7.1<br>7.0<br>7.1<br>7.1<br>7.1<br>7.1<br>9<br>H<br>6.9<br>7.0<br>6.9<br>6.9 | 5.5<br>8.1<br>9<br>12.7<br>5.8<br>8.4<br>8.5<br><b>7emp C</b><br>10.8<br>10.8<br>10.8<br>10.6<br>9.4 | 76<br>77<br>70<br>58<br>63<br>63<br>24<br>Alkalinity<br>63<br>72             | Notes   |

| Pemberton Nort   | h   |  |   |   |   |                                    |
|--|---|--|---|---|---|------------------------------------|
| Collins Rd   | 11/12/2019  | 0.17   | 6.9   | 9   | 62  | meter valve closed                 |
| Meadows Rd   | 11/12/2019  |  | 6.9   | 10.6  | 69  |                                    |
| Farm Rd  | 11/12/2019  |  | 6.9   | 9.6   | 72  |                                    |
| Urdal Rd   | 11/12/2019  |  | 6.8   | 10.9  | 70  |                                    |
| Distrib total  | 11/12/2019  | 0.25   | 6.9   | 10.5  | 66  |                                    |
| Industrial Park  | 11/12/2019  |  | 6.97  | 10.2  | 24  |                                    |
|  | 11/12/2019  | 0  | 0.97  | 10.5  | 24  |                                    |
| Location   | Date  | Cl2  | PH  | Temp C  | Alkalinity  | Notes                              |
| WWTP   |   | 0.08   | <b>гп</b><br>6.9  | 6.8   | 67  | Notes                              |
| Health Centre  | 11/18/2019  |  | 6.8   | 9.3   | 72  |                                    |
|  | 11/18/2019  |  | 6.9   | 9.3   | 64  |                                    |
| Village Office   | 11/18/2019  |  |   |   |   |                                    |
| Plateau/Ridge  | 11/18/2019  | 0.2  | 6.8   | 7.4   | 62  |                                    |
| Oak St   | 11/18/2019  | 0.29   | 6.8   | 8.1   | 66  |                                    |
| Pemberton Nort   |   | 0.01   |   |   |   |                                    |
| Collins Rd   | 11/18/2019  |  | 6.8   | 8.8   | 68  |                                    |
| Meadows Rd   | 11/18/2019  |  | 6.9   | 8.8   | 66  |                                    |
| Farm Rd  | 11/18/2019  |  | 6.9   | 7.9   | 65  |                                    |
| Urdal Rd   | 11/18/2019  |  | 6.8   | 9.5   | 66  |                                    |
| Distrib total  |   | 0.24   | 6.8   | 8.5   | 66  |                                    |
| Industrial Park  | 11/18/2019  |  | 7.0   | 8   | 22  |                                    |
|  |   |  |   |   |   |                                    |
| Location   | Date  | Cl2  | PH  | Temp C  | Alkalinity  | Notes                              |
| WWTP   | 11/25/2019  |  | 6.9   | 10.5  | 52  |                                    |
| Health Centre  | 11/25/2019  | 0.2  | 6.9   | 10.9  | 54  |                                    |
|  |   | 0.1  |   |   |   |                                    |
| Village Office   | 11/25/2019  | 0.15   | 7.0   | 10.8  | 49  |                                    |
| Village Office<br>Plateau/Ridge  |   |  | 7.0<br>6.9  |   | 49<br>58  |                                    |
| -  | 11/25/2019  | 0.15   |   | 10.8  |   |                                    |
| Plateau/Ridge  | 11/25/2019<br>11/25/2019<br>11/25/2019  | 0.15<br>0.16   | 6.9   | 10.8<br>10.1  | 58  |                                    |
| Plateau/Ridge<br>Oak St  | 11/25/2019<br>11/25/2019<br>11/25/2019  | 0.15<br>0.16   | 6.9   | 10.8<br>10.1  | 58  |                                    |
| Plateau/Ridge<br>Oak St<br>Pemberton Nort  | 11/25/2019<br>11/25/2019<br>11/25/2019<br>h   | 0.15<br>0.16<br>0.22<br>0.26   | 6.9<br>6.9  | 10.8<br>10.1<br>10.7  | 58<br>63  |                                    |
| Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd  | 11/25/2019<br>11/25/2019<br>11/25/2019<br>h<br>11/25/2019   | 0.15<br>0.16<br>0.22<br>0.26<br>0.25   | 6.9<br>6.9<br>6.9   | 10.8<br>10.1<br>10.7<br>10.2  | 58<br>63<br>63  |                                    |
| Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd  | 11/25/2019<br>11/25/2019<br>11/25/2019<br>h<br>11/25/2019<br>11/25/2019   | 0.15<br>0.16<br>0.22<br>0.26<br>0.25<br>0.19   | 6.9<br>6.9<br>6.9<br>6.9  | 10.8<br>10.1<br>10.7<br>10.2<br>10.6  | 58<br>63<br>63<br>56  |                                    |
| Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd   | 11/25/2019<br>11/25/2019<br>11/25/2019<br>h<br>11/25/2019<br>11/25/2019<br>11/25/2019   | 0.15<br>0.16<br>0.22<br>0.26<br>0.25<br>0.19   | 6.9<br>6.9<br>6.9<br>6.9<br>6.9   | 10.8<br>10.1<br>10.7<br>10.2<br>10.6<br>11.3  | 58<br>63<br>63<br>63<br>56<br>56  |                                    |
| Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd   | 11/25/2019<br>11/25/2019<br>11/25/2019<br>h<br>11/25/2019<br>11/25/2019<br>11/25/2019   | 0.15<br>0.16<br>0.22<br>0.26<br>0.25<br>0.19<br>0.22<br>0.19   | 6.9<br>6.9<br>6.9<br>6.9<br>6.9<br>6.8<br>7.0   | 10.8<br>10.1<br>10.7<br>10.2<br>10.6<br>11.3<br>10.9  | 58<br>63<br>63<br>56<br>56<br>58  |                                    |
| Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total  | 11/25/2019<br>11/25/2019<br>11/25/2019<br>h<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019   | 0.15<br>0.16<br>0.22<br>0.26<br>0.25<br>0.19<br>0.22<br>0.19   | 6.9<br>6.9<br>6.9<br>6.9<br>6.9<br>6.8<br>7.0<br>6.9  | 10.8<br>10.1<br>10.7<br>10.2<br>10.6<br>11.3<br>10.9<br>10.7  | 58<br>63<br>63<br>56<br>56<br>58<br>57  |                                    |
| Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total  | 11/25/2019<br>11/25/2019<br>11/25/2019<br>h<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019   | 0.15<br>0.16<br>0.22<br>0.26<br>0.25<br>0.19<br>0.22<br>0.19   | 6.9<br>6.9<br>6.9<br>6.9<br>6.9<br>6.8<br>7.0<br>6.9  | 10.8<br>10.1<br>10.7<br>10.2<br>10.6<br>11.3<br>10.9<br>10.7  | 58<br>63<br>63<br>56<br>56<br>58<br>57  |                                    |
| Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park   | 11/25/2019<br>11/25/2019<br>11/25/2019<br>h<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019   | 0.15<br>0.16<br>0.22<br>0.25<br>0.19<br>0.22<br>0.19<br>0.17<br>Cl2  | 6.9<br>6.9<br>6.9<br>6.9<br>6.8<br>7.0<br>6.9<br>7.1  | 10.8<br>10.1<br>10.7<br>10.2<br>10.6<br>11.3<br>10.9<br>10.7<br>11  | 58<br>63<br>63<br>56<br>56<br>58<br>57<br>22  |                                    |
| Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location   | 11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>Date  | 0.15<br>0.16<br>0.22<br>0.25<br>0.19<br>0.22<br>0.19<br>0.17<br><b>Cl2</b><br>0.19   | 6.9<br>6.9<br>6.9<br>6.9<br>6.8<br>7.0<br>6.9<br>7.1<br>PH                                    | 10.8<br>10.1<br>10.7<br>10.2<br>10.6<br>11.3<br>10.9<br>10.7<br>11<br><b>Temp C</b>                             | 58<br>63<br>63<br>56<br>56<br>58<br>57<br>22<br>Alkalinity                                | Notes                              |
| Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP   | 11/25/2019<br>11/25/2019<br>11/25/2019<br>h<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>Date<br>12/3/2019  | 0.15<br>0.16<br>0.22<br>0.25<br>0.19<br>0.22<br>0.19<br>0.17<br>Cl2<br>0.19<br>0.24  | 6.9<br>6.9<br>6.9<br>6.8<br>7.0<br>6.9<br>7.1<br>PH<br>6.7                                    | 10.8<br>10.1<br>10.7<br>10.2<br>10.6<br>11.3<br>10.9<br>10.7<br>11<br><b>Temp C</b><br>8.5                      | 58<br>63<br>63<br>56<br>56<br>58<br>57<br>22<br>Alkalinity<br>58                          | Notes                              |
| Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre  | 11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>00000000000000000000000000000000000   | 0.15<br>0.16<br>0.22<br>0.25<br>0.19<br>0.22<br>0.19<br>0.17<br>Cl2<br>0.19<br>0.24<br>0.18  | 6.9<br>6.9<br>6.9<br>6.9<br>6.8<br>7.0<br>6.9<br>7.1<br><b>PH</b><br>6.7<br>6.7               | 10.8<br>10.1<br>10.7<br>10.2<br>10.6<br>11.3<br>10.9<br>10.7<br>11<br><b>Temp C</b><br>8.5<br>8.9               | 58<br>63<br>63<br>56<br>56<br>58<br>57<br>22<br>Alkalinity<br>58<br>58                    | Notes                              |
| Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office  | 11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>12/3/2019<br>12/3/2019<br>12/3/2019   | 0.15<br>0.16<br>0.22<br>0.25<br>0.19<br>0.22<br>0.19<br>0.17<br>Cl2<br>0.19<br>0.24<br>0.18<br>0.24<br>0.18                                      | 6.9<br>6.9<br>6.9<br>6.8<br>7.0<br>6.9<br>7.1<br><b>PH</b><br>6.7<br>6.7<br>6.7               | 10.8<br>10.1<br>10.7<br>10.2<br>10.6<br>11.3<br>10.9<br>10.7<br>11<br><b>Temp C</b><br>8.5<br>8.9<br>7.7        | 58<br>63<br>63<br>56<br>56<br>58<br>57<br>22<br><b>Alkalinity</b><br>58<br>56<br>58       | Notes                              |
| Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge   | 11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>12/3/2019<br>12/3/2019<br>12/3/2019<br>12/3/2019  | 0.15<br>0.16<br>0.22<br>0.25<br>0.19<br>0.22<br>0.19<br>0.17<br>Cl2<br>0.19<br>0.24<br>0.18<br>0.24<br>0.18                                      | 6.9<br>6.9<br>6.9<br>6.9<br>6.8<br>7.0<br>6.9<br>7.1<br><b>PH</b><br>6.7<br>6.7<br>6.7<br>6.7 | 10.8<br>10.1<br>10.7<br>10.2<br>10.6<br>11.3<br>10.9<br>10.7<br>11<br><b>Temp C</b><br>8.5<br>8.9<br>7.7<br>6.6 | 58<br>63<br>63<br>56<br>56<br>58<br>57<br>22<br><b>Alkalinity</b><br>58<br>56<br>58<br>64 | Notes                              |
| Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br><b>Location</b><br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort                      | 11/25/2019<br>11/25/2019<br>11/25/2019<br>h<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>12/3/2019<br>12/3/2019<br>12/3/2019<br>12/3/2019<br>12/3/2019<br>12/3/2019<br>12/3/2019<br>12/3/2019 | 0.15<br>0.16<br>0.22<br>0.25<br>0.19<br>0.22<br>0.19<br>0.17<br><b>Cl2</b><br>0.19<br>0.24<br>0.18<br>0.24<br>0.18<br>0.06                       | 6.9<br>6.9<br>6.9<br>6.9<br>6.8<br>7.0<br>6.9<br>7.1<br><b>PH</b><br>6.7<br>6.7<br>6.7<br>6.7 | 10.8<br>10.1<br>10.7<br>10.2<br>10.6<br>11.3<br>10.9<br>10.7<br>11<br><b>Temp C</b><br>8.5<br>8.9<br>7.7<br>6.6 | 58<br>63<br>63<br>56<br>56<br>58<br>57<br>22<br><b>Alkalinity</b><br>58<br>56<br>58<br>64 | Notes                              |
| Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St   | 11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>12/3/2019<br>12/3/2019<br>12/3/2019<br>h  | 0.15<br>0.16<br>0.22<br>0.25<br>0.19<br>0.22<br>0.19<br>0.17<br><b>Cl2</b><br>0.19<br>0.17<br><b>Cl2</b><br>0.19<br>0.24<br>0.18<br>0.06<br>0.26 | 6.9<br>6.9<br>6.9<br>6.9<br>6.8<br>7.0<br>6.9<br>7.1<br><b>PH</b><br>6.7<br>6.7<br>6.7<br>6.7 | 10.8<br>10.1<br>10.7<br>10.2<br>10.6<br>11.3<br>10.9<br>10.7<br>11<br><b>Temp C</b><br>8.5<br>8.9<br>7.7<br>6.6 | 58<br>63<br>63<br>56<br>56<br>58<br>57<br>22<br><b>Alkalinity</b><br>58<br>56<br>58<br>64 | Notes<br>Frozen                    |
| Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br>Location<br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd | 11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>12/3/2019<br>12/3/2019<br>12/3/2019<br>12/3/2019<br>12/3/2019<br>12/3/2019<br>12/3/2019                   | 0.15<br>0.16<br>0.22<br>0.25<br>0.19<br>0.22<br>0.19<br>0.17<br><b>Cl2</b><br>0.19<br>0.24<br>0.18<br>0.24<br>0.18<br>0.06<br>0.26               | 6.9<br>6.9<br>6.9<br>6.9<br>6.8<br>7.0<br>6.9<br>7.1<br><b>PH</b><br>6.7<br>6.7<br>6.7<br>6.7 | 10.8<br>10.1<br>10.7<br>10.2<br>10.6<br>11.3<br>10.9<br>10.7<br>11<br><b>Temp C</b><br>8.5<br>8.9<br>7.7<br>6.6 | 58<br>63<br>63<br>56<br>56<br>58<br>57<br>22<br><b>Alkalinity</b><br>58<br>56<br>58<br>64 | Notes<br>Notes<br>Frozen<br>Frozen |
| Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd<br>Meadows Rd<br>Farm Rd<br>Urdal Rd<br>Distrib total<br>Industrial Park<br><b>Location</b><br>WWTP<br>Health Centre<br>Village Office<br>Plateau/Ridge<br>Oak St<br>Pemberton Nort<br>Collins Rd        | 11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>11/25/2019<br>12/3/2019<br>12/3/2019<br>12/3/2019<br>h  | 0.15<br>0.16<br>0.22<br>0.25<br>0.19<br>0.22<br>0.19<br>0.17<br>Cl2<br>0.19<br>0.17<br>Cl2<br>0.19<br>0.24<br>0.18<br>0.06<br>0.26               | 6.9<br>6.9<br>6.9<br>6.9<br>6.8<br>7.0<br>6.9<br>7.1<br><b>PH</b><br>6.7<br>6.7<br>6.7<br>6.7 | 10.8<br>10.1<br>10.7<br>10.2<br>10.6<br>11.3<br>10.9<br>10.7<br>11<br><b>Temp C</b><br>8.5<br>8.9<br>7.7<br>6.6 | 58<br>63<br>63<br>56<br>56<br>58<br>57<br>22<br><b>Alkalinity</b><br>58<br>56<br>58<br>64 | Notes<br>Frozen                    |

| Distrib total   |            | 0.19 | 6.7 | 7.6    |            |        |
|-----------------|------------|------|-----|--------|------------|--------|
| Industrial Park | 12/3/2019  | 0.02 | 6.8 | 7      | 22         |        |
|                 |            |      |     |        |            |        |
| Location        | Date       | Cl2  | PH  | Temp C | Alkalinity | Notes  |
| WWTP            | 12/10/2019 | 0.12 | 6.9 | 8.5    | 56         |        |
| Health Centre   | 12/10/2019 | 0.27 | 7.0 | 8.4    | 56         |        |
| Village Office  | 12/10/2019 | 0.28 | 6.9 | 9.8    | 54         |        |
| Plateau/Ridge   | 12/10/2019 | 0.13 | 6.9 | 11     | 47         |        |
| Oak St          | 12/10/2019 | 0.31 | 6.8 | 7.2    | 64         |        |
| Pemberton Nort  | h          |      |     |        |            |        |
| Collins Rd      | 12/10/2019 |      |     |        |            | Frozen |
| Meadows Rd      | 12/10/2019 |      |     |        |            | Frozen |
| Farm Rd         | 12/10/2019 |      |     |        |            | Frozen |
| Urdal Rd        | 12/10/2019 |      |     |        |            | Frozen |
| Distrib total   |            | 0.22 | 6.9 | 9.0    | 55         |        |
| Industrial Park | 12/10/2019 | 0.17 | 6.8 | 7      | 22         |        |
|                 |            |      |     |        |            |        |

#### Sample Range Report

Vancouver Coastal Health

| Facility Name: | Village of Pemberton                                   |
|----------------|--|
| Date Range:    | Jan 1 2019 to Jan 1 2020                               |
| Operator       | Jeff Westlake<br>P.O. Box 100<br>Pemberton, BC V0N 2L0 |

| Sampling Site   | Date Collected                                    | Total Coliform              | E. Coli                     | Fecal Coliform |
|---|---|-----------------------------|-----------------------------|----------------|
| <u>1403 Portage Road -</u><br><u>audit site - PHN</u><br><u>office tap,</u><br><u>Pemberton Health</u><br><u>Centre</u> | 1/29/2019<br>3/25/2019<br><b>Total Positive</b> : | L1<br><u>L1</u><br><b>0</b> | L1<br><u>L1</u><br><b>0</b> |                |
| <u>Treatment</u><br><u>Plant/Airport Rd.,</u><br><u>Pemberton</u>   | 1/2/2019<br>1/7/2019                              | L1<br>L1                    | L1<br>L1                    |                |
|   | 1/14/2019<br>1/21/2019<br>1/29/2019               | L1<br>L1<br>L1              | L1<br>L1<br>L1<br>L1        |                |
|   | 2/4/2019<br>2/11/2019<br>2/19/2019<br>2/25/2019   | L1<br>L1<br>L1<br>L1        | L1<br>L1<br>L1<br>L1        |                |
|   | 3/4/2019<br>3/11/2019<br>3/18/2019                | L1<br>L1<br>L1              | L1<br>L1<br>L1              |                |
|   | 3/25/2019<br>4/1/2019<br>4/8/2019<br>4/15/2019    | L1<br>L1<br>L1<br>L1        | L1<br>L1<br>L1<br>L1        |                |
|   | 4/24/2019<br>4/29/2019<br>5/6/2019                | L1<br>L1<br>L1              | L1<br>L1<br>L1              |                |
|   | 5/13/2019<br>5/21/2019<br>5/28/2019<br>6/3/2019   | L1<br>L1<br>L1<br>L1        | L1<br>L1<br>L1<br>L1        |                |
|   | 6/3/2019<br>6/11/2019<br>6/17/2019<br>6/24/2019   | L1<br>L1<br>L1<br>L1        | L1<br>L1<br>L1<br>L1        |                |
|   | 7/2/2019<br>7/9/2019                              | L1<br>L1                    | L1<br>L1                    |                |

|  | 7/15/2019<br>7/23/2019<br>7/29/2019<br>8/6/2019<br>8/12/2019<br>8/20/2019<br>8/26/2019<br>9/3/2019<br>9/3/2019<br>9/9/2019<br>9/16/2019<br>9/23/2019<br>10/7/2019<br>10/7/2019<br>10/29/2019<br>10/29/2019<br>11/12/2019<br>11/12/2019<br>11/25/2019<br>12/3/2019<br>12/10/2019<br>12/18/2019<br>Total Positive : | L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L | L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L |
|--|---|---|---|
| <u>Reservoir North,</u><br><u>Pemberton</u>    | 5/6/2019<br><b>Total Positive</b> :   | <u>L1</u><br>0  | <u>L1</u><br>0  |
| <u>Oak Street At High</u><br>School, Pemberton | 1/2/2019<br>1/7/2019<br>1/21/2019<br>1/29/2019<br>2/4/2019<br>2/19/2019<br>2/19/2019<br>2/25/2019<br>3/4/2019<br>3/11/2019<br>3/18/2019<br>3/25/2019<br>4/1/2019<br>4/15/2019<br>4/24/2019<br>4/29/2019<br>5/7/2019<br>5/71/2019<br>5/21/2019<br>5/28/2019  | L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L | L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L |

|  | 6/3/2019<br>6/11/2019<br>6/17/2019<br>6/24/2019<br>7/2/2019<br>7/9/2019<br>7/15/2019<br>7/24/2019<br>8/6/2019<br>8/20/2019<br>8/20/2019<br>8/26/2019<br>9/3/2019<br>9/3/2019<br>9/3/2019<br>9/3/2019<br>9/3/2019<br>9/3/2019<br>9/30/2019<br>10/7/2019<br>10/16/2019<br>10/21/2019<br>10/29/2019<br>11/4/2019<br>11/12/2019<br>11/12/2019<br>11/25/2019<br>12/3/2019<br>12/10/2019<br>12/18/2019<br><b>Total Positive</b> : | $ \begin{bmatrix} 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$ | L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L |
|--|---|---|---|
| Pemberton Plateau,<br>Pemberton                                      | 1/2/2019<br>1/7/2019<br>1/14/2019<br>1/21/2019<br>1/29/2019<br>Total Positive :   | L1<br>L1<br>L1<br><u>L1</u><br><b>0</b>                           | L1<br>L1<br>L1<br><u>L1</u><br><b>0</b>   |
| <u>Ad hoc /</u><br>miscellaneous site,<br>Pemberton                  | 6/10/2019<br>11/4/2019<br><b>Total Positive</b> :   | L1<br><u>L1</u><br>0  | L1<br><u>L1</u><br>0  |
| Pemberton Health<br>Center, 1403<br>Portage Road,<br>Pemberton, B.C. | 1/2/2019  | L1  | L1  |

| 1/7/2019<br>1/14/2019<br>1/21/2019<br>2/4/2019<br>2/19/2019<br>2/25/2019<br>3/4/2019<br>3/11/2019<br>3/18/2019<br>4/1/2019<br>4/1/2019<br>4/2019<br>4/29/2019<br>5/7/2019<br>5/7/2019<br>5/21/2019<br>5/28/2019<br>6/3/2019<br>6/3/2019<br>6/17/2019<br>6/24/2019<br>7/2/2019<br>7/2/2019<br>7/9/2019<br>7/23/2019<br>7/23/2019 | L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L | L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L1<br>L |
|---|---|---|
| 7/29/2019   | L1  | L1  |
| 8/6/2019<br>8/12/2019   | L1<br>L1  | L1<br>L1  |
| 8/20/2019   | L1  | L1  |
| 8/26/2019   | L1  | L1  |
| 9/3/2019  | L1  | L1  |
| 9/9/2019<br>9/16/2019   | L1<br>L1  | L1<br>L1  |
| 9/23/2019   | LI<br>L1  | LI<br>L1  |
| 9/30/2019   | L1  | L1  |
| 10/7/2019   | L1  | L1  |
| 10/15/2019  | L1  | L1  |
| 10/21/2019  | L1  | L1  |
| 10/29/2019  | L1  | L1  |
| 11/4/2019<br>11/12/2019   | L1<br>L1  | L1<br>L1  |
| 11/18/2019  | L1<br>L1  | L1  |
| 11/25/2019  | L1  | L1  |
| 12/3/2019   | L1  | L1  |
| 12/10/2019  | L1  | L1  |
| 12/18/2019  | <u>L1</u>   | <u>L1</u>   |
| Total Positive :  | 0   | 0   |
|   |   |   |

| Village Office, 7410<br>Prospect |          |    |    |
|----------------------------------|----------|----|----|
|                                  | 1/2/2019 | L1 | L1 |
|                                  | 1/7/2019 | L1 | L1 |

| 1/14/2019        | L1        | L1        |
|------------------|-----------|-----------|
|                  |           |           |
| 1/21/2019        | L1        | L1        |
| 1/29/2019        | L1        | L1        |
| 2/4/2019         | L1        | L1        |
| 2/11/2019        | L1        | L1        |
| 2/19/2019        | L1        | L1        |
|                  |           |           |
| 2/25/2019        | L1        | L1        |
| 3/4/2019         | L1        | L1        |
| 3/11/2019        | L1        | L1        |
| 3/18/2019        | L1        | L1        |
| 3/25/2019        | L1        | L1        |
|                  | L1        |           |
| 4/1/2019         |           | L1        |
| 4/8/2019         | L1        | L1        |
| 4/15/2019        | L1        | L1        |
| 4/24/2019        | L1        | L1        |
| 4/29/2019        | L1        | L1        |
| 5/6/2019         | L1        | L1        |
|                  |           |           |
| 5/13/2019        | L1        | L1        |
| 5/21/2019        | L1        | L1        |
| 5/28/2019        | L1        | L1        |
| 6/3/2019         | L1        | L1        |
| 6/11/2019        | L1        | L1        |
| 6/17/2019        | L1        | L1        |
| 6/24/2019        | L1        | L1        |
|                  |           |           |
| 7/2/2019         | L1        | L1        |
| 7/9/2019         | L1        | L1        |
| 7/15/2019        | L1        | L1        |
| 7/23/2019        | L1        | L1        |
| 7/29/2019        | L1        | L1        |
| 8/6/2019         | L1        | L1        |
| 8/12/2019        | L1        | L1        |
|                  |           |           |
| 8/20/2019        | L1        | L1        |
| 8/26/2019        | L1        | L1        |
| 9/3/2019         | L1        | L1        |
| 9/9/2019         | L1        | L1        |
| 9/16/2019        | L1        | L1        |
| 9/23/2019        | L1        | L1        |
| 9/30/2019        | L1        | L1        |
|                  |           |           |
| 10/7/2019        | L1        | L1        |
| 10/15/2019       | L1        | L1        |
| 10/21/2019       | L1        | L1        |
| 10/29/2019       | L1        | L1        |
| 11/4/2019        | L1        | L1        |
| 11/12/2019       | L1        | L1        |
| 11/18/2019       | L1        | L1        |
|                  | L1        | L1        |
| 11/25/2019       |           |           |
| 12/3/2019        | L1        | L1        |
| 12/10/2019       | L1        | L1        |
| 12/18/2019       | <u>L1</u> | <u>L1</u> |
| Total Positive : | 0         | 0         |
|                  |           | -         |

Pemberton Ridge Pumphouse, Pemberton

| 2/4/2019         | L1        | L1        |  |
|------------------|-----------|-----------|--|
| 2/11/2019        | L1        | L1        |  |
| 2/19/2019        | L1        | L1        |  |
| 2/25/2019        | L1        | L1        |  |
| 3/4/2019         | L1        | L1        |  |
| 3/11/2019        | L1        | L1        |  |
| 3/18/2019        | L1        | L1        |  |
| 3/25/2019        | L1        | L1        |  |
| 4/1/2019         | L1        | L1        |  |
| 4/15/2019        | L1        | L1        |  |
| 4/24/2019        | L1        | L1        |  |
| 4/29/2019        | L1        | L1        |  |
| 5/7/2019         | L1        | L1        |  |
| 5/13/2019        | L1        | L1        |  |
| 5/21/2019        | L1        | L1        |  |
| 5/28/2019        | L1        | L1        |  |
| 6/3/2019         | L1        | L1        |  |
| 6/11/2019        | L1        | L1        |  |
| 6/17/2019        | L1        | L1        |  |
| 6/24/2019        | L1        | L1        |  |
| 7/2/2019         | L1        | L1        |  |
| 7/9/2019         | L1        | L1        |  |
| 7/15/2019        | L1        | L1        |  |
| 7/23/2019        | L1        | L1        |  |
| 7/29/2019        | L1        | L1        |  |
| 8/6/2019         | L1        | L1        |  |
| 8/12/2019        | L1        | L1        |  |
| 8/20/2019        | L1        | L1        |  |
| 8/26/2019        | L1        | L1        |  |
| 9/3/2019         | L1        | L1        |  |
| 9/9/2019         | L1        | L1        |  |
| 9/16/2019        | L1        | L1        |  |
| 9/23/2019        | L1        | L1        |  |
| 9/30/2019        | L1        | L1        |  |
| 10/7/2019        | L1        | L1        |  |
| 10/15/2019       | L1        | L1        |  |
| 10/21/2019       | L1        | L1        |  |
| 10/29/2019       | L1        | L1        |  |
| 11/4/2019        | L1        | L1        |  |
| 11/12/2019       | L1        | L1        |  |
| 11/18/2019       | L1        | L1        |  |
| 11/25/2019       | L1        | L1        |  |
| 12/3/2019        | L1        | L1        |  |
| 12/10/2019       | L1        | L1        |  |
| 12/18/2019       | <u>L1</u> | <u>L1</u> |  |
| Total Positive : | 0         | 0         |  |
|                  | U         | U         |  |
|                  |           |           |  |

| Result Values:   | E - estimated                            | L - less than | G - greater than                                   |  |
|--|--|---------------|--|--|
| Samples that contain total<br>Samples that contain e. co<br>Samples that contain feca<br>Number of consecutive sa<br>contain total coliform:<br>Number of samples that c | oli: 0<br>I coliform: 0<br>Imples that 0 |               | 0.00% of total<br>0.00% of total<br>0.00% of total |  |

Comments:

Environmental Health Officer Jan 6 2020

FOR FURTHER INFORMATION PLEASE CALL: Dan Glover (604) 892-2293

#### Sample Range Report

Vancouver Coastal Health

| Facility Name: | Pemberton Industrial Park Water System                                |
|----------------|---|
| Date Range:    | Jan 1 2019 to Jan 1 2020  |
| Operator       | Jeff Westlake<br>Attn: Jeff Westlake Box 100<br>Pemberton, BC V0N 2L0 |

| Sampling Site  | Date Collected   | Total Coliform | E. Coli   | Fecal Coliform |
|--|------------------|----------------|-----------|----------------|
|  |                  |                |           |                |
| Yard Hydrant,  |                  |                |           |                |
| Pemberton Industrial   |                  |                |           |                |
| Park   |                  |                |           |                |
|  | 3/4/2019         | L1             | L1        |                |
|  | 3/11/2019        | L1             | L1        |                |
|  | 3/18/2019        | L1             | L1        |                |
|  | 3/25/2019        | L1             | L1        |                |
|  | 4/1/2019         | L1             | L1        |                |
|  | 4/8/2019         | L1             | L1        |                |
|  | 4/15/2019        | L1             | L1        |                |
|  | 4/24/2019        | L1             | L1        |                |
|  | 4/29/2019        | L1             | L1        |                |
|  | 5/7/2019         | L1             | L1        |                |
|  | 5/13/2019        | L1             | L1        |                |
|  | 5/21/2019        | 1              | L1        |                |
|  | 6/3/2019         | L1             | L1        |                |
|  | 8/26/2019        | L1             | L1        |                |
|  | 9/3/2019         | L1             | L1        |                |
|  | 9/9/2019         | L1             | L1        |                |
|  | 9/16/2019        | L1             | L1        |                |
|  | 9/23/2019        | L1             | L1        |                |
|  | 9/30/2019        | L1             | L1        |                |
|  | 10/7/2019        | L1             | L1        |                |
|  | 10/15/2019       | L1             | L1        |                |
|  | 10/21/2019       | L1             | L1        |                |
|  | 10/29/2019       | L1             | L1        |                |
|  | 11/4/2019        | L1             | L1        |                |
|  | 11/12/2019       | L1             | L1        |                |
|  | 11/18/2019       | L1             | L1        |                |
|  | 11/25/2019       | L1             | L1        |                |
|  | 12/3/2019        | L1             | L1        |                |
|  | 12/10/2019       | L1             | L1        |                |
|  | 12/18/2019       |                | <u>L1</u> |                |
|  | Total Positive : | <u>L1</u><br>1 | 0         |                |
|  |                  | I              | U         |                |
| <u>Sample Station at</u><br><u>Meter Chamber,</u><br>Pemberton Industrial<br><u>Park</u> |                  |                |           |                |
| <u>r an</u>  | 1/2/2019         | L1             | L1        |                |

|                                      | 1/7/2019                             |    | L1            | L1        |                  |  |
|--------------------------------------|--------------------------------------|----|---------------|-----------|------------------|--|
|                                      | 1/14/2019                            |    | L1            | L1        |                  |  |
|                                      | 1/21/2019                            |    | L1            | L1        |                  |  |
|                                      | 1/29/2019                            |    | L1            | L1        |                  |  |
|                                      | 2/4/2019                             |    | L1            | L1        |                  |  |
|                                      | 2/11/2019                            |    | L1            | L1        |                  |  |
|                                      | 2/19/2019                            |    | L1            | L1        |                  |  |
|                                      | 2/25/2019                            |    | L1            | L1        |                  |  |
|                                      | 5/28/2019                            |    | L1            | L1        |                  |  |
|                                      | 6/11/2019                            |    | L1            | L1        |                  |  |
|                                      | 6/17/2019                            |    | L1            | L1        |                  |  |
|                                      | 6/24/2019                            |    | L1            | L1        |                  |  |
|                                      | 7/2/2019                             |    | L1            | L1        |                  |  |
|                                      | 7/9/2019                             |    | L1            | L1        |                  |  |
|                                      | 7/15/2019                            |    | L1            | L1        |                  |  |
|                                      | 7/23/2019                            |    | L1            | L1        |                  |  |
|                                      | 7/29/2019                            |    | L1            | L1        |                  |  |
|                                      | 8/6/2019                             |    | L1            | L1        |                  |  |
|                                      | 8/12/2019                            |    | L1            | L1        |                  |  |
|                                      | 8/20/2019                            |    | <u>L1</u>     | <u>L1</u> |                  |  |
|                                      | Total Positive :                     | _  | 0             | 0         |                  |  |
| Result Values:                       | E - estimated                        | d  | L - less than |           | G - greater than |  |
| Samples that contai                  | n total coliform:                    | 1  |               |           | 1.96% of total   |  |
| Samples that contain e. coli:        |                                      | 0  |               |           | 0.00% of total   |  |
| Samples that contain fecal coliform: |                                      | 0  |               |           | 0.00% of total   |  |
| Number of consecutive samples that   |                                      | 0  |               |           |                  |  |
| contain total coliform:              |                                      |    |               |           |                  |  |
| Number of samples                    | Number of samples that contain total |    |               |           |                  |  |
| coliform in last 30 d                |                                      |    |               |           |                  |  |
| Total number of sar                  | nples:                               | 51 |               |           |                  |  |

#### Comments:

Environmental Health Officer Jan 6 2020

FOR FURTHER INFORMATION PLEASE CALL: Dan Glover (604) 892-2293

| From:    | Justin Penney  |
|----------|--|
| То:      | Amica Antonelli; Ted Craddock; Leah Noble; Ryan Zant; Mike Richman |
| Cc:      | Sheena Fraser; Lisa Pedrini  |
| Subject: | Zoning Bylaw - Parking; Prospect St. Expedition Station            |
| Date:    | Tuesday, June 16, 2020 10:39:34 AM                                 |

Dear Mayor and Council,

The residents and commercial property owners of 7450 Prospect Street (Expedition Station) would like to bring forward a concern about parking for the units.

It is understood that at the time of the development approval and construction, that Expedition Station zoned C-1 (Commercial, town center) were allocated one parking space per two and three bedroom units, plus the 0.25 spaces for visitor parking per unit. Commercial space parking was included with the visitor parking spaces along the back side of building phase 2 (this is the only nongarage parking included in the development).

The current Village Zoning Bylaw 832, 2018 Section 8 Parking, Section 8.3 Residential Vehicular Parking Requirements requires townhouses (two and three bedrooms) two parking spaces per dwelling, plus 0.25 spaces of visitor parking per dwelling. This does not include the spaces required for the commercial units on the ground level of 7450 Prospect, as stated in Section 8.4 Commercial Vehicular Parking Requirements. Residential units currently have 8 spots in building 1 (8 single space garages, units 1-8), and 18 spots in building 2 (9 double/tandem garages, units 9-17) for a total of 26. To meet the bylaw stated above the strata would require an additional 8 spots for a total of 34.

The residents and commercial property owners would like the parking for Expedition Station to be revisited, and look for a solution moving forward. The residents do not want to impose on the commercial vehicular parking, however would like the means to park a second vehicle at their residence.

A solution used in urban settings around Canada, as well as further down the street on Prospect (7423, 7425, etc.) is permit parking for residents. This solution would limit the on street parking by residents and still leave room for commercial users. Other viable solutions we feel are worth discussing is limiting the 2hr parking to business hours only, or granting full access to areas allocated for museum parking (with additions of parking curbs) as there is a large area of parking available (currently with restrictions) for a very low number of museum users.

Thank you,

**Expedition Station Council** 

Rya Letham

Pemberton BC V0N 2L1

June 24, 2020,

Mayor Mike Richman 7400 Prospect Street Pemberton, BC

Dear the Honourable Mayor Richman and whom it may concern,

Thank you for all the work you and your team have done and continue to do this year to support Pemberton in being a healthy community.

To my understanding, Pemberton does not (yet) have 5G cell towers installed. Is this correct? If so, I am writing to express that I do NOT give consent for the 5G frequencies to enter into my home. I am NOT in favour of 5G or towers of any kind emitting non-ionizing electromagnetic radiation installed close to my home or the local schools. I have been learning about the importance of reducing non-ionizing electromagnetic radiation or non-native EMF's, for the sustainable health of my children, my family and the rest of the community. My understanding is that 5G frequencies are particularly dangerous, as they are more powerful than current 3G, and can permeate through walls. I have also learned that the 5G waves do not travel as far, so more towers are needed to be installed close to houses, offices, schools ect, posing greater exposure to potentially harmful frequency in the community.

Page 1 of 2 Village of Pemberton Regular Council Meeting No. 1518 Tuesday, June 30, 2020 123 of 279 Please find an example of a study highlighting the potential dangers of living close to mobile phone based station here:

In an environmental epidemiological study commissioned by the Provincial Government of Styria, Austria, in the municipalities of Hausmannstatten and Vasoldberg, of 2543 participants, within a range of 1200 meters from a emitting tower, persons living within a 200 meter radius of a mobile phone base station had a significantly increased of cancer of the breast and brain compared to those persons living 200-1200 meters from the tower. In comparison to the reference category of power density exposure of radiofrequency emissions less than 10uW/m2 where the odds ratio of risk of cancer was 1 (i.e. no increased risk), exposure levels between100uW/m2 -1000uW/m2 increased the risk of all cancers to 3.4 times over the background population. The odds ratio for all cancers was 3.4 with the calculated probability or 'p value' of 0.008.

However, the cancer risk in the higher exposure range >1000uW/m2 was 23 times higher for breast cancer. The odds ratio being 22.5 and the calculated probability or 'p value' being 0.0007. The risk of brain tumours at >1000uW/m2 was 121 times higher with an OR of 121.1 (p value 0.001). (Oberfelt 2008).

https://emrlegaleducation.com/legal-education-documents/

Thank you for taking the time to read this letter and in keeping Pemberton a "5G free" community. I encourage you to continue to do your own research on the potential health dangers of 5G.

Sincerely,

Rya Letham and Polek Rybczynski

Page 2 of 2 Village of Pemberton Regular Council Meeting No. 1518 Tuesday, June 30, 2020 124 of 279



625 Howe Street, Suite 1430 Vancouver, British Columbia V6C 2T6

June 19, 2020

#### Subject: Showing your support for small business recovery by promoting #SmallBusinessEveryDay

Dear Mayor and Council,

On behalf of small and medium-sized businesses across Canada including those in British Columbia, the Canadian Federation of Independent Business (CFIB) is asking all politicians to show their support for small businesses by promoting our new *Small Business Every Day* campaign.

This campaign encourages shopping local as businesses look to recover from COVID-19 closures and adapt to new social distancing requirements. It also amplifies other great campaigns and initiatives to support small businesses from other businesses and movements by profiling them all on one spot making them easy to access for both businesses and consumers. We want to encourage a big parade of initiatives that support Main Street throughout the year and strengthen economic recovery.

A parade of campaigns to promote local shopping is desperately needed and, our survey results show a shop local campaign is highly supported by small businesses as seven out of ten worry their customers won't come back.

How can you help?

- Starting June 25 please use your social media to encourage and challenge your followers to shop local.
- Post pictures and recommend your favourite local businesses on Twitter, Facebook and Instagram using the hashtag #SmallBusinessEveryDay, and encourage everyone you know to do the same. (a bonus would be to also tag @CFIBBuzz on Twitter and @cfib\_fcei on Instagram).
- Print, display and help distribute our thank you posters (see below)

To support your local businesses even more, we encourage you to print, display and distribute copies of our posters to your local businesses, which thank customers for shopping local. You can download the posters at <u>http://www.smallbusinesseveryday.ca/business/#poster</u>. It would be great if you could put one up in your constituency office.

The campaign will run until the end of December and we look forward to providing more updates as we promote different aspects of the campaign throughout the summer and fall. Our goal is to have every politician in Canada show their support and help us amplify the importance of small businesses to our local communities. We hope we can count on your support. If you or anyone on your team would like to discuss this campaign, please don't hesitate to contact us at 604-684-5325 or by email at <u>ms.bc@cfib.ca</u>.

Sincerely,

Nama Jours

Laura Jones Executive Vice President

Stonard

Samantha Howard Senior Director of B.C.

Village of Pemberton - Website Submission: Write to Mayor & Council - pemberton.ca

# Website Submission: Write to Mayor & Council - pemberton.ca

### Form Submission Info

First Name: Dudley Last Name: Coulter

\_\_\_\_\_

Street Address:

PO Box:

Town/City: Vernon

Province: BC

Postal Code:

Phone Number:

Email:

Please attach any related documents (if applicable):

BC+CRAFT+FARMERS+CO-OP+-

+Economic+Development+and+Job+Creation+Proposal+-2020.pdf

Message to Mayor & Council: To his Worship, Mike Richman, and Council:

I hope your community is doing well and staying healthy.

I am contacting you on behalf of the BC Craft Farmers Co-Op (BCCFC), further to previous information sent by my colleague, Megan, last summer.

As you may know, since incorporation on 04.20.20, BCCFC has been busy working on a proposal that has been submitted to the provincial and federal governments that will help with B.C.'s economic recovery post-COVID-19.

The proposal, Creating Opportunity for BC's Craft Cannabis Sector and Supporting the Economic Recovery, was distributed to the Prime Minister and Premier last week. In addition to responding to the economic crisis created by COVID-19, this proposal strives to achieve the original public interest goals of Canada's Cannabis Act, particularly related to the diversion of profit from the illicit market and the creation of a diverse sector where small farmers can succeed.

Unfortunately, these goals are not being achieved. Of the 1,200,000 million+ square meters of legal indoor and outdoor cannabis cultivation space approved by Health Canada across the country over the past two years, craft cannabis farmers account for less than 1%. Nowhere in Canada is this more important than in B.C. With a well-established international cannabis brand and thousands of craft farmers already established in the medical cannabis system, B.C. has the most to lose if these small enterprises continue to be excluded.

Transitioning just 30% of the 6,000+ B.C. micro-farmers already approved to produce medical cannabis into the legal market, as proposed, will create thousands of B.C. jobs this summer, divert millions from the illicit market and generate hundreds of millions of dollars in new revenue for all levels of government.

In short, the attached proposal has two parts. Part One is focused exclusively on regulatory innovation within Health Canada starting this summer. Part Two proposes a federal/provincial partnership based on existing models that will support craft farmers through the transition with a series of modest, strategic investments over the next two years. In addition to providing a significant return on investment for taxpayers, the project will help keep B.C. an international cannabis headquarters.

As part of the proposal, the Project Advisory Committee will include a representative from the Union of BC Municipalities and dedicate resources to rapidly engage local governments. A micro-credit program will also be implemented to help transition craft farmers and respond to municipal requests.

We have been meeting with B.C. MPs, MLAs and relevant Ministers over the past two weeks to review this made-in-B.C. opportunity. We have been well-received by all parties so far.

We hope you will have a moment to review the proposal attached.

Please share with your team as needed. We welcome your feedback and an

opportunity to answer any questions you may have. We would be happy to schedule a phone call to discuss our work further with you, please let me know if you would like to meet in the coming weeks.

Best regards,

Dudley Coulter BCCFC

Village of Pemberton



BC CRAFT FARMERS CO-OP BC ECONOMIC DEVELOPMENT AND JOB CREATION PROPOSAL

## Creating Opportunity for BC's Craft Cannabis Sector and Supporting the Economic Recovery

May 2020

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#### BC CRAFT FARMERS CO-OP BC ECONOMIC DEVELOPMENT AND JOB CREATION PROPOSAL

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#### Contact BC Craft Farmers Co-Op

e. info@bccraftfarmerscoop.com | w. bccraftfarmerscoop.com



### Introduction

Canada's *Cannabis Act* includes a regulatory approach designed to allow for a range of large and small producers and processors within a competitive industry. Despite this goal, tens of thousands of these Canadians have been unable to enter the legal market.

As the Canadian province with the largest number of craft cannabis farmers, not-to-mention a well-recognized international brand, BC has the most to lose if these innovators are not provided with an opportunity to fully apply their skills and experience.

To address the low number of license applications, Canada invited the sector to provide constructive solutions to increase participation prior to the current pandemic. In response, the newly incorporated BC Craft Farmers Co-Op (BCCFC) assembled a team of sector leaders and government professionals to propose constructive solutions. Since then, BCCFC has developed a two-part pilot project that:

- Promotes the public interest
- Achieves the Cannabis Act's original intent
- Builds on cannabis' recent elevation to essential status
- Supports BC's post-COVID economic recovery



#### BC CRAFT FARMERS CO-OP

Incorporated under the BC Cooperatives Act, the BC Craft Farmers Coop (BCCFC) has been established to:

- provide BC micro-farmers and processors with a safe, accessible and sustainable alternative to the illicit market
- help maintain BC's top position as an international cannabis leader and innovator
- provide medical and recreational cannabis consumers around the world with the highest quality BC cannabis

Activities of the Co-Op are governed by a Memorandum of Association (MoA), 30+ page set of Rules and Board of Founding Members that includes well-established BC micro-cultivators, processors, independent retailers and advisors. BCCFC rules and MoA are available at <u>www.bccraftfarmerscoop.</u> <u>com</u>. See *Appendix A* for membership overview.

BCCFC is guided by international Co-Op Principles (*Appendix B*) and a Code of Conduct (*Appendix D*) that establishes a reliable standard of ethics community partners can rely on.



### **Project Overview**

| MISSION     | • Achieve goals of the Cannabis Act.   |
|-------------|--|
|             | Empower BC micro-farmers and processors by providing a safe, accessible alternative  |
|             | to the illicit market.   |
|             | • Revitalize the BC and Canadian economy in the aftermath of COVID 19.   |
|             |  |
| GOALS       | <ol> <li>Rapidly transition thousands of BC's globally-recognized medicinal craft farmers and processors<br/>to the legal recreation cannabis market.</li> </ol> |
|             | 2. Create thousands of sustainable jobs in all regions of BC.  |
|             | 3. Shift profit from the illicit market.   |
|             | 4. Promote public health and effective product safety testing.   |
|             | 5. Leverage BC's craft cannabis sector as a platform to achieve shared public goals related to   |
|             | innovation, environmental stewardship, diversity, food security, economic development,   |
|             | small and medium sized business, regenerative farming, sustainable agriculture and employment training.  |
|             | 6. Deliver the highest quality craft cannabis to medical and recreational consumers in BC, across  |
|             | Canada and around the world.   |
|             | 7. Effectively engage community leaders, federal, provincial, Indigenous and municipal   |
|             | governments to support community and economic development.   |
|             | 8. Foster public health research collaborations with BC universities, colleges and other organizations.  |
|             | 9. Secure access to investment capital and government support available to other sectors.  |
|             | 10. Advance international co-op principles and business model.   |
| DESCRIPTION | The project features <b>two parts</b> that reflect priorities identified by BC craft farmers, processors,  |
|             | retailers, public officials and community leaders over the past year:  |
|             | Part One: Regulatory Innovation  |
|             | Part Two: Business Development Partnership   |
|             | Craft cannabis farmers will seamlessly comply with physical distancing and PPE requirements  |
|             | associated with current public health orders. Some say the decades long cannabis prohibition has   |
|             | forced them to physically distance for generations.  |
|             | By definition, the jobs associated with this project can be described as "shovel-ready". All   |
|             | governments need to do is let these people grow.   |
|             |  |

### Background

#### ENVIRONMENT SCAN

#### 2015

The federal government's Task Force on cannabis legalization concluded there were several advantages in the early period of the policy's implementation to encourage market diversity. They recommended farming controls to create space for craft cannabis farming and prevent the development of monopolies or large conglomerates.

#### 2018

Health Canada agreed and established a category of micro-scale cannabis licences to facilitate the participation of small growers and processors in the legal industry. To be effective, Health Canada acknowledged the regime must be able to support a viable small business.

#### 2019

Canada's Premiers call on the federal government to address cannabis supply challenges by attracting more farmers to legal market. In a year-end interview, BC Premier Horgan expressed concerns about the inability of BC's craft cannabis farmers to transition into the legal marketplace.

"I (thought) we're going to fly through this, because we're all about the weed in BC...We had such a well-established grey market, as well as an historic black market, that it's been really tough to break through those cycles and get the new consumers onto a path that's legal and safe and all of the things that you want to see."

- BC Premier John Horgan, Globe and Mail, January 6, 2020

#### 2020

In February, Health Canada confirmed only 25 microcultivator licences have been approved in Canada since the application process was launched 1.5 years ago.

"As a proportion of the 1,211,615 square meters of indoor cultivation space approved by Health Canada as of January 31, 2020, micro-cultivation accounted for a whopping 0.41%. Add the 180 hectares of licensed outdoor cultivation space to the total and the microcultivation share falls to a barely noticeable 0.17%." - Jameson Berkow, The Rise, March 16, 2020

#### 2020

The COVID 19 pandemic strikes Canada. Cannabis retail sales are determined to be an essential service in BC.

Canada announced a Business Credit Availability Program (BCAP) to provide \$10 billion in liquidity to Canadian companies through existing agencies (EDC, BDC). BDC stated cannabis companies were not eligible to apply.

Farm Credit Canada said their financing programs are open to cannabis businesses. While these measures are targeted to small farmers, it excludes non-licensed producers and those who do not have three quarters of positive cash flow.

The Government of Canada established a \$962 million Regional Relief and Recovery Fund to help small businesses facing financial pressure. \$307 million has been set aside for Western Canada.



#### 2020

The COVID 19 pandemic causes significant damage to the BC and Canadian economy.

"Almost 90% of BC small businesses are already reporting some hit"

- Vancouver Sun, March 19

"Prime Minister Trudeau said Monday the federal government will implement new measures for farmers and agriculture businesses, including \$5 billion designed to extend the lending capacity for farmers facing cash flow issues due to the corona virus" - Globe and Mail, March 24

*"Jobless claims soar to nearly one million" - Globe and Mail*, March 25, 2020

*"500,000 jobs on the line as pandemic plunders BC economy" - Vancouver Sun*, March 28

"The BC Business Council released its full economic projections Friday, which estimate an unprecedented decline of between 7 and 12% in BC's GDP in 2020 due to the COVID-19 outbreak" - Province Newspaper, March 29

"Canada's largest banks approved more than \$5 billion in no-interest loans to small businesses in the first five days of an emergency program, but many small-business owners say they won't qualify because of restrictions around payroll criteria"

- Globe and Mail, April 15

"The global economy is expected to shrink by 3% during 2020 in a stunning coronavirus-driven collapse of activity that will mark the steepest downturn since the Great Depression of the 1930s, the International Monetary Fund said on Tuesday"

- Financial Post, April 15

"Shovel ready projects eyed for post-shutdown stimulus plan"

- Report on Business, April 16

*"BC first in Canada to allow cities to run deficits"* - *Globe and Mail,* April 17

"The federal government is adding \$250 million to help small and medium businesses commercialize their work as part of \$1.2 billion for entrepreneurs"

- Globe and Mail, April 18

*"Deficit on track to top \$252 billion. GDP could contract by 12%."* 

- National Post, May 1

"Ottawa unveils loan program for large corporations" - Globe and Mail, May 12



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#### ECONOMIC IMPACT

Transitioning just 30% of BC's 6,500+ Health Canadaapproved medicinal cannabis farmers into the recreation market with the current micro-cultivation and processing limitations, could result in over \$2.8 billion in direct economic impact and 24,000 direct and indirect job opportunities across BC over the next two years.

See Appendix D for economic impact analysis.

"Craft pot from BC grey market worth about \$3 billion. Freeing up segment and legitimizing it would have many benefits, analysis finds." - Vancouver Sun, June 27, 2019

Modest increases to micro-cultivation and processing limits nearly double this collective benefit to over \$5.5 billion and 40,000+ direct and indirect jobs.

These two scenarios, with conservative assumptions, would yield additional tax revenue for all levels of governments of \$400 million and \$800 million respectively over the next two years.

With on-going liberalization efforts world-wide, BC can leverage its position as a premier cannabis producer to build a large export industry. However, U.S. states and some countries are liberalizing cannabis regulations. The race is on for this premium market.

#### ADVOCACY

Good government policy and regulation can still result in a vibrant craft cannabis industry and an economic success story for BC post-COVID 19.

Integrating a portion of BC's 6,500+, Health Canadaapproved, micro medical farmers into the postprohibition marketplace will help achieve the public interest related to the illicit market.

Currently, BC's craft cannabis sector is not responding to Health Canada's regulatory and application process. In addition to being overly complicated, the current framework does not sustain a viable business. The plan has been implemented without reflecting regular feedback from expert farmers who have been serving the market for generations.

A reset is required for the sector to achieve the public interest goals of the *Cannabis Act* and the Canadian economy — particularly at this critical time.

Over the past months, the BC Craft Farmers Co-Op has developed a constructive set of actions for Canada to consider that will improve its regulatory framework this summer. These are identified in **Part One** of the project.

Earlier this year, BCCFC developed a constructive series of economic development and job creation opportunities to sustain BC's globally-recognized craft cannabis sector through the transition – and beyond (*Appendix E*). These form the basis for **Part Two** of this pilot-project.

### Part One: Regulatory Innovation

#### OVERVIEW

The federal recommendations in *Appendix E* will benefit craft farmers and provincial economies across Canada. Among other things, these suggestions include:

- immediately transition BC craft farmers registered in Health Canada's medical cannabis program to the recreation market — without compromising patient access
- an immediate doubling of micro-cultivation and micro-processing caps – from 2,100 sq. ft and 650kg to 4,200 square feet and 1,300kg
- setting a target for micro-licence approvals over the next 1-2 years — recognizing thousands are needed to meet demand and achieve a critical mass
- respect the skill of BC craft cannabis farmers and processors by effectively including them in a special Task Force to achieve targets and remove regulatory barriers

Part One of this project builds on these recommendations by proposing **two tracks** of regulatory innovation:

- Track One Rapidly transition thousands (30%) of Health Canadaapproved micro-medical cultivators across BC to the legal market on a temporary basis (12 months) and in time for the summer growing season.
- Track Two

Simultaneously reset micro-cultivation and processing regulations by the end of 2020 with a two-year licensing target.

To achieve this regulatory innovation, we are asking Canada to approach these suggestions with an open mind and recognize the current legal framework is not achieving the public interest.

| 6,000 - 6,500 | Micro-cannabis farmers in BC approved by Health Canada to produce medical cannabis.   |
|---------------|---|
| 25            | Micro-farmers and processors that have received Health Canada licences over the past 15 months (as of February 1, 2020).  |
| 0.17%         | Total share of all Health Canada-approved cannabis cultivation dedicated to micro-farmers as of February 1, 2020.   |
| 2.5-4         | Full-time equivalent (FTE) employees each BC craft famer and processor will create once licenced.   |
| 20,000+       | Direct and indirect jobs that can be created in BC over the next three years if just 30% of licenced medical cannabis famers transitioned to the legal market with the current production and processing caps.                  |
| 40,000+       | Direct and indirect jobs that can be created in BC over the next three years if just 30% of licenced medical cannabis famers transition to the legal market and current production and processing caps were modestly increased. |



#### BACKGROUND

In 2001, after using the Ministerial exemption provision in section 56 of the Controlled Drugs and Substances Act (CDSA), Canada created the Medical Marihuana Access Regulations (MMAR) to provide patients legal access to their product by growing it themselves or receiving it from a designated producer. Designated producers may charge for their services but only grow for two patients. No more than four licenses are allowed at any particular address.

In 2005, Canada introduced the Marihuana Medical Purposes Regulations (MMPR) which attempted to remove personal and designated production classifications in favour of more large producers. This led to a federal court challenge that temporarily grandfathered MMAR patients and previously approved permit-holders by interim-injunction on March 21, 2014 pending trial.

On February 24, 2016, the Federal Court of Canada ruled the licenses of medically approved patients with a valid authorization to possess as of March 21, 2014, and valid personal production or designated production license on September 30, 2013, under the MMAR pursuant to the CDSA, would remain valid under the final decision in Allard v. Canada 2016 — despite the repeal of the MMAR. The injunction remains in effect.

On August 24, 2016, the federal government introduced a new medical cannabis regime with the Access to Cannabis for Medical Purposes Regulations (ACMPR) under the CDSA that on October 17, 2018 became Part 14 of the *Cannabis Act* regulations. Those grandfathered by Allard can transition into a registration under the ACMPR Part 14 of the *Cannabis Act* regulations. They are encouraged to. While their MMAR certificate remains valid until the court orders otherwise, those farmers who transition will not only hold a current ACMPR registration permit to facilitate proof of being legal under the *Cannabis Act* but are also eligible to apply for, and be governed by, any Ministerial exemption under the Act that are not available to modify an MMAR permit.

A similar process to the MMAR and ACMPR is continued under the ACMPR that now forms Part 14 of the *Cannabis Act* regulations that received Royal Assent in June 2018. Under these regulations, medical producers, whether personal or designated grower, are required to comply with local bylaws (such as those related to fire and electrical safety, water contamination, odor, light, etc) and must not cause a nuisance to their neighbours. They are also required to destroy any excess product and prohibited from selling any extra cannabis into the legal market.

Section 140 of the *Cannabis Act* authorizes the Minister of Health, on any terms and conditions necessary, by order to exempt any person or class of persons from the application of the Act and regulations if the exemption is necessary for a medical or scientific purpose or is otherwise in the public interest.

#### SYNOPSIS

Since 2001, tens-of thousands of Canadians have produced medical cannabis for themselves or medically approved patients without any apparent negative consequences to consumers. To the best of our knowledge, no patient has suffered an illness or disease from the medicinal cannabis they have produced for themselves or their designated patients over the last 20 years.

The Government of Canada has a record of the personal details of all of these citizens on file.

Each small producer must renew their license annually. While there was originally a challenge having product tested in professional labs, all responsible medical cannabis farmers and processors want to have their product tested effectively prior to any public consumption.

With the exception of a limited number of outdoor cultivators who own their own land, the current regulatory framework requires the vast majority microproducers to make significant capital investment with little to no promise of any return. Reports estimate these micro-cultivators and processors require \$200,000 to over \$1 million just to be considered eligible.

This challenge is more complex because, despite cannabis' new-found essential status, financial institutions are still refusing traditional banking services to these small enterprises.

The *Cannabis Act*'s approach towards security clearance requirements also inhibit the ability of anyone to become a micro-cannabis producer or processor.

The current approach is based on an underlying belief that anyone whose name just shows up in a government database associated to any involvement with cannabis (convicted or not) or with others that may have similar data records will not be allowed to participate in this industry — whether or not they have a criminal record for any cannabis offense.

Supposedly, this security clearance result raises a suspicion to someone, somewhere, that the applicant may divert product into the illicit market, despite product tracking and license conditions. This is unfair, counter to the policy's original intent and excluding expert farmers.

The bottom line is that all Health Canada approved medical cannabis producers and processors are required to provide some level of security information as set out in the ACMPR Part 14 of the Cannabis regulations. Many have been approved since 2001 under the MMAR. By their demonstrated compliance with their licenses over this significant period of time, they should be exempted from any more restrictive requirements, with it being clear that any breach of their license condition will result potential cancellation.



#### ACTION ITEMS

- 1. Recognize the public interest, as part of Canada's post COVID 19 economic recovery, in transitioning a significant portion of BC's 6,500+ Health Canada approved medical producers to the legal marketplace on a temporary basis (12 months). In addition to diverting profit from the illicit market, this action will capture employment and economic opportunities associated with the full legalization of BC's globally recognized craft cannabis sector this year.
- 2. In association with the pending growing season, the Minister of Health exercise her power under s. 140 of the Cannabis Act to designate all personal and designated medical producers that make application and who are otherwise in compliance with Part 14 of the Cannabis Act regulations, as a "craft class" of micro-cultivator and processor under the Act. This Order would be in effect for a trial period of one year and authorize this designated craft class to increase their individual production or processing capacity by up to 2,100 sq. ft. or 650kg at their existing location if feasible, or at another locally approved, designated location. The 12-month Order will allow this designated craft class to sell any product in excess of their existing licence to registered medical patients or general recreation market, subject to existing government regulations related to:
  - a. Local government support and by-law compliance
  - b. No additional rules above existing security clearance standards and requests for such applications to maintain compliance with these existing requirements

- c. Apply Section 10 of the *Cannabis Act* related to bringing the applicant's seeds and genetics into the new market
- d. Compliance with all requirements related to CRA registration, product tracking and safety testing
- 3. To support this action, implement the community engagement, micro-credit and other program elements described in Part Two of the project.
- 4.Simultaneous to these actions, establish a Task Force of craft cannabis sector leaders this summer to reset federal micro-production and processing regulations by the end of 2020. Among other things, the Task Force should:
  - a. establish one and two year targets for micro-processing and production licenses
  - b. double restrictive micro-production and processing caps
  - c. streamline regulations to achieve targets, protect public health and safety
  - d. strongly consider adopting the successful California model for product testing that can enable more local and organic craft farmers to enter the legal recreation market without compromising consumer health
  - e. consider extending micro-credit program in part Two and other federal-provincial programs to new and previous applicants



### Part Two: Economic Development Partnership

#### INTRODUCTION

Whereas Part One of the project is focused on the rapid transition of micro-medical farmers into the legal market this summer, Part Two is about sustaining BC's globally recognized craft cannabis sector through the transition and supporting the province's economic recovery post COVID-19.

The BC Craft Farmers Co-Op's previous recommendations included an emphasis on job creation, economic development and elimination of the illicit market. Among other things, they included:

- financial support for local BC governments interested in creating innovative and environmentally-friendly land-use solutions for craft farmers and processors
- establishment of an economic partnership agreement with the BC government to help craft farmers transition to the new market and create thousands of jobs in all regions of BC

- creation of financing opportunities through existing federal agencies, financial institutions and market investors
- updating Agriculture and Environment Canada programs to promote sustainable regenerative farming innovation in BC's craft cannabis sector

In addition to reflecting these recommendations, Part Two of this made-in-BC economic development partnership builds on cannabis' newly established essential status by focusing on five elements:

- Governance
- Innovation
- Investment and Capacity Building
- Community Engagement
- Research

CO-OP 101 BC Co-Ops are...

- Legally incorporated and transparent businesses, owned and operated by and for members based on established values.
- A viable business model for people to collaborate and achieve common goals by pooling policy clout, purchasing power and marketing strength.
- Governed by the *BC Cooperatives Act*.

- Operated with the understanding all members have an equal say in the business and share in the profits.
- Governed with the principle that members are each entitled to one vote, regardless of the number of shares they own.
- Able to issue investor shares to members and non-members.



#### GOVERNANCE

Funded by senior governments through a one-year contribution agreement with the BC Craft Farmers Co-Op, the project will be led by an inclusive Project Advisory Group:

**Project Advisory Group Members** 

- Government of Canada Representative TBC
- Government of Canada Representative TBC
- Province of BC Representative TBC
- Province of BC Representative TBC
- BC Craft Farmers Co-Op (Micro-Cultivator)
- BC Craft Farmers Co-Op (Micro-Processor)
- BC Craft Farmers Co-Op (Independent Retailer)
- BC Craft Farmers Co-Op (Advisor)
- BC Medical Cannabis Patient TBC
- Union of BC Municipalities

The Project Advisory Group will receive significant in-kind support from the BC Craft Farmers Co-Op and recruit a Leadership Team to achieve the project goals. Among other things, the Leadership Team will:

- develop and implement a work plan approved by the Project Advisory Group
- allocate resources to implement deliverables described throughout Part Two
- initiate proactive stakeholder engagement in all elements of the project
- maintain comprehensive public reporting and accountability provisions

See Work Plan section for an overview of the Leadership Team roles, organization structure and proposed budget.

Some programs described in Part Two can be administered through existing federal and provincial initiatives and tailored to the unique nature of the craft cannabis sector in BC's post-COVID 19 economy.

At the conclusion of the project next summer, there is an expectation BC's craft cannabis sector will be wellestablished and able to sustain a more limited financial partnership with government partners focused on promoting the public interest and project mission.

The project may be replicated in other provinces, facilitating the creation of tens-of-thousand more direct and indirect jobs across Canada at a critical time. The BC Craft Farmers Co-Op is willing to share our experience with other jurisdictions.



#### INVESTMENT AND CAPACITY BUILDING

To sustain the BC craft cannabis sector's international brand and competitiveness, the Project Advisory Group will establish five working groups to focus strategic investments, strengthen the capacity of farmers, processors, retailers, their staff, vendors and contractors.

The Leadership Team will collaborate with each working group to organize on-line consultation, communication, public education and programming opportunities with sector leaders, vendors and community partners across the province.

| WORKING GROUP                               | MANDATE  |
|---|--|
| Indigenous<br>Collaboration                 | Partnership development and programming with BC communities in the spirit of Reconciliation to promote active participation by all   |
| Women<br>Entrepreneurs                      | Partnerships and programs development that actively promotes the inclusion and leadership of women entrepreneurs across BC   |
| Access to<br>Capital                        | <ul> <li>To support the regulatory innovation proposed in Part One, establish a micro-credit program for micro-farmers and processors that includes:</li> <li>Access to maximum of \$95,000 in capital to facilitate successful transition, respond to municipal requests, achieve product quality and safety standards.</li> <li>Flexible repayment terms based on current initiatives for other sectors, profitability, job generation, community support and participation in programs identified in Part Two.</li> </ul>   |
| Small and<br>Medium-sized<br>Business       | Leverage and align existing federal, provincial and local resources for small and medium sized businesses in collaboration with local organizations that promote small businesses and farmers across BC  |
| Training and<br>Professional<br>Development | Agreements with BC colleges and training organizations to develop quality assurance programs<br>for employers, their staff, vendors and contractors in a variety of relevant areas including:<br>• product testing and quality compliance<br>• organization and human resources<br>• occupational health and safety<br>• environmental stewardship<br>• intellectual property<br>• legal affairs, accounting and audits<br>With this working group, the Leadership Team will create a Product Testing Advisory Group that<br>can propose safe improvements to current protocols based on successful and more inclusive<br>testing models in other North America jurisdictions. |



#### INNOVATION

With Part One focused on regulatory innovation, the Project Advisory Group will establish an Innovation Council of government, education and technology leaders in Part Two. The Innovation council will focus on the six priorities. With project working groups, the Innovation Council will work to discover more efficient and environmentally-friendly ways of providing medical and recreational cannabis consumers around the world with a wide-range of high quality products.

#### **INNOVATION PRIORITIES**

| PRIORITY                           | DESCRIPTION   |
|------------------------------------|---|
| Processing and<br>Testing Capacity | With the potential for thousands of craft farmers entering the legal market, access to reliable processing and product testing facilities will be required. The BC Craft Farmers Co-op and Project Advisory Group will prepare a feasibility review of the opportunity to establish a provincial processor and lab testing network as a social enterprise with craft farmers and established BC processors. |
| Environmental<br>Protection        | Expand access to innovative, alternative power supplies that reduce emissions, power consumption and overall environmental impact in collaboration with municipalities, Indigenous communities and established utilities.   |
| Agriculture                        | Promote adoption of more sustainable irrigation systems, regenerative farming practices and pilot projects with the province that provides craft cannabis farmers with more direct sales access to consumers and adopts successful certification programs related to land use, ecology and soil education.  |
| Alternative<br>Products            | Create platforms, processes and dosage testing methods that ensure micro-processors have fair access the rapidly growing marketplace for cannabis edibles, derivatives and topicals — with a special emphasis on medical access.  |
| Tourism and<br>Trade               | Apply best practices of BC's wineries and craft breweries related to destination tourism.<br>Collaborate with provincial and federal agencies to maximize inter-provincial trade and export<br>development opportunities for BC craft cannabis products.  |
| Technology and<br>Agritech         | Developing a wide range of agriculture technology solutions and programming to constantly improve the sector's efficiency, quality control and safety testing.  |



#### COMMUNITY ENGAGEMENT

The Project Advisory Committee will include a representative from the Union of BC Municipalities and dedicate resources to rapidly engage local governments.

Representatives from municipal, regional and Indigenous governments will be included in project working groups to leverage existing resources, reduce duplication and promote shared goals. Among others things, this outreach will focus on:

- municipalities and governments that wish to welcome craft cannabis production and processing in their jurisdictions
- regional/local economic development agencies, universities and colleges
- business, agriculture and community organizations
- credit unions and financial institutions
- provincial and federal economic development agencies
- small producers licensed by Health Canada to produce cannabis for medical purposes who are interested in transitioning to the legal marketplace
- elected officials

To support this outreach, Canada and British Columbia should provide community infrastructure and economic development grants of up to \$95,000 for local and Indigenous governments in BC that want to create innovative and environmentally-friendly land-use solutions with craft farmers and processors. The program mechanism can be based on previous provincial partnership agreements.

This summer, BC can also accelerate revenue sharing arrangements with local governments, particularly since the regulatory innovations proposed in Part One will divert millions of dollars from the illicit market, increase legal retail sales and result in more tax revenue to share.

### RESEARCH

The history of British Columbia's craft cannabis sector is rooted in compassion and medical access. Pursuing research collaborations with our province's globally recognized research universities provides an opportunity to expand medical access where appropriate and help address public questions about the health impacts of cannabis use — positive and negative.

The BC Craft Farmers Co-Op will include medical patients in the Project Advisory Group and recruit a Research Director to develop a strategy with BC universities focused on:

- Genomic analysis of cannabis, various strains and their unique effects
- Population health impact of cannabis use on different groups (youth, elderly, pregnant women, those with addictive personality, etc.)
- General community impacts positive and negative
- Impact of different delivery vectors (inhaling, vaping, ingestion)
- Impact of terroir on terpene and cannabinoid development
- Harm reduction strategies
- Inebriation detection

In collaboration the Innovation Council and project working groups, the Research Director will present a comprehensive program funding proposal based on existing models for the Project Advisory Committee to review and approve.



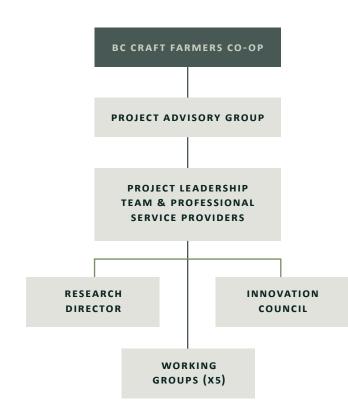
# Work Plan

### INTRODUCTION

The work plan provides a summary of the Leadership Team's proposed activities, structure and investment priorities. This overview has three elements:

- Operations
- Key Deliverables
- Budget

### **PROJECT ORGANIZATION CHART**



#### **OPERATIONS: LEADERSHIP TEAM**

The Leadership Team of 4.8 FTE will work under the direction of the Project Advisory Group to:

- develop a work plan
- allocate resources to implement deliverables described throughout Part Two
- initiate proactive stakeholder engagement in all elements of the project
- maintain comprehensive public reporting and accountability provisions

The Leadership Team will recruit service providers and professionals as needed to coordinate:

- Training Development
- Public Education
- Indigenous Partnership Development
- Legal Affairs
- Accounting and Audit
- IT, Database, Privacy Protection
- Web-Site and Digital Platforms
- Special Events

The Project Director will immediately recruit Research Director candidates for the Project Advisory Group's review. This director will lead the project's research agenda proposed on page 15 and Co-Chair the project's Innovation Council.

| The Leadership Team | members will operate virtu | ually to reduce overhead and include: |
|---------------------|----------------------------|---------------------------------------|
|---------------------|----------------------------|---------------------------------------|

| MEMBER  | DESCRIPTION   |
|---|---|
| Project Director<br>(1 FTE)                           | <ul> <li>Oversee project's day to day operations; Act as the project spokesperson</li> <li>Liaison with Project Advisory Group, provincial and federal governments; Recruit<br/>Research Director candidates</li> <li>Ensure compliance with Agreement terms and other applicable statutes; maintain<br/>financial controls</li> <li>Prepare work plan and lead development of associated programs</li> <li>Recruit professional team; Manage contracted service providers</li> </ul> |
| Assistant<br>Director -<br>Public Affairs<br>(.8 FTE) | <ul> <li>Support Project Director (PD); Report to PD</li> <li>Recruit and manage all project working groups and Innovation Council</li> <li>Strategic stakeholder relations</li> <li>Manage contractors as required</li> </ul>  |
| Local<br>Government<br>Coordinator<br>(.8 FTE)        | <ul> <li>Proactive engagement with local and Indigenous governments</li> <li>Liaison with local micro-cultivators and processors</li> <li>Program development; Report to Assistant Director</li> <li>Special event planning; Outreach to local associations and co-ops</li> </ul>   |
| Communications<br>Coordinator<br>(.8 FTE)             | <ul> <li>Manage digital platforms; E-Newsletters; News Releases</li> <li>Media and community relations; Special events; Act as the project spokesperson</li> <li>Database management; Report to PD</li> </ul>   |
| Operations<br>Manager<br>(.7 FTE)                     | <ul> <li>IT system management; Report to PD</li> <li>Human resources; Payroll administration; Bookkeeping</li> <li>Manage professional services as required</li> </ul>  |
| Executive<br>Assistant<br>(.7 FTE)                    | <ul> <li>Manage internal communication systems; Correspondence</li> <li>Support Project Director (PD) and Assistant Director; Report to PD</li> <li>Manage professional services; Schedule regular team meetings</li> </ul>   |



## OPERATIONS: WORKING GROUPS AND

INNOVATION COUNCIL

The Project's Assistant Director for Public Affairs, with the support of contractors and other members of the Leadership Team, will activate each of the five working groups and the Innovation Council this summer to help develop, communicate and implement project programs and activities.

| WORKING GROUPS  | INNOVATION COUNCIL  |
|---|---|
| <ul> <li>8-12 members; Approved by Project Advisory<br/>Group (PAG)</li> <li>Meet once a month virtually with email</li> </ul>                      | <ul> <li>10-15 members; Approved by PAG</li> <li>Meet once a month virtually with email correspondence and on-line discussions</li> </ul>         |
| correspondence and on-line discussions in-between meetings  | <ul><li>in-between meetings</li><li>8-12 hour/month volunteer commitment</li></ul>  |
| <ul> <li>8-12 hour/month volunteer commitment</li> <li>Include medical patients</li> </ul>  | <ul><li>Co-Chaired by Research Director</li><li>Include medical patients</li></ul>  |
| <ul><li>Gender balanced</li><li>Indigenous participation</li></ul>  | <ul> <li>Gender balanced; Indigenous participation</li> <li>Include local government leaders</li> </ul>   |
| <ul> <li>Include local government representatives</li> <li>Include subject matter experts and regional<br/>economic development agencies</li> </ul> | <ul> <li>Include BC associations and subject matter experts<br/>(technology, investment, processing, agriculture,<br/>product testing)</li> </ul> |
| <ul> <li>Liaison with provincial and federal officials</li> <li>Conflict of interest and privacy policies</li> </ul>                                | <ul> <li>Include BC research universities and<br/>training colleges</li> <li>Include provincial and federal agencies</li> </ul>                   |
| <ul> <li>Inform Innovation Council</li> </ul>   | <ul> <li>Conflict of interest and privacy policies</li> <li>Receive Working Group feedback</li> </ul>   |



### **KEY DELIVERABLES**

The project identifies a set of 25 deliverables to achieve the project's mission, guide the Leadership Team, working committees and Innovation Council. This implementation plan describes these program elements, designates responsibilities and proposes a sequence of activities.

| NO. | DELIVERABLE   | PROJECT ELEMENT          | RESPONSIBLE  | TIMELINE  |
|-----|---|--------------------------|--|-----------|
| 1   | Proposed regulatory actions approved for implementation.  | Regulatory<br>Innovation | BC Craft Farmers<br>Co-Op (BCCFC)  | May – Aug |
| 2   | Identify members of Project Advisory Group<br>(PAG). Complete one-year project agreement<br>with BC Craft Farmers Co-Op (June 2020 –<br>June 2021).   | Governance               | BCCFC; BC;<br>Canada   | Jun – Jul |
| 3   | Recruit Project Director (PD).  | Governance               | PAG  | Jun – Jul |
| 4   | Recruit Leadership Team.  | Governance               | PD   | Jun – Jul |
| 5   | Establishment of project web-site, digital<br>platforms and internal communication<br>systems to facilitate ongoing engagement with<br>key stakeholders, working groups and<br>Leadership Team. | Community<br>Engagement  | PD; Assistant<br>Director (AD);<br>Local Government<br>(LGC) and<br>Communication<br>(COM)<br>Coordinators | Jun – Jul |
| 6   | Complete comprehensive database of key stakeholders.  | Community<br>Engagement  | AD; LGC; COM   | Jun – Jul |

>

| NO. | DELIVERABLE   | PROJECT ELEMENT                        | RESPONSIBLE                            | TIMELINE  |
|-----|---|--|--|-----------|
| 7   | Establish rapid engagement program focused on local and Indigenous governments.   | Community<br>Engagement                | AD; LGC; COM                           | Jun – Jul |
| 8   | Prepare and approve work plan, budget;<br>HR plan; Monthly reporting.   | Governance                             | PAG; PD;<br>Operations<br>Manager (OP) | Jun – Jul |
| 9   | Recruit Research Director (RD).   | Research                               | PAG; PD                                | Jun – Jul |
| 10  | Innovation Council established, meeting<br>monthly, developing a work plan and<br>recruiting project partners.  | Innovation                             | AD; RD; PAG                            | Jun – Jul |
| 11  | Five working groups established, meeting monthly and informing programming and project activities.  | Investment and<br>Capacity<br>Building | AD; LGC                                | Jun- Jul  |
| 12  | Completed feasibility review of opportunity to<br>establish a provincial processing and product<br>testing agency in collaboration with BC Craft<br>Farmers Co-Op.                            | Innovation                             | BC; BCCFC;<br>Canada; PD               | Jun – Jul |
| 13  | Establish interactive digital communication<br>platforms. Publish regular schedule of<br>events, training, education, networking<br>and communication opportunities with<br>key stakeholders. | Governance                             | OP; COM; AD                            | Jun – Jul |
| 14  | Agreements with BC credit unions to provide<br>basic banking services to transitioning micro-<br>cultivators and processors (aka SMEs). Federal<br>finance officials consulted as needed.     | Investment and<br>Capacity<br>Building | BC; BCCFC;<br>Canada                   | Jun - Aug |
| 15  | Implement micro-credit program<br>for transitioning micro-cultivators<br>and processors.  | Investment and<br>Capacity<br>Building | BC; BCCFC;<br>Canada                   | Jun - Aug |

| NO. | DELIVERABLE  | PROJECT ELEMENT                        | RESPONSIBLE              | TIMELINE  |
|-----|--|--|--------------------------|-----------|
| 16  | Establish municipal grant for local<br>governments interested in delivering solutions<br>for transitioning micro-medical cannabis<br>farmers and processors.   | Community<br>Engagement                | BC; BCCFC;<br>Canada     | Jul - Aug |
| 17  | Establish partnership with BC colleges that includes training grant to build the capacity of sector leaders, employees, vendors.   | Investment and<br>Capacity<br>Building | BC; BCCFC;<br>Canada; AD | Aug – Oct |
| 18  | Initiate pilot project with federal and<br>provincial economic development agencies<br>that provides direct support for women<br>entrepreneurs, Indigenous micro-farmers and<br>processors and persons with disabilities<br>wishing to enter the legal cannabis<br>marketplace.                | Investment and<br>Capacity<br>Building | BC; BCCFC;<br>Canada; AD | Aug – Oct |
| 19  | Initiate regenerative farming pilot project in<br>collaboration with federal and provincial<br>agriculture agencies to facilitate the<br>establishment of farms in all BC regions.   | Innovation                             | BC; BCCFC;<br>Canada     | Aug – Oct |
| 20  | Initiate environmental protection pilot project<br>with federal and provincial environmental<br>agencies to establish a grant program that<br>supports craft farmers and processors<br>implementing practices that reduce power<br>consumption and better protect the earth,<br>air and water. | Innovation                             | BC; BCCFC;<br>Canada     | Aug – Nov |
| 21  | Engage other provincial jurisdictions to extend project model across Canada.   | Governance                             | BCCFC; PD                | Sept–Nov  |

| NO. | DELIVERABLE  | PROJECT ELEMENT                        | RESPONSIBLE                  | TIMELINE    |
|-----|--|--|------------------------------|-------------|
| 22  | Initiate pilot project with federal and<br>provincial economic development agencies<br>that establishes an Innovation grant for craft<br>cannabis SMEs to pursue technology<br>applications that improve efficiency, product<br>testing packaging options and the<br>development of alternative, non-smokable<br>products. | Investment and<br>Capacity<br>Building | BC; BCCFC;<br>Canada; RD; AD | Sep – Nov   |
| 23  | Prepare feasibility review of BC craft cannabis inter-provincial trade, tourism and export development opportunities.  | Investment and<br>Capacity<br>Building | BCCFC; BC;<br>Canada         | Sep – Dec   |
| 24  | Research agenda and work plan developed as<br>proposed on Page 15. Grant program<br>introduced in collaboration with relevant<br>health and science agencies at federal and<br>provincial levels.  | Research                               | BC; Canada; RD;<br>PAG       | Oct - Dec   |
| 25  | Develop ongoing funding model to sustain relevant programs beyond project's conclusion.  | Part Two:<br>Governance                | BCCFC; PD                    | Spring 2021 |



### **BUDGET: OVERVIEW**

As described in *Appendix D*, transitioning just a portion of BC's 6,500+ approved medicinal cannabis farmers into the recreation market will have a very positive impact on the provincial economy when we need it most.

The scenarios proposed, with conservative assumptions, will divert profit from the illicit market and yield hundreds of millions of dollars of new revenue for all levels of government, starting this summer.

### JOB CREATION AND REVENUE TARGETS (TWO YEARS)

| Target                              | Scenario One: Current<br>Production and Processing Cap | Scenario Two: Doubling<br>Production and Processing Caps |
|-------------------------------------|--|--|
| Micro-Cultivators                   | 1,800  | 1,800  |
| Micro-Processors                    | 900  | 900  |
| Production                          | 360,000 kg   | 720,000 kg   |
| Total Gross Retail Value (\$8/gram) | \$2.8 billion  | \$5.5 billion  |
| Taxable Income                      | \$430 million  | \$860 million  |
| Direct Taxes                        | \$45 million   | \$90 million   |
| Direct Employment                   | 6,750  | 10,800   |
|                                     | (2.5 FTE/cultivator or processor)                      | (4 FTE/cultivator or processor)                          |
| Indirect Employment                 | 17,500   | 30,200   |
| Total Employment                    | 24,000   | 41,000   |

Sources of project funding are divided into four categories, with an expectation Canada and BC would share costs equally. The project proposes a two-year return on investment for taxpayers of \$4 to \$8 for every \$1 invested.

| BCCFC     | Project Agreement   | Canada/BC Craft Cannabis<br>Economic Partnership   | Canada/BC Micro-Credit<br>Partnership   |
|-----------|---|--|---|
| • In-Kind | <ul> <li>Contribution Agreement<br/>with BCCFC</li> </ul> | <ul> <li>Based on similar sector<br/>agreements</li> <li>Include current regional<br/>development, environment,<br/>agriculture and research<br/>programs</li> </ul> | <ul> <li>Partnership based on existing<br/>Community Futures model</li> <li>Include credit criteria to<br/>forgive 50%</li> </ul> |
| Total:    | \$845,000; one year                                       | \$12.5 million; two years  | \$95 million; two years   |



### BUDGET: SUMMARY OF EXPENSES

| PROJECT ELEMENT                     | DELIVERABLE  | SOURCE                            | TOTAL                                   |
|-------------------------------------|--|-----------------------------------|---|
| PARTONE                             |  |                                   |   |
| Regulatory Innovation               | Propose regulatory actions approved for implementation   | BC Craft Farmers Co-Op<br>(BCCFC) | In-Kind                                 |
| PARTTWO                             |  |                                   |   |
| Governance                          | Project Advisory Group (PAG)   | BCCFA                             | In-Kind                                 |
| Governance                          | Project Director   | Project Agreement                 | \$95,000                                |
| Governance                          | Project Leadership Team  | Project Agreement                 | \$360,000                               |
| Governance                          | Professional Services  | Project Agreement                 | \$145,000                               |
| Community                           | Project web-site, digital platforms and internal<br>communication systems  | Project Agreement                 | \$30,000                                |
| Community                           | Complete stakeholder database  | BCCFC                             | In-Kind                                 |
| Community                           | Establish engagement program focused on local and<br>Indigenous governments  | Project Agreement                 | \$50,000                                |
| Governance                          | Research Director (.8 FTE – 10 months); Research strategy  | Project Agreement                 | \$95,000                                |
| Innovation                          | Innovation Council   | Project Agreement                 | \$35,000                                |
| Capacity Building                   | Working Groups   | Project Agreement                 | \$35,000                                |
| Innovation                          | Regional Craft Processing and Product Testing Feasibility<br>Review: Follow-Up   | Canada/BC Partnership             | \$50,000; \$2 millior<br>over two years |
| Investment and Capacity<br>Building | Micro-credit access for transitioning micro-cultivators<br>and processors – Up to \$95,000 x 2,000; 50% repayable;                             | Micro-Credit Partnership          | \$95 million over<br>two years          |
| Community Engagement                | Local and Indigenous government grant; \$95,000 X 20   | Canada/BC Partnership             | \$1.9 million over<br>two years         |
| Investment and Capacity<br>Building | Training partnership with BC colleges; training grant for sector<br>leaders, employees, vendors (\$1,500 x 420)                                | Canada/BC Partnership             | \$1 million over<br>two years           |
| Investment and Capacity<br>Building | Programming for women entrepreneurs; Indigenous SMEs;<br>Employment for persons with disabilities; Additional grant<br>program (\$3,500 x 420) | Canada/BC Partnership             | \$2 million over<br>two years           |
| Innovation                          | Regenerative farming pilot; (\$15,000 x 30)  | Canada/BC Partnership             | \$500,000 over<br>two years             |
| Investment and Capacity<br>Building | Feasibility review — inter-provincial trade, tourism and export development  | Canada/BC Partnership             | \$120,000                               |
| Innovation                          | Innovation Grant for SMEs (\$10,000 x 150); Product testing pilot  | Canada/BC Partnership             | \$1.6 million over<br>two years         |
| Research                            | Implement agenda; Grant partnership with BC research universities and other organizations  | Canada/BC Partnership             | \$1.5 million over<br>two years         |
| Innovation                          | Environmental protection grant program; Regional and individual pilot projects (\$18,000 x 100)  | Canada/BC Partnership             | \$1.8 million over<br>two years         |
| Governance                          | Develop sustainable funding collaboration  | BCCFC                             | ,<br>In-Kind                            |





# **Executive Summary**

On April 20, 2020, with the announcement of its incorporation, the BC Craft Farmers Co-Op (BCCFC) confirmed plans to develop an economic development and job creation plan for governments to consider in response to the economic crisis created by COVID 19 and to achieve the *Cannabis Act*'s original goals.

### GOALS

BCCFC assembled a team of sector leaders to develop and submit a proposal that will:

- Rapidly transition thousands of BC's internationally recognized medicinal craft farmers and processors to the legal recreation cannabis market.
- Create thousands of sustainable jobs in all regions of BC.
- Divert profit from the illicit market.
- Promote public health and effective product safety testing.
- Leverage BC's craft cannabis sector as a platform to achieve other shared public goals.
- Deliver high quality craft cannabis to medical and recreational consumers in BC, Canada and around the world.
- Effectively engage community leaders, federal, provincial, Indigenous and municipal governments to support community economic and social development.
- Foster public health research collaborations with BC universities.
- Secure access to investment capital and government support available to other sectors.
- Advance international co-op principles and business model.

### ENVIRONMENT

Thousands of micro BC cannabis farmers and processors have been excluded from the legal market due to a poorly designed regulatory framework. With a globally recognized brand and the most craft farmers in the country, BC has the most to lose if these innovators are not provided with an opportunity to apply their skills in the post-prohibition market.

Of the 1,200,000+ square metres of legal indoor and outdoor cannabis cultivation space approved by Health Canada across the country as of February 1, craft cannabis farmers account for a microscopic 0.17%.

Since COVID 19 arrived, the global economy has been in its worst free-fall since the Great Depression. Canada's unemployment rate has ballooned to double-digits and BC's Business Council predicts a 7 to 12% decline in BC GDP. Some reports suggest 500,000 BC jobs may be at risk — many in rural communities.

During the pandemic, British Columbia included cannabis retail sales among a limited number of essential services.



### OPPORTUNITY

Recognizing the minimal number of small producers and processors applying for licenses, Canada invited the sector to provide constructive solutions to increase uptake just prior to the pandemic. BCCFC is responding to this request and recently announced government programs for small business and regional economic development.

An economic analysis prepared for the BC Craft Farmers Co-Op last June confirmed a properly legalized craft cannabis sector can create over 20,000 direct and indirect jobs over the next two years – and \$400-800 million of new revenue for all levels of government.

#### **PROJECT DESCRIPTION**

To support BC's post-COVID 19 economic recovery, BCCFC has developed a two-part pilot project to achieve the *Cannabis Act*'s original intent and build on cannabis' recent elevation to essential status:

• Part One: Regulatory Innovation

### • Part Two: Business Development Partnership

Craft cannabis farmers will seamlessly comply with physical distancing and PPE requirements associated with current public health orders. Some say the decades long cannabis prohibition has forced them to physically distance for generations.

By definition, the jobs associated with this project can be described as "shovel-ready". All governments need to do is let these people grow.



### **REGULATORY INNOVATION**

BC's craft cannabis farmers and processors are not responding to Health Canada's micro-application process for many well-established reasons. A policy and regulatory reset is required. Part One of the project proposes two tracks of regulatory innovation:

• Track One

Rapidly transition thousands (30%) of Health Canadaapproved micro-medical cultivators across BC to the legal market on a temporary basis (12 months) and in time for the summer growing season.

• Track Two

Simultaneously reset micro-cultivation and processing regulations by the end of 2020 with a two-year licensing target.

Canada is being asked to take these actions for the public interest and approach these suggestions with an innovative spirit. These suggestions include:

- Applying the Minster's direct authority under s. 140 of the *Cannabis Act*
- Doubling micro-cultivation and micro-processing caps
- Setting An acceptable target for micro-licence approvals over the next 1-2 years
- Respecting the skill of BC craft cannabis farmers and processors by including them in a Task Force to achieve targets and remove regulatory barriers

#### ECONOMIC DEVELOPMENT PARTNERSHIP

To build on the regulatory innovation proposed in Part One, BCCFC has developed an economic opportunity and job creation program to sustain BC's globallyrecognized craft cannabis sector through their transition — and beyond. These form the basis for Part Two of the project and focus on five elements:

- Governance
- Innovation
- Investment and Capacity Building
- Community Engagement
- Research

### GOVERNANCE

Funded by senior governments through a one-year contribution agreement with the BC Craft Farmers Co-Op, the project will be led by an inclusive and accountable Project Advisory Group. The model can be replicated in other provinces to facilitate the creation of more green jobs across Canada at a critical time.

The project agreement and funding structure will be based on similar federal-provincial economic partnership agreements that have been effectively developed for other sectors in BC and Western Canada. Some programs can be administered through existing federal/provincial initiatives but tailored to the craft cannabis sector and economic circumstances post-COVID 19.

### INNOVATION

The Project Advisory Group will establish an Innovation Council of government, education and technology leaders to develop more efficient and sustainable ways of providing adult consumers around the world with a wide-range of high quality products. The Innovation Council will develop strategic programming focused on:

- Technology and Agritech
- Agriculture
- Environmental Protection
- Alternative Products
- Tourism and Trade

The project will also propose a feasibility analysis of an opportunity to establish a provincial processing and product testing network as a social enterprise with craft farmers and established BC processors.

#### INVESTMENT AND CAPACITY BUILDING

The Project Advisory Group will collaborate with financial institutions, training colleges and local business associations to strengthen the capacity of craft farmers, processors, independent retailers, their staff, vendors and contractors. Inclusive working groups will be established to develop effective programming focused on:

- Indigenous Collaboration
- Women Entrepreneurs
- Access to Capital for Small and Medium Size Enterprises (SMEs)
- Training and Professional Development

The project proposes an effective and accessible micro-credit program for craft farmers and processors to facilitate the successful transition of ~2,000 craft farmers over the next two years. Based on established models, the micro-credit program will help these SMEs respond to municipal requests, achieve product quality standards and include flexible repayment terms.

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### COMMUNITY ENGAGEMENT

The Project Advisory Committee will include a representative from the Union of BC Municipalities and dedicate resources to rapidly engage local governments this summer. Among others things, this outreach will focus on:

- Rural municipalities and Indigenous governments that wish to welcome craft cannabis production and processing in their jurisdictions
- regional/local economic development agencies, universities and colleges
- business, agriculture and community organizations
- credit unions and financial institutions
- provincial and federal economic development agencies
- small producers licensed by Health Canada to produce cannabis for medical purposes who are interested in transitioning to the legal marketplace
- elected officials
- medical patients

The project proposes the establishment of a municipal infrastructure and job creation grant for local BC governments interested in creating innovative and environmentally-friendly land-use solutions for craft farmers and processors.

#### RESEARCH

The history of BC's craft cannabis sector is rooted in compassion and medical access. Pursuing research collaborations with our globally recognized research universities provides an opportunity to expand medical access where appropriate and answer public questions about the health impacts of cannabis use — positive and negative.

BCCFC will include medical patients in the project's governance and recruit a Research Director to develop a strategy focused on:

- Genomic analysis of cannabis, various strains and their unique effects
- Population health impact of cannabis use on different groups
- General community impacts positive and negative
- Impact of different delivery vectors
- Impact of terroir on terpene and cannabinoid development
- Harm reduction strategies
- Inebriation detection

### FUNDING

Sources of project funding are divided into four categories, with an expectation Canada and BC would share costs equally.

The project funding request is proportionate to government investments in other key job creating sectors and proposes a two-year return on investment for taxpayers of \$4 to \$8 for every \$1 invested.

| BCCFC   | Project Agreement   | Canada/BC Craft Cannabis<br>Economic Partnership  | Canada/BC Micro-Credit<br>Partnership  |
|---------|---|---|--|
| In-Kind | One-year contribution<br>Agreement with BC Craft<br>Farmers Co-op | Two year agreement based on<br>similar sector agreements.<br>Include regional development,<br>environment, agriculture and<br>research programs | Two year partnership based on<br>existing government models.<br>Credit criteria to forgive 50% in<br>certain circumstances |



# Appendices

A BC Craft Farmers Co-Op – Membership Overview
B International Co-Op Principles
C BC Craft Farmers Co-Op – Code of Conduct
D Economic Impact Analysis: British Columbia
E Policy and Regulatory Proposals – Canada





BC Craft Farmers Co-Op – Membership Overview





### BCCRAFTFARMERSCOOP.COM

Are you a cannabis micro-producer or processer, or an independent retailer?

Do you want to be part of a positive movement to accelerate the participation of BC's legendary craft cannabis sector in the legal market?

## JOIN US!

The BC Craft Farmers Co-op's mission is to:

- Provide BC micro-cultivators and processors with a safe, accessible and sustainable alternative to the illicit market
- Help maintain BC's top position as an international cannabis leader and innovator
- Provide medical and recreational cannabis consumers around the world with the highest quality BC cannabis

### MEMBERSHIP

Fee: \$420 annually (+\$25 membership share in co-op) Membership provides you access to a network that:

- collects political clout to reset ineffective policies
- collects purchasing power to reduce costs
- develops financing options with credit unions, government and investment shares
- collects marketing strength to get best price for BC craft cannabis across BC. Canada and the world

- promotes democracy, transparency and code of conduct
- develops community partnerships and national networks
- organizes sector networking, education and training opportunities
- and more...

Village of Pemberton @bccraftcoop | breachtftfunktimettingnopisism Tuesday, June 30, 2020 164 of 279



### DO YOU QUALIFY TO BE A MEMBER?

Membership is offered to any British Columbian (age 19+) that meets the following criteria:

### **Micro-Cultivators and BC Processors**

- BC-based & Health Canada-licensed:
  - medical cannabis cultivators including ACMPR producers
  - micro-cultivators
  - processors serving micro-cultivators
  - outdoor cultivators
  - cannabis testing laboratories
  - nurseries
- Any individual initiating an applicable Health Canada licence application for any of the categories above

### Independent Retailers

- Any BC-approved independent cannabis retailer
- Any individual initiating a formal retail application to the Province of BC

### OUR CODE OF CONDUCT

To maintain a reliable standard of ethics co-op members and community stakeholders can rely on in their interactions with the public, the co-op and each other. Please visit **bccraftfarmerscoop.com** for more.



## APPLY TODAY BCCRAFTFARMERSCOOP.COM

# Appendix B: International Co-Op Principles

A co-operative is a legally incorporated business, owned and operated by and for members. Co-ops are businesses based on established international values and principles.

Co-ops are a viable model for how people can collaborate to achieve common goals by pooling resources, decision making, risk and rewards. Whether they are customers, employees or producers, all members have the right to an equal say in the business and share in the profits. Each member is entitled to one vote, regardless of the number of shares they own.

Incorporating a co-op requires the establishment of operating rules, membership structure and minimal financial commitment in the form of member shares. Members elect a Board of Directors to provide direction, manage governance, establish goals and policies.

For-profit co-ops may issue investor shares to members and non-members. These shareholders can vote on matters that affect the co-op's financial viability. Each investment share entitles the holder to one vote. Up to 20% of a co-op Board may be investment shareholders.

Co-ops come in many different shapes and have been adapted to work in all sectors. Even though they share many features, each co-op is unique, based on their membership, purpose and market conditions. Marketing and producer co-ops are the most common.

Often confused with marketing co-ops, producer co-ops feature a group of people forming one business to produce and sell their goods together. In a marketing co-op, members may have their own businesses and sell all or some of their goods to, or through, the co-op. By marketing together, members can get a better price and access larger markets. Marketing co-ops may be involved with processing, assembling, packaging or other value-added activities. They also allow members to focus on producing goods or services instead of finding buyers. Marketing co-ops provide annual patronage returns to members based on sales volume and through a percentage of the co-op's profits.

Both these types of co-ops provide a collective venue for members to pool resources, knowledge and labor to collectively promote and sell their products. Both offer a variety of benefits to members including access to services such as book-keeping or insurance, or bulk purchases. Both can have investment shares and follow a similar path to incorporating.

### **CO-OP VALUES**

- Self-help
- Self-responsibility
- Democracy
- Equality
- Equity
- Solidarity

### CO-OP PRINCIPLES

- Open and voluntary membership
- Member democratic control
- Member economic participation
- Autonomy and independence
- Education, training, and information
- Concern for community
- Cooperation among co-operatives





BC Craft Farmers Co-Op – Code of Conduct





# **CODE OF CONDUCT**

## **PURPOSE**

To maintain a reliable standard of ethics co-op members and community stakeholders can rely on in their interactions with the public, the co-op and each other.

## **CODE OF CONDUCT**

By joining the BC Craft Farmers Co-Op, I promise to:

- 1. Treat people with respect at all times.
- 2. Respect the cannabis plant at all times.
- 3. Respect the planet at all times.
- **4.** Be truthful and a good neighbour.
- **5.** Be an advocate for the association and its mission in any instance where I feel comfortable within my own personal and professional networks.
- 6. Contribute to and encourage open, respectful and thorough discussion.
- 7. Protect citizen privacy and confidential information.
- 8. Not proactively recruit staff of other co-op members.
- 9. Collaborate with other co-op members to:
  - promote safe farming, processing and retail practices
  - promote facts, public education, health and wellness
  - adopt inclusive hiring and procurement practices
  - respect each other's independence
  - respect each other's intellectual property



Economic Impact Analysis: British Columbia





# DRAFT ECONOMIC IMPACT ANALYSIS

STIMULATING CRAFT CANNABIS IN BC & WESTERN CANADA

## Prepared by: Grow Tech Labs

https://www.bcscpp.com/ Email: info@bcscpp.com

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## **INTRODUCTION**

In February 2019, Vancouver's Grow Tech Labs (GTL) launched a project to accelerate the participation of BC's craft cannabis sector in Canada's new legal marketplace.

In association with plans to establish a provincial co-operative for small producers, processors and independent retailers, GTL completed an analysis of the craft cannabis sector as a potentially significant source of job creation and economic opportunities for rural communities across BC and Western Canada.

The challenge has been the lack of progress in transitioning small producers and processors to the legal system. This has contributed to the ongoing success of the illicit market and resulted in lost legitimate jobs and economic opportunity. In this brief we explore changes in government policy that would stimulate this sector and the resulting economic and employment impacts.

## SITUATIONAL ANALYSIS

There are currently 12,000 small scale producers in BC and Western Canada designated by Health Canada to grow medicinal cannabis.

Separately, in association with the Cannabis Act, Health Canada established a graduated licensing system that includes designated categories for small scale producers and processors.

While employment figures are imprecise due to the current legal status of growers, survey data shows that, under Health Canada's current capacity limits for small producers (2,100 sq ft) and small processors (640kg/year), employment at these production and processing facilities are:

## **Small Production Facility (2.5 FTE)**

- 2 full time employees, including lead grower and helper
- 3-8 part-time employees pruning, trimming, defoliation, cleaning and other tasks (equivalent to 0.5 FTE)

## Small Processing Facility (2.5 FTE)

- 2 full time employees; lead processor and helper (Quality Assurance person)
- 3-8 part-time employees; packaging/processing (equivalent to 0.5 FTE)

# **GOVERNMENT POLICY ALTERNATIVES**

We consider the impact of transitioning 15% (1,800) of the current small medical cannabis producers to a legal craft cannabis marketplace:

| Scenario<br>One | Health Canada's small producer (2,100 sq. ft.) and small processor caps (640kg/year) are maintained for these 1,800 producers.   |
|-----------------|--|
| Scenario<br>Two | Minimal increase is allowed for small producers (4,200 sq. ft.)<br>and small processors (1,250kg) across all 1,800 producers. In<br>this case each producer and processor would employ, on<br>average, 4.0 FTEs. |

# **ECONOMIC IMPACTS**

Employment in a primary production industry results in upwards of 3 times as many secondary jobs. This is enhanced to 7 times when the product is exported. These additional jobs involve a cross-section of skills and services.

For rural communities suffering from high unemployment and exodus of youth, such high quality jobs are particularly attractive for ensuring vibrant communities.

We analyse a broad range of economic impacts across BC and Western Canada that are projected to emanate from the two proposed government policies listed above.

## **ECONOMIC IMPACTS**

| TWO-YEAR TARGETS<br>(BC and Western Canada) |                |                |
|---|----------------|----------------|
| Target                                      | Scenario One   | Scenario Two   |
| Micro Producers                             | 1,800          | 1,800          |
| Micro-Processors                            | 900            | 900            |
| Total Production                            | 360,000 kg     | 720,000 kg     |
| Total Gross Retail Value<br>(\$8/gr)        | \$2.88 billion | \$5.76 billion |
| Taxable Income <sup>(1)</sup>               | \$432 million  | \$864 million  |
| Direct Taxes <sup>(2)</sup>                 | \$47 million   | \$95 million   |
| Export <sup>(3)</sup>                       | 15%            | 20%            |
| Direct Employment                           | 6,750          | 10,800         |
| Indirect Employment (4)                     | 17,500         | 30,200         |
| Total Employment                            | 24,250         | 41,000         |
| Employment Tax Revenue                      | \$182 million  | \$308 million  |
| Total Annual Tax Revenue                    | \$229 million  | \$403 million  |

### Notes

- 1. Taxable income is calculated at 30% of gross revenue. Gross revenue for a producer is calculated at 50% of retail value.
- 2. Direct taxes are calculated at the rate of 11% of taxable income for small businesses.
- 3. Export targets are set conservatively at 15% under Scenario 1 and 20% under scenario 2. Higher export earnings may be possible but the 2-year target may be aggressive.
- 4. Calculated at 2 indirect jobs (local consumption) and 6 indirect jobs (exports).

# ECONOMIC IMPACTS

| TWO-YEAR TARGETS<br>(BC)             |                |                |
|--------------------------------------|----------------|----------------|
| Target                               | Scenario One   | Scenario Two   |
| Micro Producers                      | 900            | 900            |
| Micro-Processors                     | 450            | 450            |
| <b>Total Production</b>              | 180,000 kg     | 360,000 kg     |
| Total Gross Retail Value<br>(\$8/gr) | \$1.44 billion | \$2.88 billion |
| Taxable Income <sup>(1)</sup>        | \$216 million  | \$432 million  |
| Direct Taxes <sup>(2)</sup>          | \$23 million   | \$47 million   |
| Export <sup>(3)</sup>                | 15%            | 20%            |
| Direct Employment                    | 3,375          | 5,400          |
| Indirect Employment (4)              | 8,750          | 15,100         |
| Total Employment                     | 12,125         | 20,500         |
| Employment Tax Revenue               | \$91 million   | \$154 million  |
| Total Annual Tax Revenue             | \$114 million  | \$201 million  |

### Notes

- 1. Taxable income is calculated at 30% of gross revenue. Gross revenue for a producer is calculated at 50% of retail value.
- 2. Direct taxes are calculated at the rate of 11% of taxable income for small businesses.
- 3. Export targets are set conservatively at 15% under Scenario 1 and 20% under scenario 2. Higher export earnings may be possible but the 2-year target may be aggressive.
- 4. Calculated at 2 indirect jobs (local consumption) and 6 indirect jobs (exports).

# **SUMMARY & CONCLUSIONS**

- 1. **Vibrant communities:** Good government policy can result in a vibrant craft cannabis industry which is an economic success story for BC and Western Canada
- 2. **Reduction in the illicit market:** Integrating existing small medical cannabis producers and processors into the post-prohibition marketplace will help achieve widely shared public safety goals related to the illicit market and organized crime.
- 3. **Economic impact:** Transforming as few as 15% of medicinal cannabis growers into the recreation marketplace with the small production and processing limitations currently in place would result in \$3B in direct economic impact and 24,000 jobs across rural BC and Western Canada.
- 4. **Expanded economic impact:** Increasing micro-production and processing limits as proposed would nearly double this to \$5.8B in direct economic impact and over 40,000 jobs across rural BC and Western Canada.
- 5. **Increased tax revenues:** These two scenarios, with conservative assumptions, would yield additional taxes for all levels of governments of \$229M and \$403M respectively.
- 6. **Premium exports:** With on-going liberalization efforts world-wide, Canada could leverage its position as a premier producer (especially in BC) to build a large cannabis export industry.
- 7. **Price advantage:** Building a brand around our craft cannabis industry would ensure it commands a premium price which would multiple the above benefits many times over.
- 8. **Time is of the essence:** While Canada can become a world-leader for high-end cannabis, with many US states and European countries quickly liberalizing their cannabis regulations, the race will soon be on for capturing the premium market.



Policy and Regulatory Proposals – Canada





**BCCRAFTFARMERSCOOP.COM** 

# CANADA'S CANNABIS POLICY IS NOT ACHIEVING ITS STATED PURPOSE.

Thanks to the federal government's restrictive and costly regulations, the entire illicit market is thriving.

# A complete policy reset is required in 2020 to support Canada's post-Covid-19 economic recovery.

The BC Craft Farmers Co-Op is proposing **10 constructive solutions** for Prime Minister Trudeau and his government to help make the policy a success:

- Immediately transition craft cannabis farmers in Health Canada's medical program to the new marketplace without compromising patient access.
- 2 Recognize 1000s of licensed BC craft farmers are needed to meet demand not dozens. Establish targets for licence approvals over the next 1–2 years.
- Respect the skill of BC craft cannabis farmers and processors. Effectively include them in solution making through a Task Force to achieve targets and reduce barriers.
- 4 Immediately increase unreasonably low micro-cultivation, outdoor cultivation and micro-processing caps that discourage investment, restrict consumer choice and limit viability.
- Collaborate with the BC Craft Farmers
   Co-op to create financing opportunities
   for craft farmers and processors through
   existing federal agencies, financial
   institutions and market investors.

- 6 Establish an economic partnership agreement with BC government to help craft farmers transition to the new market and create 1,000s of rural jobs.
- Provide financial support for BC municipalities that want to create innovative land-use solutions for craft farmers.
- 8 Immediately roll-back plastic cannabis packaging to protect the environment.
- 9 Update Agriculture Canada and Environment Canada programs to expand regenerative farming innovation in BC's craft cannabis sector.
- **10** Increase restrictive dosage caps on edible products and extracts.





# BCCRAFTFARMERS.COM

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 From:
 >

 Sent: June 14, 2020 2:24 PM
 >

 To: Mike Richman <<u>mrichman@pemberton.ca</u>>
 >

 Cc: VoP Admin <<u>admin@pemberton.ca</u>>
 >

 Subject: 5G ~ What you Need to Know
 >

**Subject:** 5G ~ What you Need to Know

Dear Mayor Richman & Councillors,

Parliament has been remote. School has been virtual. Work has been online. Recent events have shown us how important safe and affordable high-speed broadband is.

In response, telecommunication providers are racing to install 5G. Is this the best connectivity option? What rights do local governments have when it comes to 5G? And why are the limited rights municipalities *do* have now under threat?

### 5G and You

The Federation of Canadian Municipalities (FCM) recently published *Getting it right: Preparing for 5G deployment in your municipality*. Although the FCM guide accurately answers the regulatory questions linked to 5G, including the potential loss of local input, it does not offer municipal governments the critical big picture information needed to understand the practical, policy and logistical implications of 5G.

To support you in making well-informed telecommunication decisions, we have prepared <u>Getting</u> <u>it Wrong in Getting it Right</u>, a preamble and supplement to the FCM guide.

Action Item:

• Please take a moment to read the guide by clicking <u>Here</u>. It is also attached.

### **Untying Your Hands**

Perhaps you would like to create local 5G and small cell siting policies that reflect and protect community interests, but believe your hands are tied.

The second document we have prepared and attached, <u>Creating a Proactive Antenna Siting</u> <u>Protocol and Small Cell Licensing Agreement</u>, shows you how to create the most protective policies possible given our regulatory landscape. It also covers critical liability issues which every local government should know about.

### Action Item:

• Please read the document's *Overview* and share the document with your legal team. It is found <u>Here</u> and is also attached.

### A Better Way

The infrastructure investments we make today will shape how the Internet will be provided and how it will impact our security, well-being, resilience, and sustainability for generations to come. We encourage you to choose the fastest, safest, most energy-efficient and cyber-secure data delivery system for your community - fiber optics connected directly to each premise.

### **Action Item:**

• Visit this site to learn more:

Connected Communities ~ Wired fiber for Sustainable Last-Mile Solutions

### Who are We?

We represent an umbrella group of organizations and individuals advocating for safe and responsible technology.

For more information, you may reach us at cst.citzensforsafetechnology@gmailcom ,

With Warm Regards,

Sherry Ridout

On Behalf of Citizens for Safe Technology

# Getting it wrong in "Getting it right: Preparing for 5G deployment in your municipality"

In February 2020, the Federation of Canadian Municipalities (FCM) published <u>Getting it</u> <u>Right: Preparing for 5G deployment in your municipality</u>, a guide designed to help municipalities deal with the practical, policy and logistical implications of 5G technology in local communities.

This FCM document contains several half-truths, mistruths and framing tactics – listed below – which result in a biased, misleading and generally inaccurate guide.

The document did, however, get *some* things right. Part 2 of this summary outlines those points.

Part 1: Getting it Wrong

**Misconception 1** The fifth generation of wireless technology (is) a necessity if Canada is to remain competitive on the world stage. (p.4)

# **Fact** The benefits of 5G are dubious at best, and are they worth the costs?

There has been no cost-benefit analysis of 5G to see if its consequences and risks, including the costs stemming from security and data breaches, environmental damage, liability claims, lost productivity due to radiofrequency radiation-induced illness, and increased healthcare requirements, outweigh its benefits.

Driven by the belief that digital technology is neutral and therefore carries no unintended consequences or risks, politicians, policy makers, and society are ignoring the science-backed evidence that urges us to exercise precaution when investing in infrastructure that is wireless-dependent.

# Learn more here:

1. Women's College Hospital, Toronto, <u>Impacts of Wireless Technology on Health: A</u> <u>symposium for Ontario's medical community</u>, 31 May 2019 Video of Presentation by Dr. Magda Havas: <u>Impacts of EMFs on health in the community</u>

2. Schneier, B. (2019, September 25). <u>Essays: Every Part of the Supply Chain Can Be</u> <u>Attacked – Schneier on Security</u> – as published in the New York Times

3. Zarrett, David. (2020, February 19). <u>Threats to security, health, public</u> infrastructure.and other potential costs of Canada's 5G rollout. Macleans

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# **Misconception 2** 5G is key to profiting and benefiting from enhanced connectivity and "Smart Cities."

"Connectivity has become essential for any community's economic, cultural and social development." President's Message (p.4)

"For municipal officials, the IoT translates into "smart cities" where countless data points generated by citizens, sensors and assets allow you to monitor traffic and parking, water, wastewater, storm water, bus and rail stops, etc. This would also allow municipalities to make adjustments, or allow systems to make adjustments on their own, as needed." (p.8)

# **Fact** 5G is not the pinnacle of connectivity; wired fiber optic networks are.

From resource and energy monitoring and management to improved emergency, educational and health care services, most of the smart city applications 5G promises can be provided by fiber optic cables connected directly to each premise - without the threats wireless 5G poses to privacy, national security, energy consumption, the environment and public health. A few of 5G's perks - like autonomous vehicles - cannot be delivered by wired fiber networks. However, experts warn that self-driving cars are risk and liability laden, and that 5G will likely not be able to support them.

## Learn more here:

1. The Benefits of Wired Smart Cities, Connected Communities

2. Schoechle, Timothy. (2018). <u>Reinventing Wires: The Future of Landlines and</u> <u>Networks</u>. The National Institute of Law and Public Policy

3. Dawson, Doug. (2019). The Myth of 5G and Driverless Cars. CircleID

4. Jones Day law firm. (2017, November). <u>Legal issues Related to the Development of</u> <u>Automated, Autonomous and Connected Cars</u>. A White Paper

# **Misconception 3** 5G is the wireless industry's solution to our everincreasing wireless data consumption.

"The trend toward greater connectivity will only accelerate. The use of wireless Internet connected devices in our communities is exploding. The advent of fifth generation (5G) wireless networks is the industry's response to this growth and the desire to further leverage the potential of the Internet." (p.6)

Village of Pemberton Regular Council Meeting No. 1518 Tuesday, June 30, 2020 182 of 279 **Fact** The main industry drivers behind 5G – Huawei, Ericsson and Qualcomm – admit they developed 5G by recognizing trends and opportunities. Consumers would not be consuming more and more data if an endless stream of wireless products were not being marketed and sold. Our growing wireless data consumption has serious environmental implications.

Which came first – our skyrocketing data usage or industry's plan to sell us a wireless world that is dependent upon us consuming more and more data? Wireless technology uses 10 times more energy than wired technology does. Experts warn our environment cannot support unlimited digital consumption.

Industry is not providing 5G as a public service. When asked about the motivation driving 5G at a December 2016 meeting of *The Institute of Electrical and Electronics Engineers* (IEEE), respected industry expert and Senior Huawei Researcher Dr. H. Anthony Chan stated: "...if technology does not change, the company will die...it is about more jobs...engineering and manufacturing... People must buy a new phone."

# Learn more here:

1. A GSA Executive Report from Ericsson, Huawei and Qualcomm. (2015, November). The Road to 5G: Drivers, Applications, Requirements and Technical Development

2. The Shift Project. (2019, March). <u>Lean ICT: Towards "Digital Sobriety": Our New</u> <u>Report on the Environmental Impact of ICT</u>

3. The Shift Project. (2019, July). <u>Climate Crisis: The Unsustainable use of Online Video:</u> <u>Our new Report on the Environmental Impact of ICT</u>

# **Misconception 4** 5G will bring us the fastest Internet possible.

"Once fully deployed, 5G technology promises maximum theoretical speeds in the 10 Gbps range, at least 100 times faster than top theoretical speeds for existing 4G technology (up to 1,000 times faster than actual speeds in some circumstances). To get a sense of this change, downloading a two-hour movie will take less than four seconds versus approximately six minutes on existing 4G networks. (Note that consumer technology will also have to catch up as many existing devices are not 5G capable.) (p.7)

**Fact** New breakthroughs in fiber optics offers real-time transmission of 200 Gbps. *This is 20 times faster* than the maximum theoretical speed of wireless 5G.

# Learn more here:

Brown, Mike. (2020, January 2). <u>A Fiber Optic Breakthrough Could Beat 5G for Rural</u> Internet Access. Inverse

**Misconception 5** "5G technology will outperform traditional land connections in some cases, making home routers a thing of the past." (p.7)

**Fact** 5G may be faster than Internet provided through copper wires or coaxial cable, but it will never be faster than fiber wired directly to the premises.

Wireless signals can never be as fast as the fiber cables that transport data to antennas.

# Learn more here:

Schoechle, Timothy. (2018). <u>Reinventing Wires: The Future of Landlines and Networks</u>. The National Institute of Law and Public Policy

# **Misconception 6** "More significantly, 5G networks are key to opening up the potential of the "Internet of Things" (IoT). (p.7)

# **Fact** A balanced and informed discussion of the IoT will include its potential, as well as its pitfalls. This discussion would include:

#### Privacy and National Security issues related to the IoT:

- o Smart devices are easily hacked and controlled,
- They allow for increased surveillance, and potentially nefarious military and paramilitary capabilities such as "swarming" and robotic attack missions,
- They permit our personal data to be tracked and sold.

#### Environmental and Social Costs of the IoT:

- Powering , manufacturing and storing the data from trillions of sensor-equipped and chipped devices demands huge amounts of energy and resources,
- o Massive amounts of e-waste will be generated due to planned obsolescence,
- $\circ$  An increasingly automated world threatens job security and heightens tech addiction,
- Mining for the rare minerals needed to make these devices is causing untold human suffering.

# Learn more here:

1. Halpern, Sue. (2019, April 26). The Terrifying Potential of the 5G Network. The New Yorker

2. Congressional Research Service. (2020, May 22). <u>National Security Implications of 5<sup>th</sup></u> <u>Generation (5G) Mobile Technologies</u>. A Report from the U.S. Congressional Research Service

3. Bordage, Frederic. (2019, October). <u>The Environmental Footprint of the Digital World</u> <u>Summary</u>. A Report from Green IT.fr

4. McLelland, Callum. (2020, January 15). <u>The Impact of Artificial Intelligence - Widespread Job</u> Losses. Retrieved from IoT for all

5. Annie Kelley. (2019, December 16). <u>Apple and Google named in US lawsuit over Congolese</u> <u>child cobalt mining deaths</u>. The Guardian

# **Misconception 7** There are no Health Risks associated with 5G.

"Health Canada ensures that 5G installations comply with all existing safety regulations, including Safety Code 6 (SC6), which determines exposure limits for wireless devices and their associated infrastructure. Canada's limits are consistent with the science-based standards used in other countries. Large safety margins have been incorporated into these limits to provide a significant level of protection for the general public and personnel working near radio frequency sources." (p.23)

**Fact** There is ample peer-reviewed science linking non-thermal radio frequency radiation (RFR) to biological harm. Countries such as Italy, Switzerland and Russia have radiation exposure limits many times more protective than ours.

In 1976, the <u>US Naval Medical Research Institute</u> published a <u>bibliography of 3,700</u> <u>scientific papers</u> on the thermal and non-thermal biological effects of RFR. The body of scientific evidence on the health implications of the non-thermal effects of RFR has grown exponentially since.

"Health Canada's 2015 guidelines for human exposure to non-ionizing radiation (Safety Code 6) were out of date before they were published, and the review process was flawed," says Dr. Meg Sears, PhD, Chair of Ottawa-based *Prevent Cancer Now*. "Hundreds of peer-reviewed, published studies show that radiofrequency (RF) radiation can cause cancers, damage sperm and DNA, impair reproduction, learning and memory, and more. We should be limiting public exposure, not increasing it."

Village of Pemberton Regular Council Meeting No. 1518 Tuesday, June 30, 2020 185 of 279 "We have sufficient data to classify RF radiation as a Group 1, known human carcinogen, along with, for example, asbestos and tobacco smoke," states Dr. Anthony Miller MD, Professor Emeritus of the Dalla Lana School of Public Health, University of Toronto, who worked with the International Agency for Research on Cancer on the 2011 scientific review.

When the U.S. Naval Medical Research Institute identified the risks in 1976, governments should have limited the scope of technological change, and created radiation exposure standards that protected the public from harm. Instead, the evidence was hidden and ignored, and industry-influenced bodies like ICNIRP created the standards that Health Canada still emulates today.

## Learn more here:

1. <u>Peer Reviewed Scientific Research on Wireless Health Effects</u> ~ Environmental Health Trust

2. 5G Telecommunications Science - Physicians for Safe Technology

3. Lai, Henry. (2019). <u>Research Summaries of RFR scientific Literature</u>. Retrieved from Bioiniative.org

# **Misconception 8** Innovation Science and Economic Development Canada (ISED) regularly audits antenna sites to make sure they are safe.

"ISED's regulatory framework, including market surveillance and compliance audits, provides safeguards to protect Canadians against overexposure from wireless devices and antenna installations." (p. 23)

# **Fact** ISED relies on cell tower operators to make sure their sites comply with Safety Code 6. Given how 5G and the IoT work, operators cannot accurately measure citizens radiofrequency radiation exposure.

Much like the fox watching the henhouse, ISED asks cell tower operators to self-monitor how much radiofrequency radiation their antenna sites are emitting. The tests these telecoms do are often software generated, and prone to inaccuracies.

ISED requires operators to "consider, in addition to their own radio system, the contributions of all existing radiocommunication installations within the local radio environment". Given that 5G requires potentially dozens of small cell antennas on one street, and that millimetre wave 5G works "on demand", it is impossible for an operator to take an accurate and consistent field measurement of the RF exposure residents are receiving on a daily basis.

Village of Pemberton Regular Council Meeting No. 1518 Tuesday, June 30, 2020 186 of 279 For software-generated audits of 5G RF exposure to be accurate, operators would need to asses an ever-changing IoT "smart" landscape that includes multiple antenna sites owned by multiple operators as well as the RF-emitting smart infrastructure that 5G is purportedly there to support.

For the past six years, academics have been preparing for the increase in radiofrequency radiation exposure inherent to smart cities, and have been developing potential measurement tools. These measurement systems are much more involved and complex than what ISED now requires, and would likely put the onus on municipalities to monitor and regulate emissions and protect residents' health.

#### Learn more here:

1. ISED. (2015, March 19). TN-261 <u>Safety Code 6 Radio Frequency Exposure Compliance</u> <u>Evaluation Template</u>

 Diez, L., Aguero, R. and Munoz, L. (2017, June) <u>Electromagnetic Field Assessment as</u> <u>a Smart City Service: The SmartSantander Use-Case</u>. Retrieved from <u>Sensors (Basel)</u>. 17(6): 1250

# Part 2: Getting it Right

The FCM's "Preparing for 5G deployment in your municipality" outlines several 5Grelated planning and regulatory issues that all municipal governments in Canada should be aware of.

#### **Planning Concerns**

"Clusters of small cells can be visually unappealing and create unique safety concerns. They can, in particular, detract from the qualities and integrity of areas such as historical or heritage districts as well as some planned urban environments." (p.24)

#### **Regulatory Concerns**

"For stand-alone tower structures, regardless of height, the procedure provides for formal consultations with the municipality as the local land-use planning authority. However, 5G small cell installations on existing structures (towers and non-tower structures such as a building or power pole) are excluded from this requirement as long as the height of the structure is not increased by more than 25 percent." (p.14)

7

"In practical terms, this means that if the power poles are owned by the provincial utility in your jurisdiction, a carrier could enter into an agreement to install 5G small cell antennas on these poles and not even have to notify your municipality (even if the small cell is added at the top of the pole, as long as the addition is less than 25% of the existing height)." (p.14)

"A grey zone exists with respect to pre-emptive pole replacements by utilities. If a utility were to replace a pole with a much taller one, and then add antennas to it, it would likely fall outside the consultation requirements." (p.16)

# **Liability Concerns**

"... a number of municipalities, even those with comprehensive MAAs in place, are reporting the installation of 5G small cell antennas without their knowledge. Even if they are affixed to someone else's asset—like a power pole—if the antenna is located within the ROW space, it could raise issues of interest to the municipality such as safety concerns for the public and municipal workers." (p.14)

# **Municipal Rights in Jeopardy**

# **Current Rights**

"If a carrier has identified municipal assets (light poles, traffic lights, transit shelters, etc.) as one of its preferred options to install small cell antennas, it has to negotiate with the municipality and come to an agreement. As asset owners, municipalities have the right to refuse access." (p.24)

"Municipalities can refuse antennas on their property, but they cannot refuse the installation of equipment required to connect antennas located on other assets. Municipalities cannot charge occupancy fees for the connecting cables and other equipment installed within the ROW, but they can charge market value for an antenna located on their assets." (p.25)

"Some municipalities have been misinformed by carriers into believing that small cells deployment is already covered in MAA's and that, as a result, carriers enjoy the same conditional right of access for antennas as they do for their cables, etc. This is not the case." (p.25)

# **Potential Loss of Rights**

# Telecommunications in Canada is currently under two review processes:

1. The Report of the Broadcasting and Telecommunications Legislative Review Panel

In its January 2020 report, the Panel reviewed the governance framework for antennas and the issue of access to municipal infrastructure for network deployment.

### 2. The CRTC Telecom Notice 2019-57 - Review of Wireless Services

In this national consultation regarding the future of wireless services in Canada, access to municipal infrastructure is an important theme.

# How These Two Review Processes May Affect Municipal Governments in Canada:

## 1) If Recommendations 22, and 34-37 of the Legislative Review Panel's Report are passed:

- Jurisdiction over antenna siting—including small cells for 5G—will be transferred from ISED to the CRTC. (p.11)
- The right of access that carriers currently enjoy within the right-of-way will be extended to encompass all potential support structures. These structures are referred to as "passive infrastructure" in the report, terminology that inaccurately portrays the functionality of a municipality's assets. (p.11)
- Local governments' current ability to refuse telecoms access to municipal assets and property would be lost. (p.11)

# 2) If the recommendations made by telecommunication carriers to the CRTC Wireless Review are adopted:

- The CRTC will have absolute authority over siting small cells antennas (p.26)
- The CRTC will impose time limits for municipalities to process 5G applications, as well as fee caps, and more. (p.26)

#### Note on Cost Recovery:

"To date, municipalities have been identifying direct costs (related to the deployment of 5G) such as engineering studies, electricity supply and workforce time, and billing them back to carriers. This seems to be the accepted best practice in Canada for the moment, a practice based in the sound public policy principle that **taxpayers should not be subsidizing the for-profit ventures of the carriers**". (p.23)

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# **GUIDE GUIDE GUIDE GUIDE**



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# Disclaimer

This guide has been developed for FCM's municipal members. Information contained within the guide reflects FCM's best understanding and is believed to be accurate at the time of preparation. The material contained in this document is for informational purposes only and is not intended to provide legal advice and should not be relied upon in that regard. Municipalities are encouraged to seek professional legal advice specific to the realities of each municipality. FCM accepts no responsibility for damages, if any, suffered by any party as a result of decisions made or actions based on this document.

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#### $\ensuremath{\mathbb{C}}$ Federation of Canadian Municipalities, 2020

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An electronic copy of this handbook is available on **fcm.ca** 

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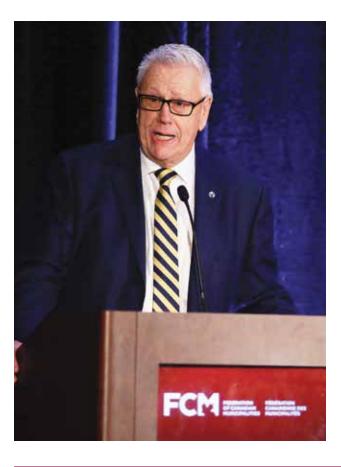
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# President's message



Connectivity has become essential for any community's economic, cultural and social development. Even though important challenges remain in terms of access to basic broadband and wireless services in many smaller and rural municipalities-challenges which FCM continues to address in its work-the next wave of innovation is upon us. Telecommunications carriers, the federal government and the CRTC are gearing up for the deployment of the first components of the fifth generation of wireless technology (or "5G")—a necessity if Canada is to remain competitive on the world stage.

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Everyone has heard of 5G, but it is important for municipal officials to grasp and prepare for its practical, policy and logistical implications. From a practical perspective, this technology will revolutionize the place of the Internet in our professional and personal lives, including how municipalities provide services to the public.

5G will also pose challenges in that the infrastructure required is different from anything currently on the ground. In order to achieve its full potential, 5G will rely on vast numbers of small antennas—hundreds of thousands of them—that will become ubiquitous in our environment, each antenna requiring its own power and broadband connections. Furthermore, under the current legislative framework, the antenna and wireline components fall under different regulatory schemes, although this could evolve in the coming years.

Carriers have already stated that, for 5G to be fully deployed, they will require access to various municipal assets: traffic lights, light posts, bus shelters, etc. As with previous waves of communications innovation, municipalities will therefore be key in managing and supporting this deployment for the benefit of their residents and businesses. And FCM will play a leading role in advocating for the municipal sector and assisting municipalities in developing best practices. This guide is the first practical tool developed by FCM to assist municipal officials as they prepare for 5G deployment in their communities. I wish to thank those who have contributed to this project, in particular the volunteer members of the Technical Committee on Rights-of-Way and the Small Cell Working Group.

As with other FCM resources, this guide provides members with a thorough overview of the information they need and the concrete steps they can take to adapt their individual relationships with carriers, as well as their own internal processes, in order to meet the challenge of 5G. FCM will continue to update this resource as the collective experience and the regulatory framework evolves.

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**Bill Karsten** FCM President and Councillor, Halifax Regional Municipality

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# **Connectivity:** a new challenge

Connectivity is a crucial factor in ensuring a community's development and prosperity. For this reason, FCM has played a leading role in developing policies, programs, and tools that advocate for universal connectivity. Municipal officials also need help to protect their communities' interest while ensuring the efficient and timely deployment of technology within their jurisdiction. Thanks to the work of its Technical Committee on Rights-of-Way and, more recently, the work of the Small Cell Working Group, FCM has been instrumental in shaping best practices and defending municipal interests.

The trend toward greater connectivity will only accelerate. The use of wireless Internetconnected devices in our communities is exploding. Research shows that our current wireless data consumption has reached approximately 1.8 exabytes (one exabyte is one quintillion bytes) per month in North America alone, and this number is projected to grow six-fold by 2022. The advent of fifth generation (5G) wireless networks is the industry's response to this growth and the desire to further leverage the potential of the Internet. The Government of Canada is also encouraging the deployment of telecommunications infrastructure to meet its broadband and broader connectivity targets, both in urban settings and in rural areas.

5G technology requires entirely new networks comprised of great numbers of small, shortrange antennas—"small cells"—to be deployed in order to provide effective coverage. Unless incentives (or even restrictions) to share infrastructure are put in place federally, each carrier will want to deploy its own network of small cells, which means that in some neighbourhoods there will be one small cell per carrier company every few hundred metres. Multiply this by the number of carriers operating in that neighbourhood and you get a sense of the magnitude of the undertaking. Estimates for 5G coverage in Canada set the number of installations at over 275,000 small cells. The scope of this next wave of technological evolution makes it necessary for both the public and private sector to work closely together to ensure that the benefits of 5G technology become available to residents and businesses in a timely and cost-effective way. As the owners and managers of the right-of-way (ROW) space, as well as many other types of municipal or utility infrastructure (such as elevated tanks, buildings, posts and other possible supporting structures) where carriers want to install their 5G infrastructure, municipalities will have a pivotal role to play in balancing the need to provide connectivity to their communities with the protection of legitimate municipal interests such as safety and cost-recovery.

To assist municipal officials in their work and in tackling the new challenges posed by 5G, this guide seeks to provide readers with a basic understanding of 5G technology, of the current regulatory framework within which the deployment of the new networks will take place, as well as key considerations and emerging best practices municipal officials can take into account in preparing locally.

# What is 5G?

5G, quite simply, refers to the "fifth-generation" of industry standards for wireless technology, the next wave in the evolution of mobile net-works. While current 4G/LTE (fourth-generation/ Long Term Evolution) technology revolution-ized the capabilities of mobile handsets and other devices through faster connectivity and enhanced data capability, 5G will take wireless possibilities to a whole new level.

Once fully deployed, 5G technology promises maximum theoretical speeds in the 10 Gbps range, at least 100 times faster than top theoretical speeds for existing 4G technology (up to 1,000 times faster than actual speeds in some circumstances). To get a sense of this change, downloading a two-hour movie will take less than four seconds versus approximately six minutes on existing 4G networks. (Note that consumer technology will also have to catch up as many existing devices are not 5G capable.)

However, 5G is about much more than boosting speeds on your mobile phone. It is ultimately about enabling faster Internet connectivity everywhere and for everyone. In terms of coverage, 5G technology will outperform traditional land connections in some cases, making home routers a thing of the past. More significantly, 5G networks are key to opening up the potential of the "Internet of Things" (IoT), another popular term.

At the moment, most of the data that circulates on the Internet comes from human beings. In order for a news story, a research article, or a photo to find its way onto the web, someone has to create that content and upload it. To make a piece of data available on the Internet, by and large a person has to collect that data, then enter it into a computer. The IoT would allow countless devices, objects and even living beings—people, plants and animals—to be connected and provide accessible data in real time without the need for a human intermediary.

Imagine you own a dairy farm. You currently monitor the health of your cows by observing them and if you feel there is problem, by making certain tests. Now imagine if each cow had a medical implant wirelessly connected to the Internet. You could consult, in real time on your mobile phone, any number of vital signs for each cow in your herd over the life of each animal. Each component in your car could report its own status, allowing you to make repairs before any real harm is done. Or imagine an implant monitoring your blood-sugar levels and informing you when you actually need a dose of insulin, as well as the size of the dose. Or a chip warning you that the blood markers of an imminent heart attack are present before you notice any symptoms. Smart home devices already on the market are just the tip of this technological iceberg and its potential.

For municipal officials, the IoT translates into "smart cities" where countless data points generated by citizens, sensors and assets allow you to monitor traffic and parking, water, wastewater, storm water, bus and rail stops, etc. This would also allow municipalities to make adjustments, or allow systems to make adjustments on their own, as needed. There are currently pilot projects across the country testing Smart City implementation and how to make use of the data that will flow from 5G to increase the efficiency and effectiveness of services and to respond to emerging needs.

Transportation and computer industry experts suggest the 5G deployments may also be crucial to the eventual use of autonomous vehicles or semi-autonomous driving. New pilot projects on provincial highways are exploring this possibility now. In short, 5G opens the door to giving more and more things an IP address and connecting them to the Internet using some sort of sensor, allowing them to communicate with us and with each other, without the need for human interaction. This technology will bring new commercial opportunities, new services to residents, and open the door to innovation in the way municipal services are provided and managed.

# How does 5G work?

In order to deliver on its promise to connect millions of densely packed devices and sensors, 5G relies on new technical standards as well as new infrastructure.

Without getting into too many technical details, 5G standards rely on a few key changes to achieve the new network's full potential:

- **Greater bandwidth:** the ability to flow more data faster.
- A different band of the radio spectrum: different frequencies from current 4G networks.
- Reduced latency: the time it takes a device to connect to the network (measured in milliseconds).
- Full duplex capabilities: the ability to transmit and receive at the same time, instead of doing one, then the other, sequentially.
- The ability to "speak" to large numbers of devices at the same time, instead of switching very quickly between devices as is currently the case.

Of central importance to municipal officials is the fact that these new standards cannot be delivered with existing 4G wireless infrastructure. The larger antennas now found in most neighbourhoods do not operate in the right frequency range. 5G will therefore require an entirely new network of its own, gradually replacing existing mobile networks. The most significant change within the municipal realm is the advent of small cell installations. Although this equipment is relatively small, its range is also limited. A study by Accenture estimates that achieving the full deployment of 5G in Canada will require the installation of somewhere in the order of 275,000 of these devices and, as you might expect, carriers will want to install these on any number of public assets. Developing business processes and technical parameters for the installation of thousands of these devices within your jurisdiction poses a challenge for municipalities and carriers alike.

The deployment of 5G networks will also require a number of new cell towers ("macro towers"), but the extent of that deployment is not known at this time, nor whether existing sites can accommodate these structures.

# What are small cells?

Small cells are low-powered antennas (or "wireless base stations", to use industry language) that function like cells in existing mobile wireless networks, typically covering targeted indoor or localized outdoor areas. It is essential to remember that "wireless" communications are only wireless for the end user. Small cells rely on a number of physical connections to function. In order for the data to flow into or from the Internet, each small cell antenna must be hard-wired into the carrier's underground fibre-optic network. Each antenna is also accompanied by various support or control equipment and requires its own power source. Therefore a fiber optic cable conduit and a power supply conduit might need to be constructed where the cables are located underground.

There are various types of small cells: their size, shape, weight, the way in which they are attached as well as their individual ranges all vary. The smallest are for indoor use, operating on power levels similar to Wi-Fi routers. The largest are for outdoor use and typically consist of a small equipment cabinet (pedestal) and antennas. The antennas are small, mostly smaller than a briefcase, while the pedestals can be as large as fridge-sized cabinets. The larger small cells are often located on existing assets like traffic lights, street lights, crosswalk arms, power utility poles and buildings. Some can be incorporated into LRT or subway platforms, bus shelters, or placed underground, while others are installed in municipal buildings (city hall, libraries, arenas, recreation centres, police and fire stations, etc.).

Unlike traditional cellular equipment, which is placed high up on single cell towers or buildings, small cell technology requires the density of multiple equipment installations clustered closely together, located in proximity to the end user and closer to the ground. While technical needs will vary according to the location and specific device used, providing full 5G coverage can require small cells as close to each other as every 250 metres. For these reasons, coupled with the high cost of installing dedicated monopoles and the resulting public discontent that sometimes occurs in residential neighbourhoods due to tower proliferation, by installing small cells on existing municipal infrastructure, carriers can also reduce their costs. The collection of photographs at *Appendix A* provides you with a good overview of the variety of small cell installations that are commonly found.

# How is the deployment of small cells regulated in Canada?

# An evolving landscape

Having a basic understanding of how federal regulations are structured is important for municipal officials dealing with telecommunications issues. This section sets out the fundamentals of these rules. However, the legislative and regulatory landscape for small cells in Canada is currently the subject of two in-depth reviews that could bring about significant changes to this framework.

The first review was undertaken by the federal government. It appointed the *Broadcasting and Telecommunications Legislative Review Panel* to recommend revisions to the statutes that govern all aspects of communications in Canada. The Panel examined issues such as telecommunications, Canadian content creation, net neutrality, cultural diversity, and how to strengthen Canadian media. Of significance to municipalities, the Panel reviewed the governance framework for antennas and the issue of access to municipal infrastructure for network deployment. The Panel issued its final report in January 2020 (**Full Text**). A number of recommendations (namely 22, and 34 to 37) involve municipalities directly. The Panel proposes transferring jurisdiction over antenna siting—including small cells for 5G—from ISED to the CRTC. The Panel further recommends that the right of access that carriers currently enjoy within the rightof-way be extended to encompass all potential support structures. These structures are referred to as "passive infrastructure", terminology that inaccurately portrays the functionality of a municipality's assets.

Although this is not stated explicitly, there seems to be an assumption on the part of the Panel that municipal consent will be required as per existing requirements under the *Telecommunications Act* but the ability to refuse access to municipal assets outright would be lost if the Panel's recommendations are adopted. Other recommendations, and several segments of the Panel's "rationale", on the other hand, are supportive of the municipal role and perspective as guardians of the right-of-way.

A summary of FCM's submission to the Panel is set out at Appendix C. At the time of publication, FCM was in the process of determining its official response to the recommendations. The federal government was also still studying the report. FCM will remain engaged in this issue and will update this guide as required.

In a parallel proceeding, the CRTC has embarked on a national consultation regarding the future of wireless services in Canada (**Telecom Notice 2019-57**). FCM is also actively engaged in representing the municipal sector in this process during which access to municipal infrastructure has become an important theme. The consultation phase of this process is expected to wrap up in March 2020 with no definite timeline for a decision from the CRTC. (To access copies of FCM's submissions to the CRTC, follow the links in *Appendix C*.) In the meantime, please consider the present guide as a living document, which will grow alongside the legislative and regulatory landscape as it evolves.

## The current legislative backdrop

All matters pertaining to interprovincial communications fall under federal jurisdiction. As it stands, the federal framework relating to telecommunications in Canada is set out in three key statutes:

- Telecommunications Act: The oldest of the statutes, this Act was initially meant to regulate telegraphs. Today, the Act essentially covers all modes of communication that involve a cable or wire. Significantly for municipalities, this Act gives carriers (the word used to designate telecommunications service providers) a right to use municipal ROWs to install, maintain and operate telecommunications infrastructure, subject to municipal consent. The Act is administered by the Canadian Radiotelevision and Telecommunications Commission (CRTC).
- Radiocommunication Act: This statute deals with the technical aspects of communications through transmitted signals: radio, television, cell phones, and the emerging 5G technology. The statute is administered by Industry, Science and Economic Development Canada (ISED), formerly known as Industry Canada. The placement of any towers for transmission antennas, for any consumer or commercial application, must be approved by ISED and the approval process is set out in the Antenna Tower Siting Procedure. Contrary to the Telecommunications Act, carriers do not enjoy any rights of access to install

transmission antennas, including small cells, and must negotiate access on a case-by-case basis.

Broadcasting Act: Much less relevant to the municipal sector, this statute deals with the management of frequencies, sets out policies regarding such things as Canadian content, and establishes the CBC/Radio-Canada. Most matters under this Act are administered by the CRTC.

When these laws were put in place, telling "telecommunications" and "radiocommunications" apart was simple: a telephone relied on a wire, while watching television or listening to the radio depended on your proximity to an antenna. However, as we all know from our daily lives, this dividing line has become blurred more than ever. Technically, our telephones now rely on transmission antennas, not cables, to function. And we consume most of our content through means, such as fibre-optic cables, that do not involve traditional broadcasters or antennas. We also tend to purchase all our communications services from a single carrier. These dramatic changes are undoubtedly why legislative and regulatory reviews are underway.

For municipal officials, understanding the different set of rules, and how they are applied, is essential to develop bylaws, agreements and practices that protect their municipality's interests while ensuring the latest telecommunications services are available to businesses and residents. Being well versed in how these rules interact will take on even greater importance with the impending deployment of 5G technology.

# Wires, cables, and municipal rights of way

If you have limited experience with the carriers operating within your ROW, understanding the rules regarding wireline infrastructure (such as fibre-optic cables) is important in the 5G context since—as we have seen—each small cell antenna has to be connected to the carrier's wire network, typically located within the ROW—usually underground.

When it enacted the *Telecommunications Act*, Parliament did two things. First, it used its jurisdiction to grant carriers a right to access municipal ROW and "other public places" to deploy their networks. Second, Parliament also expressly curtailed the carriers' rights. Under the Act, carriers can only access ROW and other public places with the consent of the municipality. Municipalities are prevented from refusing access to carriers, but they can dictate reasonable terms of access to their ROW through the conditions of their consent.

The conditions you set and the actual tool you decide to use to grant your municipality's "consent" to a carrier's work depends on your municipality's circumstances. FCM's updated handbook *Telecommunications and Rights-of-Way* explores in great detail the best practices that have developed over the last two decades in this field. The Small Cell Guide builds on that expertise, but only provides a cursory overview. You are therefore invited to consult the telecommunications handbook if you are not familiar with this topic.

In essence, there are three options available to you to grant consent for work within the ROW (or in other public places): Ad hoc or individual permits: If you only receive the occasional request from a carrier to perform work within your municipality's ROW (typical in less densely-populated areas), you might decide to deal with the occasional request from a carrier through ad hoc or individual permits, attaching specific conditions to each permit. Individual agreements can also be used if the carrier is seeking access to public property, other than a ROW, that has unique characteristics such as a park.

#### Municipal access agreements:

The most widely used way of granting blanket consent and setting the terms of access to municipal ROWs is through the negotiation of a mutually-acceptable, comprehensive Municipal Access Agreement (or MAA). MAAs typically cover a host of issues to protect local taxpayers by ensuring direct and indirect costs are not transferred to the municipality (e.g. reinstatement costs, pavement degradation, relocation for municipal works, liabilities, etc.). Please note that site-specific access agreements are also used when dealing with unique properties or assets.

Municipal access bylaws: The Telecommunications Act does not set out the form that municipal consent must take. Theoretically, therefore, consent and terms of access can take the form of a bylaw. A handful of municipalities have opted for this approach and, in some cases, the bylaws have worked well for some time. However, in other municipalities, the carriers have reacted by challenging the bylaws in court. At the time of publication, cases involving Calgary, Alberta and Gatineau, Quebec are proceeding through the courts so the judicial response to this approach— the definitive interpretation of the word "consent" under the Telecommunications Act is still unknown.

Regardless of the method used to grant municipal consent, both parties, the municipality as well as the carrier, can turn to the CRTC to resolve disagreements regarding the conditions of access to municipal ROWs. The CRTC has the authority to dictate the specific terms of carrier's access and their decisions can be appealed to the Federal Court of Appeal, with the Court's permission.

One of the central elements of the CRTC's approach has been the principle of cost-neutrality. Under this principle, the CRTC has clearly set out how municipalities can recover all cost elements attributable to the work and presence of telecommunications infrastructure within the ROW. The only cost element the CRTC has consistently rejected is an occupancy fee. Municipalities are not allowed to charge occupancy fees or rent to carriers for the space (even if they do so for other ROW users).

#### Transmission antennas: towers and small cells

The legal framework for antennas is completely different and is set out under the *Radiocommunication Act.* Contrary to wires and cables, carriers do not have any rights to access property for the purposes of installing transmission antennas. Carriers must negotiate on an equal footing with the owners of the assets where they wish to install an antenna. Typically, carriers purchase or lease the land to install large towers or, if they wish to attach a smaller antenna to an existing structure (rooftop, building wall, utility pole, etc.), they negotiate an occupancy agreement with the owner, which usually includes some form of rent. Of course, any owner is free to refuse. Once they have secured a location for an antenna, carriers must apply to Innovation, Science and Economic Development Canada (ISED) for technical approval. ISED will assess each application based on the Antenna Systems Procedure (**Client Procedures Circular CPC-2-0-03**). For stand-alone tower structures, regardless of height, the procedure provides for formal consultations with the municipality as the local land-use planning authority. However, 5G small cell installations on existing structures (towers and non-tower structures such as a building or power pole) are excluded from this requirement as long as the height of the structure is not increased by more than 25 percent.

In practical terms, this means that if the power poles are owned by the provincial utility in your jurisdiction, a carrier could enter into an agreement to install 5G small cell antennas on these poles and not even have to notify your municipality (even if the small cell is added at the top of the pole, as long as the addition is less than 25% of the existing height). When the carrier undertakes work within the ROW to connect these antennas to their fibre network, they might approach you for a permit for that part of the process. However, a number of municipalities, even those with comprehensive MAAs in place, are reporting the installation of 5G small cell antennas without their knowledge. Even if they are affixed to someone else's asset-like a power pole—if the antenna is located within the ROW space, it could raise issues of interest to the municipality such as safety concerns for the public and municipal workers. These aspects will be explored in the Key considerations and emerging best practices section of this guide.

# 5G deployment: where wirelines and antennas meet

As explained earlier in this guide, to provide connectivity, 5G networks rely on large numbers of small, short-range antennas. To properly cover a large urban area, several hundred antennas (if not thousands) must be installed throughout the service area. These might be "wireless" as far as the end user is concerned, but for the technology to function, each small cell antenna requires a power source and must usually be physically connected, by a cable, to the rest of the carrier's Internet network.

What this combination means is that 5G deployment simultaneously engages both sets of rules—the antenna regulations and the wireline regulations—and it does so on a very large scale. From a legal and a practical ROW point of view, the deployment of 5G networks potentially engages your municipality in at least six different ways:

1. Municipality as an asset owner: Carriers must obtain the consent of any property owner in order to place an antenna. Therefore, if a carrier wishes to install an antenna on a municipal asset, it cannot proceed without the full agreement of the municipality. Conditions of access to a supporting structure for each small cell antenna (traffic light, bus shelter, light standard, hydro pole, etc.) will have to be negotiated between the carrier and the owner of the structure. As we will explore further below, conditions typically include assigning liability, accessing a power source, maintenance, occupancy fees, worker safety, etc. In negotiating access, a municipality should feel free to impose any reasonable conditions to safeguard its interests. Like other private property owners, municipalities typically receive rent from carriers for any antennas installed on their property.

- 2. Municipality as the ROW owner/custodian: Each small cell will have to be connected to the 5G network through cables to transmit the data captured by the small cells or to deliver data to the wireless users and devices. This wire connection component of a carrier's 5G network will likely be located within your ROW and could require the installation of pedestals or cabinets at grade. As per the rules applicable to wire-line infrastructure, carriers have a right to use the ROW space for these installations but, as we have seen, this right is subject to the terms of your municipality's consent. Disagreements on the terms of access can be brought to the CRTC by either party for resolution.
- **3.** Municipality as land use planning authority: In 2014, the FCM was successful in advocating for regulatory amendments to the federal government's Antenna Siting Procedure that previously exempted smaller supporting structures (notably towers under 15 metres in height) from the public consultation requirements. The updated federal procedure requires consultation with the municipality and the public for all tower installations, regardless of height. In the 5G context, in the absence of a readily-available supporting structure, carriers might ask to place their own dedicated poles (or "monopoles," in 5G parlance—see *Appendix A* for images) within the ROW or elsewhere, to support a small cell antenna. Officially, the request to install a supporting structure would trigger the formal public consultation requirements with the land use planning authority, set out in ISED's procedure. Practically, since the carrier would have to seek permission from the municipality as the owner of the land on which the monopole is to be installed, both processes would likely unfold simultaneously.

Installations to existing towers or other existing structures such as power poles or buildings do not trigger the formal consultation requirement set out in CPC-2-0-03 unless the installation would result in an increase in height, of the existing structure, of more than 25 percent. A grey zone exists with respect to pre-emptive pole replacements by utilities. If a utility were to replace a pole with a much taller one, and then add antennas to it, it would likely fall outside the consultation requirements.

(Please note that, in addition to the changes to the federal framework, FCM negotiated a comprehensive Antenna System Siting Protocol Template with the Canadian Wireless Telecommunications Association. This template is not mandatory and has no legal force unless it is used by a municipality and a carrier to enter into an agreement that complements the federal consultation requirements and reflects local considerations.)

- 4. Municipality as building code enforcement authority: If a carrier wishes to attach a transmission antenna to an existing privately-owned building or structure, municipalities should feel free to require a building permit application if they have any concerns regarding the effects of the installation on the structure. The rationale for this requirement is the same as for any other change to an existing structure and FCM is of the view that this approach is legally and constitutionally sound.
- 5. Municipality as utility: Each small cell installation requires a dedicated power supply (although battery back-ups are being reviewed by some manufacturers). If your municipality also owns the local power utility, or acts as the utility itself, it will also have to consider the technical requirements for these power connections, as well as determine how to metre and bill for each antenna's electricity usage. There is no expectation that the utility will simply allow carriers to plug in to their power source and use electricity without paying for it. Some municipalities have calculated an annual rate for non-metered power connections as the power utility, or with the agreement of the power provider.
- 6. Municipality as legislator: Municipalities also enjoy a number of lawmaking powers through the adoption of bylaws. However, municipal officials should keep in mind that, in the context of telecommunications, these powers are greatly limited by the federal government's exclusive jurisdiction in this field. As the Supreme Court of Canada's decision in *Rogers Communications Inc. v. Châteauguay (City)*, (2016 SCC 23) clearly sets out, municipalities cannot use their powers to establish mandatory rules regarding antenna placement. A bylaw establishing a minimum separation distance between a dwelling and a small cell, for example, would be unconstitutional.

# Key considerations and emerging best practices

As with any change of this magnitude, it is difficult to anticipate all the legal and operational issues that will arise. Looking back to the impacts of the deregulation of the telecommunications industry in 1993—and the immediacy with which issues arose on the ground—we know that such changes can create significant challenges for individual municipalities and for the municipal sector as a whole.

FCM's goal through this guide and the ongoing work of the Technical Committee, particularly its Small Cell Working Group, is to support information sharing and the development of best practices with respect to 5G technology, and to do so as proactively as possible. Although 5G deployment is barely starting in Canada, we already know from Canadian municipalities at the forefront of this work and from experience elsewhere, that there are certain steps municipalities can take right away in order to protect municipal interests while make the deployment of 5G networks on their territory as smooth as possible.

# **GETTING STARTED** Administrative and stakeholder considerations

Internal engagement: Depending on your municipality's size and its approach and experience in processing applications from carriers for traditional ROW work, your internal structures and/or resources may or may not be adequate to deal with 5G issues comprehensively. In some municipalities, the division of responsibilities between various administrative units (engineering, public works, water, legal, transit, etc.) might not lend itself to handling the various aspects of 5G deployment naturally. There might not even be any obvious coordination point for this work. Coming together internally to figure out the basic "who does what," including designating a 5G function within your structure, is often a necessary and worthwhile first step, even before the carriers come knocking. Some municipalities have used the opportunity to coordinate or centralize the technical 5G work with initiatives such as smart-city opportunities and connectivity strategic plans for their communities.

**Engaging carriers:** Being able to anticipate and plan for the arrival of 5G with the carriers is certainly the preferred approach. This might be a slightly utopian objective as deployment is largely market-driven, with carriers going first where they can make the most money. This can make it challenging to obtain detailed plans in advance. Carriers want to protect their competitive advantages and may be reluctant to share too much information. Furthermore, experience has shown that plans can change suddenly as carriers review their commercial priorities. Nonetheless, engaging carriers as early as possible remains a preferred approach. Obtaining information on planned service areas, deployment timelines, preferred support structures, the types of small cells that will likely be used, the requirements for power and cable connections, etc., will allow you to assess what measures are required to ensure that the framework is in place to manage the arrival of 5G technology in your municipality.

Conversely, regular meetings with carriers will allow you to test out ideas on how your municipality is proposing to deal with these issues. For example, experience has shown that carriers can have difficulty understanding how power connections and fibre-optic feeds can be best installed to avoid safety risks and planning concerns. A healthy dialogue is often the most efficient way of resolving these issues.

Lastly, a proactive approach is also helpful in developing a healthy collaborative relationship with carriers for the long term. By and large, municipalities at the forefront of 5G deployment in Canada have reported good success with most carriers in jointly developing the parameters for a successful 5G introduction on their territory.

**Business processes:** The information gathered in the first two steps above will assist you in adapting or developing business processes and corresponding staffing needs to manage the influx of 5G small cell installation requests. Municipalities are free to develop and use whatever process is convenient and logical in their jurisdiction but, at this point in time, it seems that the type of installation has been guiding the comprehensiveness of permitting process used:

#### A. Attachment to an asset owned by a third party (like a power pole) within the ROW:

In these cases, the relationship is mainly between the carrier and the third-party owner. The power supply may or may not involve municipal interests while the wire connection might only require minor work within the ROW. In such cases, the governing ROW processes might be sufficient, along with a new "notification" requirement that allows you to know that there is a small cell at this location, the type and strength of the device, etc. This information would be useful to ensure a complete shutdown of the antenna if municipal employees must work in close proximity (more on this in the *Technical and engineering considerations* below). Some municipalities are going a bit further and treating the presence of this type of small cell installation within the ROW under their general ROW occupancy bylaws and requesting an occupancy fee for the small cell as well as an indemnity agreement with the carrier for civil liability and the cost of any future relocation at the municipality's request.

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- **B.** Attachments to private property outside the ROW: In such cases, you might consider that being notified is sufficient, depending on how much work needs to take place within the ROW to connect the antenna to the carrier's wireline network.
- **C.** Attachments to municipally-owned assets: In these cases, municipalities are generally requiring a full permit application process to make sure that municipal interests are protected, both as the asset owner and as the manager of the space. The complexity of the process will depend on whether the installation type has already been reviewed for technical and engineering purposes. If the application is for the same type of small cell antenna on the same type of municipal asset, for example, application processes are typically simplified and bulk applications are often considered. Applications for new antenna-asset combinations, on the other hand, typically require a closer examination (see *Technical and engineering considerations*).
- **D. In-building installations:** Requests for small cell installations inside municipal buildings are not frequent yet but will be coming. These will obviously require individual consideration as each building will present different challenges. However, a standard set of conditions can be developed in advance to govern general legal and operational issues associated with the presence of the antenna within a municipal building.

As with most approval processes, in developing any 5G-specific business process, you can set out the different goals that you wish to achieve: data collection on 5G infrastructure in your municipality, cost-recovery, protection for potential liabilities, public consultation or notification, etc.

E. Pilot projects and soft launches: In the Canadian municipalities where 5G deployment has progressed the most, municipal official and carriers have tended to work together in order to proceed incrementally and learn and develop best practices collectively. This has been achieved through limited pilot projects (installing a few small cells in different environments to identify practical issues that need to be resolved) or through soft launches of comprehensive business processes. In these cases, a permitting process and basic legal framework are put in place, a number of installations take place, and the lessons learned from this initial phase are used to inform the final versions of the permit process and master agreement between the carriers and the municipality.

# Technical and engineering considerations

Civil or structural engineering: In many cases, attaching a small cell antenna to an existing asset will require a review by a civil engineer. Some poles might quite readily accommodate the added weight of the antenna, its control box and its power supply. But the added wind load on the pole (depending on the location of the device, its shape, and size) can become a problem that needs to be addressed through modifications to the pole or an outright replacement with a stronger structure. The great variety of small cell devices, multiplied with the various types of assets to which a carrier might want to attach an antenna, will mean that each antenna-structure configuration will need to be assessed to ensure public safety. On the positive side, once this work is done for a specific antenna-structure combination, approvals can proceed much more quickly, streamlining business processes over time. To that end, some municipalities are creating tables of each type of antenna coupled with each type of support structure with carriers and integrating them into their legal agreements.

**Electrical engineering and power supply:** How each small cell is powered is an important consideration in establishing approval parameters in your jurisdiction. This aspect will have to be examined closely as carriers often assume that a power source is readily available when, in fact, it is not. For example, in many municipalities, street lights are not powered at all during the day, requiring significant reconfiguration of lighting circuits in order to provide the 24-hour power required for the operation of the small cells. Provincial electrical codes also vary, which means that a solution in one location might not work in another province. Lastly, metering power usage is an important part in ensuring full cost-recovery for taxpayers. Emerging practices currently vary according to the location and type of small cell, from individual smart meters attached to each cell, to a flat fee per cell negotiated with the local utility.

How an electrical feed is introduced in the pole is also another issue of contention. Where an external power feed is needed to feed a small cell antenna on an existing pole, the underground feed from the meter or the pedestal may be required, but supplying that feed through the existing streetlight's base can be problematic. Some carriers and municipalities have agreed to a shroud to cover the external cable routing on the outside of the base to the bottom of the pole itself, but it has been found to either be aesthetically undesirable or the shroud gets deformed or broken by snow clearing or by pedestrian traffic. A better practice is to allow for conduit paths in new streetlight bases/piles to allow an eventual power and/or fibre-optic feed through the base into the pole.

Access to municipal assets: In some municipalities, once the installation request has been reviewed, the carrier will be allowed to simply proceed with the work, from installing the small cell to connecting it to its power supply and to the underground fibre network. However, in other municipalities, work on municipal assets such as traffic lights and street lights can only be performed by municipal employees because of collective agreements. In some cases, this restriction might not apply to the installation of the antenna itself, as it is owned by the carrier. But the connection to the power supply within a pole might have to be done by municipal workers. In other jurisdictions, work on municipal assets can only be performed by designated contractors. These are important considerations that will have to be examined in your own context.

It is worth noting that some municipalities have opted, with the concurrence of carriers, to undertake the work of connecting the antenna to a designated location where the carrier brings its fibre-optic. In other words, the carrier installs the antenna but the municipality does the rest of the work on (or inside) the pole. This includes hooking up the power supply and the fibre-optic cable to a designated and municipally-provided junction cabinet at grade, where the carrier then connects the antenna to its underground network. This ensures that any work affecting the integrity of the municipal asset is directly under municipal control. Furthermore, by providing common cabinets for all 5G antennas, the goal is to limit proliferation of at-grade infrastructure.

Abandoned assets: 5G will only increase demand for congested spaces. Ensuring that carriers remove infrastructure that is no longer useful will be important in many locations. By and large, carriers resist incurring these costs however, municipalities might have to become more demanding on this point as time goes one to ensure that the space available is used efficiently.

**Density and antenna-sharing:** The concern of demand for 5G locations outstripping the supply, particularly in dense urban areas, has been identified openly by some carriers. Municipalities should also bear this in mind as they move forward with 5G approvals. If five different carriers each want to install their own 5G small cell networks, will there be enough room on available structures? Will the resulting visual clutter be

tolerated by officials or residents? This is still an unknown variable, but an important one to keep in mind.

#### Shutdown and employee/contractor safety:

Municipal employees might need to work in close proximity to small cells (to install street signage, decorative banners, or flowerpots, for example), while those working on streetlight luminaires would have to pass the cells' radiation zone. First responders arriving at the scene of an accident where a pole has been knocked down and a small cell is lying on the roadway will be placed in a similar situation of being in close proximity to the radiation emitted by the small cell. While some provincial safety associations and industry groups are examining the potential impacts of this kind of deployment, mechanisms and protocols to ensure the complete shutoff of individual small cells in such circumstances should form part of any technical parameters developed with the carriers.

#### Interference with existing wireless assets:

There is a small risk that 5G small cells might interfere with existing wireless infrastructure. For example, if your municipality already uses wireless devices to control traffic flows or street lights, advanced testing of the carriers' preferred antenna models would be a worthwhile exercise to avoid any surprises.

**Ground-mounted installations:** On this point, it is sufficient to remember that all small cells have to be connected to a carrier's fibre network in order to function. How this is managed at grade is another logistical challenge, particularly in congested urban areas. Municipalities will likely want to ensure some level of coordination or control—to avoid the proliferation of cabinets at grade.

# **Financial considerations**

**Cost recovery:** With respect to traditional telecommunications infrastructure within the ROW, the CRTC has long supported full recovery of "causal costs"-cost elements associated with the work and presence of telecommunications infrastructure. Municipalities have been approaching the deployment of 5G technology with the same principle in mind: ensuring that the taxpayer is made whole. Municipalities have been identifying direct costs such as engineering studies, electricity supply and workforce time, and billing them back to carriers. This seems to be the accepted best practice in Canada for the moment, a practice based in the sound public policy principle that taxpayers should not be subsidizing the for-profit ventures of the carriers.

**Permit fees:** Municipal law parameters are well-established when it comes to what a municipality can charge to process permit applications. These fees must bear a direct relationship to the service provided. To charge less than the cost of processing permit applications would be problematic as carriers would be treated differently from other utilities that provide services that are also of vital importance locally and nationally. It would also amount to a *de facto* subsidy to carriers that could be challenged by others.

**Occupancy fees:** Although the CRTC has long held that municipalities cannot charge occupancy fees or rent for the use of the ROW space by telecommunications equipment, with respect to antennas, carriers have to negotiate access to the supporting structure and typically pay rent to the owner of that structure. This is certainly the case for current 4G antennas found on many buildings. In places where initial 5G installations and testing has begun, agreements with carriers do include occupancy fees or rent for access to the municipality's structure. These typically include a fixed annual fee for the location as well as a per-meter annual fee for the underground conduits where these are provided by the municipality. In some cases, in-kind contributions are also being considered, such as free access within municipal buildings, as part of the fees package.

Lastly, municipal officials should also keep in mind any developments with respect to access to hydro poles in their jurisdiction. Even in Ontario, where the Ontario Energy Board (OEB) has set a tariff for wireline attachments on hydro poles, the OEB declined to regulate fees for small cells. Carriers must therefore pay market rates for these attachments. These developments can have an effect on municipalities' bargaining position.

# **Public opinion considerations**

Health concerns: Health Canada ensures that 5G installations comply with all existing safety regulations, including Safety Code 6 (SC6), which determines exposure limits for wireless devices and their associated infrastructure. Canada's limits are consistent with the science-based standards used in other countries. Large safety margins have been incorporated into these limits to provide a significant level of protection for the general public and personnel working near radio frequency sources. ISED's regulatory framework, including market surveillance and compliance audits, provides safeguards to protect Canadians against overexposure from wireless devices and antenna installations.

To this effect, ISED requires that all wireless equipment sold in Canada, including consumer devices such as cell phones, tablets and Wi-Fi routers comply with SC6. Carriers are obligated to comply with these regulations. In cases where residents express concern about this technology and health risks, carriers and Health Canada should be equipped to address the issue.

**Planning concerns:** Proper municipal oversight should help address the most obvious planning concerns such as sight lines and the effective management of the public realm by avoiding duplication, ensuring proper positioning, etc. However, clusters of small cells can be visually unappealing and create unique safety concerns. They can, in particular, detract from the qualities and integrity of areas such as historical or heritage districts as well as some planned urban environments. Products and techniques are available to camouflage and mask antennas, and municipalities can also facilitate placement in less visible locations.

# Framework and legal considerations

#### **Reviewing your Municipal Access Agreement:**

The current dual governance structure, coupled with the relatively low number of antennas required for traditional cell phone technology, means that wireless connections are not often addressed explicitly in traditional MAAs. You should review any agreements in place to determine whether they capture items such as power feeds and fiber optic connections to the small cell attachments from a vault or pedestal. For example, what is the definition of "works" or similar word in your agreement? What is its scope? Obtaining legal advice on this point in advance is recommended as it will allow you to know what position to take in future negotiations. You might consider proposing changes to your MAAs to explicitly cover any unique elements flowing from 5G deployment.

Prepare to negotiate a lease for supporting

**structures:** If a carrier has identified municipal assets (light poles, traffic lights, transit shelters, etc.) as one of its preferred options to install small cell antennas, it has to negotiate with the municipality and come to an agreement. As asset owners, municipalities have the right to refuse access. In this light, municipalities would do well to give some thought to their needs in this regard beforehand. For example, are there locations or asset types for which your municipality is not prepared to grant access? There is currently no preferred model to govern access to municipal infrastructure, but basic parameters will undoubtedly evolve over time.

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**Combining legal agreements:** You may find this more efficient, instead of entering into two distinct agreements to negotiate a comprehensive document to manage 5G deployments alongside traditional telecommunications infrastructure in your municipality. There is certainly nothing preventing a municipality from proceeding this way. However, it is worth repeating the fundamental point that antennas and their connecting infrastructure are subject to two different sets of rules. Municipalities can refuse antennas on their property, but they cannot refuse the installation of equipment required to connect antennas located on other assets. Municipalities cannot charge occupancy fees for the connecting cables and other equipment installed within the ROW, but they can charge market value for an antenna located on their assets.

Some municipalities have been misinformed by carriers into believing that small cells deployment is already covered in MAA's and that, as a result, carriers enjoy the same conditional right of access for antennas as they do for their cables, etc. This is not the case. Prepare for litigation: While FCM's goal is to be a constructive partner in the deployment of 5G technology, there will inevitably be a few cases where it will be necessary to turn to regulatory bodies or the Courts to clarify jurisdictional grey zones. FCM, through its Legal Defense Fund, can intervene in key cases. However, experience in the telecommunications realm over the last 25 years has clearly shown that, in order to help regulators and the courts gain a better understanding of municipal needs, the presentation of strong, objective evidence, collected by individual municipalities, is crucial. By preparing reliable data on contentious legal and operational issues, individual municipalities will be able to demonstrate the legitimacy of their arguments and positions, not just for themselves but also for the municipal sector as a whole.

# The future

There is still a fair amount of uncertainty with respect to how both the legislative framework and the range of technical challenges for 5G deployment will be managed. How will the federal government respond to the Report of the Broadcasting and Telecommunications Legislative Review Panel? If the Panel's recommended changes to the regulatory framework for antennas and wireline infrastructure are adopted, this would certainly upend existing practices. Changes of that magnitude would not only take time to make their way through Parliament, they would also generate inevitable legal questions that might require final determination by the courts.

From a technical point of view, the review of mobile wireless services undertaken by the CRTC in Telecom Notice 2019-57 is another source of uncertainty. As part of this process, some carriers have urged the CRTC to adopt an expansive interpretation of its authority in order to take over the authority over small cells antennas. Others argue that the CRTC should impose measures similar to those enacted by the Federal Communications Commission in the United States: time limits for municipalities to process 5G applications, fee caps, etc. In its various submissions (see Appendix C for the complete documents), FCM has argued strenuously that the CRTC does not have the same authority as the FCC, and that the conditions in the U.S. that led to the imposition of measures simply do not exist in Canada. FCM's central position is that, in fact, the real impediments to timely and efficient deployment of 5G are technical—not legal—and the focus of all stakeholders' efforts should be on coming together to define and resolve these issues of common interest. To that end, FCM has supported the proposals made by certain carriers who have opted for a more collaborative tone. For example, a proposal for the creation of a national 5G working group to work through common technical issues with municipalities and other stakeholders holds tremendous potential to make sure 5G deployment is done properly. Another suggestion from a number of stakeholders was the need for a faster dispute-resolution process to facilitate 5G implementation, an idea also endorsed by FCM.

During FCM's presentation at the CRTC hearings, the Commission seemed to express a good level of interest in this collaborative approach. The CRTC also seemed receptive to the various examples provided by FCM with respect to the nature of the challenges on the ground congestion, power supply to small cells, backhaul connections, etc—and the fact that these challenges require a technical solution, not a regulatory one. The CRTC's process is expected to wrap-up at the end of March 2020 with a final round of written submissions but a timeline on the publication of the CRTC's preferred approach was not known at the time of publication.

In short, municipal officials should continue to monitor closely developments on these fronts, as well as FCM communications on these issues.

## APPENDIX A: Photos



Example 1 of 13-metre tall streetlight antenna pole with connection cabinet at grade

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**Close-up of connection cabinet** 

Example 2 of 13-metre tall streetlight antenna pole with cabinet.





**Close-up of connection cabinet** 



Small cell attachments to decorative street lights (the white vertical element is the light)







Small cell attachments to decorative street lights (the white vertical element is the light)

# APPENDIX B: The U.S. context

The deployment of 5G is a bit more advanced in the U.S., so there is more collective experience from which to learn. However, it should be noted that the unique political dynamics at play in the US also affect the scope of municipal authority with the FCC and several states specifically curtailing local ability to manage 5G installations.

Recent U.Ss federal and state legislation (presently in 21 states) concerning the deployment of small cell technology may prevent cities from addressing aesthetic or safety concerns, and severely limits what cities may charge for private sector use of public streets as well as imposing new unfunded mandates on municipalities in the form of radically shortened application timelines.

The following areas have been the focus for legislative interest in the U.S.:

- > Streamlining processing times for applications and permits.
- Capping and lowering collocation, application, and ROW fees.
- Limiting municipalities' design aesthetics jurisdictions.
- Limiting municipalities' control over denying applications for reasons other than required by legislation.

The Federal Communications Commission (FCC), the U.S. regulator, believes that municipal governments are overcharging wireless carriers to access public ROW. As an example of recent action, the FCC issued a Notice of Proposed Rulemaking (NPRM) on the topic of Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment.

This NPRM suggests stripping local governments of siting authority by significantly shortening permitting "shot clocks" and eliminating cities' ability to temporarily freeze complicated siting applications. It also limits annual lease rates to \$270 per small cell, significantly lower than the present market rate in most communities. The RVA LLC/Next Century Cities found that among municipal governments surveyed, the average annual lease rate was US\$1,438 per attachment and the median annual lease rate per pole was US\$1,200.

Village of Pemb<mark>erton</mark> Regular Council Meeting No. <mark>1518</mark> Tuesday, June 30, 2020 222 of 279 Interestingly, the RVA LLC/Next Century Cities report also found that municipalities are indeed concerned about maintaining local control and input. For example, over half of respondents (59% of 176 surveys returned) reported being greatly concerned about state laws and 52% are concerned about federal regulations that are passed without municipal input. A full 84% of respondents believe that state laws presently under consideration related to pole use for small cells will have negative impacts for their community.

In the U.S., market value rates are being calculated by comparison for fees charged for installation of a monopole or lattice tower on municipal ROW or titled lands. For example, based on the current rates for monopoles—which can be anywhere from US \$20,000 to US\$27,000 per year—with the standard range of 1.3 km and the stated range of various wireless units of about 180 meters, the annual rate per pole could be anywhere from US\$2,769 to US\$3,738. The fee could be applied for multiple attachments, or per attachment. Some cities charge different fees depending on the number of poles attached (e.g. in increments such as 1-25, 26-50, 51-100, 100-200, and over 201). For example, the rate in Long Beach, CA is US\$1,500 per pole per year, whereas in Buffalo, NY, it is US\$2,000 per pole per year with an automatic 3% annual increase.

A 2018 study by RVA LLC/Next Century Cities that was implemented to help determine the current deployment status of, and community attitudes toward Smart City and small cell deployment, found that the appearance of the equipment was the most common complaint about small cells. Fifty-eight percent of 176 municipal respondents reported complaints from citizens about deployment aesthetics. In Boston, the city worked with carriers and community members to come to agreement on how to ensure the equipment blended in more naturally with the cityscape.

#### Huntington Beach, California

Huntington Beach had great success in balancing carriers' interests with maintaining local control and community values. They found that bringing as many stakeholders as possible to the table and collaboration was important at every turn.

They were able to leverage already available assets, by acquiring 11,000 street lights from Southern California Edison. As well, Philips approached Huntington Beach to offer a deal to deploy 200 Smart Fusion Poles, making them the first city in the country to have this technology. The poles include integrated stealth antennas that can support service from several carriers at each location. So far, agreements have been made with Verizon, AT&T, and Mobilitie, creating another source of revenue for the city.

They first created a broadband strategic plan and then based on that wider plan, a specific plan with carriers to deploy small cell technology. They also made use of public-private partnerships, where this made sense, in the deployment of small cells.

They created an internal (municipal) telecommunications committee to evaluate all permitting processes. At the start, internal permitting processes didn't include any protocol for wireless siting in the public ROW, so a new process for permitting of wireless facilities through the public works department was created. They also amended the zoning code to permit small cells that meet pre-approved design standards within the public ROW. The committee created a forum that encouraged participation from all city departments, including fire and police, to work together to create policies that worked for everyone.

Importantly, the municipality worked with carriers to develop four pre-approved small cell design standards. Input from carriers on design was incorporated into the final permitting process, so if carriers' deployments fit one of the four standards, they are free to follow a streamlined, over-the-counter application process for permits. Collaborating with carriers to develop these designs was integral to ensuring the permitting process would work for both the city and the carriers. They also worked with other municipalities in Orange County to develop best practices in wireless siting. As a group, the cities worked through similar questions together to problem-solve and create shared resources and tools.

#### Denver, Colorado

Denver is currently exploring its policies and ordinances for Small Cell infrastructure and reviewing all new pole applications, within the parameters of federal and state law as well as Denver rules and ordinances. Under current law, it is not clear how the city can restrict height, design, or location (unless conflicting) of Small Cell infrastructure. The city is having success in coordinating expectations and recommendations through enhanced communication efforts at the outset of each carrier's program. So far each carrier has been receptive to:

- Considering standardizing pole design elements, colour, location, etc. to meet intent and character of existing infrastructure in the public ROW.
- Limiting pole heights to match existing street lighting and other poles in the public ROW.
- Generally avoiding placing poles adjacent to parks and historical places.
- Encouraging pole and equipment designs that enclose as much equipment as possible to minimize visual impact.



- Co-locating equipment onto existing infrastructure wherever feasible.
- Installing consistent infrastructure that does not discriminate based on neighbourhood type, demographic, or character.
- Exploring new concepts in combining equipment from multiple companies into single poles.

Public Works currently performs careful consultation with top executive and program management staff from each wireless carrier about proposed infrastructure programs before the carrier is allowed to submit any applications for approval. This ensures that each carrier approaches the city in a consistent manner, and that the city's current policies and permitting procedures are well known at the outset.

Per state law, the city must allow each company to propose their infrastructure in the public ROW. Additionally, the city must offer permitting procedures that can process "bulk" Small Cell programs in batches, in 90 days or less, rather than requiring individual permits for each pole or antenna. In response to these requirements, Public Works has established a plan review and permitting program that combines existing utility plan review and encroachment permitting into one contiguous process. Each applicant may submit batches of 10 or fewer unique poles or pieces of ground-mounted equipment per application. Each application will result in a revocable encroachment permit.

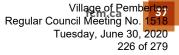
# APPENDIX C: FCM submissions

# Broadcasting and telecommunications legislative review process

January 2019 - Recommendations (excerpt from the full submission which can be found here: https://www.ic.gc.ca/eic/site/110.nsf/vwapj/908\_ FederationofCanadianMunicipalities\_10\_EN\_CA.pdf/\$FILE/908\_ FederationofCanadianMunicipalities\_10\_EN\_CA.pdf)

As stated, municipalities are crucial partners in the timely and cost-effective deployment of communications infrastructure in Canada. Therefore, in their submission to the Broadcasting and Telecommunications Legislative Review, (January 2019) FCM made clear their recommendations involving municipal ROW management related to access and consent, including:

- Develop a national broadband strategy, with elements that enhance accountability, transparency and cooperation between federal agencies, orders of government and with industry to improve broadband service across the country, as well as better ensure universal access to emerging technologies at affordable rates for consumers.
- Maintain municipalities' legislated role in managing public space for the benefit of all users. Achieving national connectivity objectives must build on and enhance the long-standing partnership with municipalities.
- Maintain the integrity of the local taxpayer without transferring costs onto the municipal tax base.
- Maintain the wording of sections 43 and 44 of the *Telecommunications Act*.
- Maintain the jurisdiction between the CRTC and ISED in the governance of small cells.
- Clarify the responsibilities of ISED and the CRTC over broadband in order to facilitate the implementation of a national broadband strategy.



FCM continues to focus on ensuring that municipalities maintain their rights around managing ROW issues and assisting with informational tools and strategies to improve the operational deployment of emerging technologies.

#### CRTC Telecom Notice 2019-57 -Review of Wireless Services

Initial submission dated May 15, 2019 - <u>https://services.crtc.gc.ca/pub/</u> DocWebBroker/OpenDocument.aspx?DMID=3646824

Response to the CRTC's "Request for Information" (RFI), a series of targeted questions, dated September 2019 <u>https://data.fcm.ca/documents/tools/guides/</u>crtc-telecom-notice-2019-57-fcm-responses-to-questions.pdf

Further comments, as per CRTC procedures, in response to all submissions and responses to RFIs submitted by all parties, dated November 23, 2019 https://services.crtc.gc.ca/pub/DocWebBroker/OpenDocument. aspx?DMID=3756327

FCM presentation slides for the CRTC hearings on February 21, 2020 - https://data. fcm.ca/documents/members\_only/board\_march/2020/FCM-CRTC-Telecom-Notice-2019-57-Presentation-en.pptx

Video recording of FCM's presentation at the CRTC hearings on February 21, 2020 - https://www.cpac.ca/en/programs/crtc-hearings/episodes/66152116/

# APPENDIX D: Canadian case study

### Edmonton, Alberta

The City of Edmonton proceeded using a clear and precise order in finding solutions to small cell deployment issues. Public consultation was an important piece and the technical review of the technology was extensive. The telecom carriers had input, and they indicated that they thought the process made sense. Edmonton has developed ROW consent and access agreements that are separate from MAAs and has developed a streamlined permitting process along with clear policies for permit review. The following is a brief selection and summary of agreement provisions and requirements.

- The annual fee for an attachment is \$500 plus GST per attachment, as approved by city council.
- The cabinets associated with the antenna are not to be attached to the pole, contractor cabinet bases will not be allowed.
- For large cabinetry, there is no objection to the unit being wrapped or painted with a mural or other artwork approved by the City.
- Any proposal to install an attachment in an area serviced with decorative poles must be designed to match, as much as possible, the design used in that neighbourhood.
- If multiple attachments are proposed in a given area, it is the city's preference that the poles are fed from a central location (e.g. three or four poles with a fibre-optic feed from a central vault).
- Installations will be permitted at any time (subject to co-ordination with other construction work and/or events.
- "Mid-span" stand-alone poles will only be allowed in areas where there are no existing street lights or poles. Should an area become serviced by standard street lighting, any stand-alone pole may need to be removed at the telecommunication company's expense.

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- Red light camera poles and/or CCTV poles are not available for attachments.
- The companies shall be responsible for all electrical permits, installation of the power feed, meter installation, and associated power consumption bills from the power carrier.

The city will review and, where appropriate, approve the installation of attachments. Once a pole has been determined to be useable, the applicant shall apply for a Utility Line Assignment (ULA) permit for the underground connections to the pole. All fees associated with the ULA permit process, pavement degradation fees, and lost productivity costs shall be charged as per the applicable agreement with the company (usually the ROW Consent and Access Agreement).

For the installation of pole attachments on public road ROW, there will be a pre-consultation site investigation meeting with the city to:

- Determine if a specific pole can accommodate an attachment.
- Identify preliminary issues of concern.
- Identify requirement for public consultation.
- Guide the content of the proposal submission.

Once the meeting has taken place, Edmonton's City Operations will give the applicant an information package that includes requirements for public consultation, installation and design and a list of plans and studies that may be required as well as any additional approvals and/or studies that the City has identified as being required. If the proposal is found to be technically possible, City Operations will forward an agreement to the applicant, advise if any additional approvals are required and require the applicant to engage in public consultation similar to the consultation required under City of Edmonton Policy C471C "Policy for Siting Telecommunications Facilities."

## APPENDIX E: References for further reading

Models and Challenges for the Deployment of Next-Generation Telecom Systems in Cities, report commissioned by the City of Montreal, June 2018 (English version)

https://res.cloudinary.com/villemontreal/image/upload/v1573053761/portail/ nitmhkpzlhc1yi00poxi.pdf

Background of Small Cell Technology. SmartWorks Partners. December 18, 2018

https://www.smartworkspartners.com/small-cell-overview

*Becoming Broadband Ready: A Toolkit for Communities*. Next Century Cities. January 2019

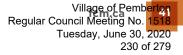
https://nextcenturycities.org/becoming-broadband-ready/

Broadband Strategy, City of San José CA

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https://nextcenturycities.org/guest-blog-bridging-the-digital-divide-inhuntington-beach/



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Summary of Final FCC Small Cell Order Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment. Declaratory Ruling and Third Report and Order; WT Docket No. 17-79; WC Docket No. 17-84. December 20, 2018 https://nextcenturycities.org/wp-content/uploads/Guide-to-FCC-Small-Cell-Order.pdf

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## Creating a Proactive Antenna Siting Protocol & Small Cell Licensing Agreement

#### **Overview**

If your municipality does not have its own antenna siting procedure in place, when a telecom wants to install an antenna in your community the default antenna siting policy created by Innovation, Science and Economic Development Canada (found <u>here</u>) will apply.

In some instances, telecommunication providers are not required to consult with land use authorities before they install small cells. For example, if a telecom is installing 4G or 5G small cell transmitters on existing structures, and its equipment does not increase the height of that structure by more than 25%, the proponent is only required to request a local government's permission if the town owns the property it wants to put the antennas on.

Clearly, it is prudent for local governments to create antenna siting protocols that include small cells, and to protect local interests in all antenna siting matters to the degree that federal telecommunication regulations permit. To draft a siting protocol for your town, use the template found here as a guide. Be sure to add the elements below to insure your protocol is as protective as possible.

The suggestions in this document may also be included in small cell licensing agreements made between telecoms and local governments.

**DISCLAIMER:** The content below is provided for informational purposes only and is not intended to substitute for legal advice regarding compliance with local, provincial, or federal law. CALM makes no assurances or guarantees regarding the applicability or suitability of this language for any municipality, and shall not be held responsible for any legal action arising from the use of language or concepts contained herein.

### **General Examples of Areas to Address**

#### LOCATION

- Prohibiting small cell installations in residential areas, in certain districts
- Requiring installations to be a certain distance away from residences, schools, hospitals, and/or other installations

#### **AESTHETICS / ENVIRONMENT**

• Aesthetic, design, and noise requirements such as co-location, camouflage, height and light limits, and more

#### ADMINISTRATIVE / LEGAL

- Requiring that residents within a certain distance of an installation be notified
- Requiring annual recertification fees
- Requiring permittees to defend and indemnify the city from any liabilities arising from permits and the installation, operation and maintenance of small cell installations
- Requiring the proponent to have insurance that includes pollution liability with no electromagnetic field exclusions as well as cyber-security and data privacy protection
- Reserving the right to hire independent consultants at the applicant's expense
- Reserving the right to employ a qualified RF engineer to conduct an annual random and unannounced test of the Permittee's small cell wireless installations located within the Town to certify compliance with all Safety Code 6 radiofrequency emission limits

#### POLICY

• Appointing a committee to study the viability of a community-owned fiber optic network

Fiber networks wired directly to the premise are *always* faster, safer and more energy efficient and secure than wireless networks. To learn more about the many benefits of community-owned fiber please visit <u>Connected Communities</u> ~ <u>Wired fiber for Sustainable Last-Mile Solutions</u>

### **Specific Content Suggestions**

#### Section 1: PERMITTING PROCESS

**1.1 Permit Required.** No small cell installation shall be constructed, erected, modified, mounted, attached, operated or maintained within the Town on or within any public right-of-way without the issuance of a permit. No approval granted under this chapter shall confer any exclusive right, privilege, license or franchise to occupy or use the public right-of-way of the Town for delivery of telecommunications services or any other purpose.

**1.2 Application Content.** All permit applications must include:

A. Detailed site and engineering plans for each proposed small cell installation, including full address, GIS coordinates, a list of all associated equipment necessary for its operation, as well as a proposed schedule for the completion of each small cell installation covered by the application.

B. A master plan showing the geographic service area for the proposed small cell installation(s), and all of applicant's existing, proposed and anticipated installations in the Town.

C. Certification that the proposed small cell installation(s) addresses an existing and significant gap in coverage in the service area, such certification to include a detailed map of the "gap areas" and documentation of such gaps causing an inability for a user to connect with the land-based national telephone network or maintain a connection capable of supporting a reasonably uninterrupted communication.

D. Photographs of proposed facility equipment.

E. Visual impact analyses with photo simulations including both "before" and "after" appearances, including simulations of the appearance of the equipment from the perspective of any property owner within 250 feet. F. Certification by a certified radio-frequency engineer that the small cell installation will be in compliance with Safety Code 6 RF emissions as they relate to the general public, including aggregate emissions for all colocated equipment.

G. Certification that the applicant has a right under federal law to install wireless telecommunications facilities in the public right-of-way.

H. Documentation demonstrating a good faith effort to locate the small cell installation in accordance with the preferred provisions of this protocol.

I. Documentation that owners of all properties within 500 feet of the proposed small cell installation have been notified in writing via certified mail of the proposed installation, including its exact location.

J. An executed indemnification agreement as set forth in section 1.7 below.

K. A disclosure of all related third parties on whose behalf the applicant is acting, including contracting parties and co-locaters.

L. If the small cell installation is proposed to be attached to an existing utility pole or wireless support structure owned by an entity other than the Town, sufficient evidence of the consent of the owner of such pole or wireless support structure to the proposed collocation.

M. Performance specifications and data that identify the maximum and minimum amount or level of radio-frequency emissions that are produced by the equipment when it is in full operating mode, and a monitoring plan for the Applicant's equipment capable of tracking and recording the daily amounts or levels of radio-frequency emissions that are produced by the equipment in order to verify that the average and peak emissions do not exceed the levels permitted by Safety Code 6. **1.3 Application Fee.** The Town shall assess a per-installation fee of \_\_\_\_\_\_ to cover the Town's costs of processing, reviewing, evaluating, conducting a public hearing, and other activities involved in consideration of the application, and conducting oversight of the construction of the small cell installation to ensure compliance with zoning requirements.

**1.4 Consultant Fee.** The Town shall have the right to retain an independent technical consultant to assist the Town in its review of the application. The reasonable cost of the review shall be paid by the applicant.

**1.5 Hydro Fees**. Permittee shall pay to the Municipality an annual hydro consumption surcharge of two hundred and fifty dollars (\$250) per Structure. This amount is due on January 2 of each year and is not prorateable or refundable.

**1.6 Compliance Bond.** Upon approval of the application, the Permittee shall be required to post a bond in the amount of \$50,000 for each small cell installation, such bond to be held and maintained during the entire period of Permittee's operation of each small cell installation in the Town as a guarantee that no such installation, including any co-located equipment, exceeds or will exceed the allowable Safety Code 6 limits for RF radiation exposure to the general public as determined by a qualified independent RF engineer under Section 1.11.2 below.

**1.7 Indemnification.** Permittee shall provide an executed agreement in the form provided by the Town, pursuant to which Permittee agrees to defend, hold harmless and fully indemnify the Town, its officers, employees, agents, attorneys, and volunteers, from (i) any claim, action or proceeding brought against the Town or its officers, employees, agents, or attorneys to attack, set aside, void, or annul any such approval of the Town or (ii) a successful legal action brought against the Placement or operation of a small cell installation. This indemnification agreement shall be in a form acceptable to the Town Attorney and shall include, but not be limited to, damages, fees and/or costs awarded against the Town, if any, and cost of suit, attorney's fees, and other costs, liabilities and expenses incurred in connection with such proceeding whether incurred by the Permittee, the Town and/or the parties initiating or bringing such proceeding. The

Village of Pemberton Regular Council Meeting No. 1518 Tuesday, June 30, 2020 238 of 279 agreement shall also include a provision obligating the Permittee to indemnify the Town for all of the Town's costs, fees and damages which the Town incurs in enforcing the indemnification provisions of this Section.

**1.8 Hazardous Substances.** Permittee specifically acknowledges that the Town is not responsible for the escape, discharge or release of any hazardous substances from the Equipment, and specifically agrees to indemnify, protect and save the Town harmless from any and all actions, causes of actions, claims and demands regarding any such hazardous substance that has escaped, been discharged or released from the Equipment unless caused by the gross negligence or willful misconduct of the Town, its elected officials, appointed officers, employees, agents, contractors or any person the Town is responsible for in law.

"Hazardous Substance" means any hazardous or toxic substance, and includes radiofrequency electromagnetic energy, or other radiation, petroleum products and byproducts, industrial wastes, contaminants, pollutants, dangerous substances, and toxic substances, as defined in or pursuant to any law, ordinance, rule, regulation, bylaw or code, whether federal, provincial or municipal.

**1.9 Environmental Liability.** Permittee agrees to assume all environmental liability under federal, provincial and local government laws in Canada, as a responsible person or otherwise, relating to its occupancy and use of the Facilities, including but not limited to any liability for clean-up of any Hazardous Substance in, on, under, along, across and around the Facilities, which are proven to result directly from:

(a) the installation, occupation, operation and removal by Permittee of the Equipment;

(b) any materials or goods brought to the Facilities by Permittee, or by any other person with the express or implied consent of Permittee. Permittee shall not be responsible for, or required to remove or remediate any Hazardous Substances that have migrated onto or into a Facility or which existed at a Facility prior to Permittee's occupation or use of such Facility.

1.10 Insurance: For the duration of the Term:

(a) Permittee shall maintain comprehensive general liability insurance with coverage up to five million dollars (\$5,000,000.00), per occurrence and in the annual aggregate for products and completed operations, to protect Permittee from claims for personal injury, bodily injury or property damage arising out of Permittee's Work and/or operation of the Equipment. In addition, Permittee agrees that:

(i) the Town shall be added as an additional insured but only with respect to Permittee's legal liabilities arising out of Permittee's operations under this Agreement; and

(ii) the insurance shall include coverage for: products and completed operations; blanket contractual liability; cross-liability; non-owned automobile liability; pollution liability with no electromagnetic field exclusions, cyber-security and data privacy protection, and broad form property damage.

(b) Permittee shall also maintain automobile liability insurance, with coverage for bodily injury and property damage, for any Permittee owned or leased vehicles used in the performance of the Work in the amount of two million dollars (\$2,000,000.00) per accident.

(c) The comprehensive general liability insurance policy shall contain a provision whereby the insurers will endeavour to provide the Town with sixty (60) days' notice of cancellation.

(d) Upon execution of this Agreement, Permittee shall file with the Town a certificate of insurance of each insurance policy required. Permittee shall also provide a certificate of insurance at any time upon reasonable written

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request by the Town . Failure to maintain the insurance policies as required by this Agreement is a material breach of contract.

(e) Excess (umbrella) liability insurance may be used to achieve the required insured limits.

#### 1.11 Annual Re-certification.

**1.11.1** Each year, commencing on the first anniversary of the issuance of the permit, the Permittee shall submit to the Town an affidavit which shall list all active small cell wireless installations it owns within the Town by location, certifying that

(1) each active small cell installation is covered by liability insurance with no electromagnetic field exclusions in the amount of
\$5,000,000 per installation, naming the Town as additional insured; and

(2) each active installation has been inspected for safety and found to be in sound working condition and in compliance with all federal safety regulations concerning RF exposure limits.

**1.11.2** The Town shall have the right to employ a qualified RF engineer to conduct an annual random and unannounced test of the Permittee's small cell wireless installations located within the Town to certify their compliance with all Safety Code 6 radio-frequency emission limits as they pertain to exposure to the general public. The reasonable cost of such tests shall be paid by the Permittee.

**1.11.3** In the event that such independent tests reveal that any small cell installation or installations owned or operated by Permittee or its Lessees, singularly or in the aggregate, is emitting RF radiation in excess of Safety Code 6 exposure guidelines as they pertain to the general public, the Town shall notify the Permittee and all residents living within 1500 feet of the small cell installation(s) of the violation, and the Permittee shall have forty-eight (48) hours to bring the small cell installation(s) into compliance. Failure to bring the small cell installation(s) into compliance shall result in the forfeiture of all or part of the Compliance Bond, and the Town shall

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have the right to require the removal of such installation(s), as the Town in its sole discretion may determine is in the public interest.

**1.11.4** Any small cell wireless installation which is no longer in use shall be removed by the Permittee within 30 days of being taken out of use.

**1.11.5** Any small cell wireless installation which is not removed within 30 days after being listed as no longer in use in the annual re-certification affidavit shall be subject to a fine of \$100/day until such installation is removed.

**1.11.6** Where such annual re-certification has not been properly or timely submitted, or equipment no longer in use has not been removed within the required 30-day period, no further applications for small cell wireless installations will be accepted by the Town until such time as the annual recertification has been submitted and all fees and fines paid.

**1.12 Non-Permitted Installations** Any small cell installation constructed, erected, modified or enhanced prior to the issuance of a site-specific permit from the Town shall be removed prior to the submission of any other application. No application for a small cell installation shall be considered while such unauthorized installations remain.

**1.13 Notice of Permit Filing.** Notice of the filing of any permit submitted pursuant to this protocol shall be sent to all property owners within 500 feet of each and every proposed small cell installation within five (5) days of such filing, such notice to be sent by certified mail at the expense of the Permittee.

**1.14 Public Availability of Permit Applications.** All permit applications submitted pursuant to this protocol, including all related documents, shall be made available for viewing and/or copying by any member of the public during normal business hours at the relevant office of the Town. Any charge for copies shall be limited to the Town's actual cost. No additional charges may be assessed against any member of the public for access to the entire permit and all of its related documents.

#### Section 2: LOCATION AND CONFIGURATION PREFERENCES

**2.1 Siting Guidelines.** The purpose of this section is to provide guidelines to applicants and the reviewing authority regarding the preferred locations and configurations for small cell installations in the Town, provided that nothing in this section shall be construed to permit a small cell installation in any location that is otherwise prohibited by the Town code.

**2.2 Order of preference - Location.** The order of preference for the location of small cell installations in the Town, from most preferred to least preferred is:

- 1. Industrial zone
- 2. Commercial zone
- 3. Mixed commercial and residential zone
- 4. Residential zone

#### **Discouraged Locations:**

- 1. Land use
  - Medium and high density residential areas
  - o Schools, daycare facilities, playgrounds and similar facilities
  - o Areas that adversely impact view corridors
  - Heritage areas (unless visibly unobtrusive) or on heritage structures unless it forms an integrated part of the structure's overall design (i.e. through the use of stealth structures).
  - Nature protection areas
  - Environmentally sensitive ecosystems

#### 2. Other considerations, irrespective of land use designation

- Locations directly in front of doors, windows, balconies or residential frontages
- Community gathering places such as community halls, churches, commercial eating & drinking establishments
- Sites of topographical and geographic prominence

(See Note 1)

#### Section 3: INSTALLATION SPECIFICATIONS

**3.1.** The Permittee must construct, install and operate the small cell installation in strict compliance with the plans and specifications included in the application.

**3.2.** Where feasible, as new technology becomes available, the Permittee shall replace larger, more visually intrusive facilities with smaller, less visually intrusive facilities, after receiving all necessary permits and approval required by the Town.

**3.3.** The Permittee shall submit and maintain current at all times basic contact and site information on a form to be supplied by the Town. The Permittee shall notify the Town of any changes to the information submitted within seven days of any change, including the name or legal status of the owner or operator.

**3.4.** At all times, all required notices and signs shall be posted on the site as required by ISED and federal law, and as approved by the Town. The location and dimensions of a sign bearing the emergency contact name and telephone numbers shall be posted pursuant to the approved plans.

**3.5.** The Permittee shall maintain current at all times liability and property insurance including pollution liability with no electromagnetic field exclusions for each small cell installation in the Public Right of Way in the amount of \$5,000,000 (Five Million dollars) naming the Town as additional insureds.

**3.6.** The proposed small cell installation shall have an adequate fall zone to minimize the possibility of damage or injury resulting from pole collapse or failure, icefall or debris fall, and to avoid or minimize all other impacts upon adjoining properties.

**3.7.** Every effort shall be made to locate small cell installations no less than 2000 feet away from the Permittee's or any Lessee's nearest other small cell installation, or within 1500 feet of any school (nursery, elementary, junior high, and high school), trail, park or outdoor recreation area, sporting venues, and residential zones. (*See Note 2*)

**3.8.** A single or co-located small cell installation must be mounted on an existing structure such as a utility or lighting pole that can support its weight and the weight of any existing co-located equipment. All new wires needed to service the small cell installation must be located within the width of the existing structure so as to not exceed the diameter and height of the existing utility pole.

**3.9.** All equipment not to be installed on or inside the pole must be located underground, flush to the ground, within three (3) feet of the utility pole. Each installation is to have its own dedicated power source to be installed and metered separately.

**3.10** If a Permittee proposes to replace a pole in order to accommodate a small cell installation, the pole shall match the appearance of the original pole to the extent feasible, unless another design better accomplishes the objectives of this section. Such replacement pole shall not exceed the height of the pole it is replacing by more than seven feet.

**3.11** Each small cell installation facility shall be designed to be resistant to, and minimize opportunities for, unauthorized access, climbing, vandalism, graffiti and other conditions that would result in hazardous situations, visual blight, or attractive nuisances. The Town may require the provision of warning signs, fencing, anti-climbing devices, or other techniques to prevent unauthorized access and vandalism when, because of their location or accessibility, a small cell installation has the potential to become an attractive nuisance.

**3.12** The Permittee shall repair, at its sole cost and expense, any damage including, but not limited to, subsidence, cracking, erosion, collapse, weakening, or loss of lateral support to Town streets, sidewalks, walks, curbs, gutters, trees, parkways, street lights, traffic signals, improvements of any kind or nature, or utility lines and systems, underground utility line and systems, or sewer systems and sewer lines that result from any activities performed in connection with the installation or maintenance of a small cell installation in the public right-of-way. The Permittee shall restore such areas, structures and systems to the condition in which they existed prior to the installation or maintenance that necessitated the repairs. In the event the Permittee fails to complete such repair within the number of days stated on a written notice by the permitting authority, the

permitting authority shall cause such repair to be completed at Permittee's sole cost and expense.

**3.13** Prior to issuance of a building permit, the applicant shall obtain the permitting authority's approval of a tree protection plan prepared by a certified arborist if the small cell installation will be located within the canopy of a street tree, or a protected tree on private property, or within a 10-foot radius of the base of such a tree. Depending on site-specific criteria (e.g., location of tree, size, and type of tree, etc.), a radius greater than 10 feet may be required by the permitting authority.

**3.14** Applicant shall abide by all local, provincial and federal laws regarding design, construction and operation of the small cell installation, including all provincial and federal Occupational Health and Safety Regulations for worker safety in, around and above power lines and near radiation-emitting devices.

**Note 1:** The town may also wish to include preference for the *configuration* of small cell installations, from most preferred to least preferred. Configuration preferences might be:

- (1) Co-located with existing wireless facilities,
- (2) Mounted on existing utility poles,
- (3) Mounted on new poles or towers.

Considerations include the structural integrity of existing utility poles, the fact that mandating co-located equipment could result in an unfair aesthetic burden on some residents or neighborhoods, and the possibility that new poles might be bigger, heavier and more obtrusive.

**Note 2:** Every effort should be made to avoid placing small cell installations in close proximity to residences. Viable and defendable setbacks will vary based on zoning.

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#### SUPPLEMENTAL INFORMATION

From:

Sent: June 18, 2020 5:53 PM
To: Mike Richman <a href="michman@pemberton.ca">mrichman@pemberton.ca</a>
Cc: VoP Admin <a href="michadmin@pemberton.ca">admin@pemberton.ca</a>
Subject: Important Update - Providing a more protective Antenna Siting & Small Cell Agreement Policy

Dear Mayor Richman & Councillors,

A few days ago I sent two documents to support you in making sound telecommunications decisions. When one of Canada's top environmental health and radiofrequency radiation experts read the second document, she offered some eye-opening and significant suggestions about how we might improve it.

<u>We apologize for adding to your inbox</u>, but in order to ensure you have access to the best resources possible, a revised version of *Creating Protective Antenna Siting Protocols & Proactive Small Cell Licensing Agreements* is attached.

With Warm Regards,

Sherry Ridout

On Behalf of Citizens for Safe Technology

#### Who are We?

We represent an umbrella group of organizations and individuals advocating for safe and responsible technology.

For more information, you may reach us at cst.citzensforsafetechnology@gmailcom,

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## Creating a Proactive Antenna Siting Protocol & Small Cell Licensing Agreement

### **Overview**

Although antenna siting falls under federal jurisdiction in Canada, Innovation, Science and Economic Development (ISED) encourages local governments to create siting protocols that reflect and protect local interests. When there is no local protocol in place, the ISED policy found <u>here</u> becomes the default process.

In some instances, telecommunication providers are not required to consult with land use authorities or the public before they install small cell antennas. For example, if a telecom is installing 4G or 5G small cell transmitters on existing structures, and its equipment does not increase the height of that structure by more than 25%, the proponent is only required to request a local government's permission if it wants to put antennas on property owned by the town..

In preparation for 5G, providers are installing a growing number of small cell antennas on our streets. Clearly, it is prudent to have antenna siting protocols in place that include small cells and protect local interests to the degree federal regulations permit. To draft a siting protocol for your town, use the template found here as a guide. To create the most protective protocols and small cell licensing agreements possible, be sure to add the **Specific Content Suggestions** found on Pages 5 to 16 of this document.

**Please note:** To provide the fastest, safest and most secure Internet infrastructure possible for generations to come, and to avoid the risks associated with wireless and 5G, communities are strongly advised to build a sustainable fiber-to-the-premises last mile in place of installing small cells.

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### **General Examples of Areas to Address**

**Note:** While the terms "certain distances" and "certain districts" are used below, specific values are later provided **LOCATION** 

- Prohibiting small cell installations in residential areas and in certain districts
- Requiring installations to be certain distances away from residences, schools, hospitals, and/or other installations

#### **AESTHETICS / ENVIRONMENT**

• Aesthetic, design, and noise requirements such as co-location, camouflage, height and light limits, and more

#### ADMINISTRATIVE / LEGAL

- Requiring that residents within a certain distance of an installation be notified
- Requiring annual recertification fees
- Requiring permittees to defend and indemnify the city from any liabilities arising from permits and the installation, operation and maintenance of small cells
- Requiring the proponent to have insurance that includes pollution liability with no electromagnetic field exclusions as well as data privacy protection
- Reserving the right to hire independent consultants at the applicant's expense
- Reserving the right to employ a qualified RF engineer to conduct an annual random and unannounced test of the small cell installations Permittee has in the Town to certify compliance with Safety Code 6 or the Town's Guideline, whichever of these two guidelines sets the lowest emission limit. Learn about creating local radiofrequency exposure guidelines in **Policy Suggestion 2** below.

#### POLICY SUGGESTIONS

#### 1. Appoint a committee to create a community-owned fiber optic network

Fiber optic cables wired directly to the premises are *always* faster, safer and more energy efficient and secure than wireless networks, including 5G. To learn more about the many economic and other benefits of communityowned fiber optics, please visit <u>Connected Communities ~ Wired fiber for</u> <u>Sustainable Last-Mile Solutions</u>.

#### 2. Establish a protective radiofrequency exposure guideline for your Town

Toronto has done it. So has Salt Spring Island, BC. These local governments assessed available health, environmental and technical data, concluded there are uncertainties in the science regarding the potential health risks associated with long-term exposures to radiofrequency radiation, and created exposure guidelines for their communities that are hundreds of times more protective than Safety Code 6. Although complying with these stricter municipal guidelines is voluntary, most telecommunication proponents do.

Salt Spring has incorporated its guideline - which at 2microW/cm2 is 500 times more stringent than Health Canada's - right into the body of its antenna siting protocol. Here is the wording used:

"No cell phone antenna should be installed within 500 metres of any facility concerned with continuous human activity. A proponent wishing to install an antenna closer than this distance should demonstrate, using an independent consultant acceptable to the Islands Trust, that incident power density is less than 2 microwatts per square cm (2µW/cm2) at any facility concerned with continuous human activity within 500 metres of the proposed antenna. Additional antennae to be mounted on existing towers must also meet these standards, so that incident power density at any any facility where there is continuous human activity stays below 2 microwatts per square cm."

#### 10 REASONS WHY LOCAL GOVERNMENTS ARE CREATING RADIOFREQUENCY EXPOSURE LIMITS THAT ARE MORE PROTECTIVE THAN SAFETY CODE 6

1. Safety Code 6 is a *guideline* and not a *standard*. While *standards* are enforceable, *guidelines* are "recommendations" that are not mandatory to follow.

2. Safety Code 6 has not been updated for decades, despite the fact that our exposure to radiofrequency radiation has continued to increase.

3. Safety Code 6 is based on an out-dated thermal effect that tells us harm only occurs when heating happens. Although this theory has value

when it comes to *non-living substances,* it is inappropriate to apply it to *living organisms*.

4. Instead, *biologically based guidelines* (often less than 1 microW/cm2) or the *precautionary principal* should be invoked when it comes to exposing living things to radiofrequency radiation.

5. Another critical aspect that makes Safety Code 6 inappropriate for living organisms is that it relies on a *6-minute average* (measured as root-mean-squared) rather than maximum exposures. *Extremes* are what instigate biological effects and not averages.

6. Furthermore, what this average fails to consider is exposure from all sources that may vary beyond a 6-minute timeframe, and thus not be captured by a 6-minute average.

7. Another issue – Safety Code 6 does not measure **peak values** for exposure, and it is peak emissions that do the most biological damage.

8. Also, because the millimetre waves that 5G will employ have not been tested for long-term exposure, it is critical that we establish limits that err on the side of caution.

9. Finally, cumulative exposure is not considered by Health Canada, and it is cumulative exposure that causes most of the adverse health effects. Taking a small amount of arsenic once may not be lethal, but if taken daily, it will eventually poison the body. The same applies to radiofrequency radiation.

10. For these reasons, we need to be very careful what limits we use to protect vulnerable populations (children, pregnant women, those who are chronically ill). We need to protect the population not against a heating effect but rather against cancer, reproductive problems, and neurohormonal and immunological problems, all of which have been documented in scientific peer-reviewed studies to occur at levels well below Safety Code 6 guidelines.

### **Specific Content Suggestions**

#### Section 1: PERMITTING PROCESS

**1.1 Permit Required.** No small cell installation shall be constructed, erected, modified, mounted, attached, operated or maintained within the Town on or within any public right-of-way without the issuance of a permit. No approval granted under this chapter shall confer any exclusive right, privilege, license or franchise to occupy or use the public right-of-way of the Town for delivery of telecommunications services or any other purpose.

**1.2 Application Content.** All permit applications must include:

A. Detailed site and engineering plans for each proposed small cell installation, including full address, GIS coordinates, a list of all associated equipment necessary for its operation, as well as a proposed schedule for the completion of each small cell installation covered by the application.

B. A master plan showing the geographic service area for the proposed small cell installation(s), and all of applicant's existing, proposed and anticipated installations in the Town.

C. Certification that the proposed small cell installation(s) addresses an existing and significant gap in coverage in the service area, such certification to include a detailed map of the "gap areas" and documentation of such gaps causing an inability for a user to connect with the land-based national telephone network or maintain a connection capable of supporting a reasonably uninterrupted communication.

D. Photographs of proposed facility equipment.

E. Visual impact analyses with photo simulations including both "before" and "after" appearances, including simulations of the appearance of the equipment from the perspective of any property owner within 100 metres. F. Certification by a certified radiofrequency engineer that the small cell installation will comply with Safety Code 6, or the Town's radiation exposure guideline, whichever of these two guidelines sets the lowest emission limit, including aggregate emissions for all co-located equipment.

G. Certification that the applicant has a right under federal law to install wireless telecommunications facilities in the public right-of-way.

H. Documentation demonstrating a good faith effort to locate the small cell installation in accordance with the preferred provisions of this protocol.

I. Documentation that owners of all properties within 200 metres of the proposed small cell installation have been notified in writing via certified mail of the proposed installation, including its exact location.

J. An executed indemnification agreement as set forth in section 1.7 below.

K. A disclosure of all related third parties on whose behalf the applicant is acting, including contracting parties and co-locaters.

L. If the small cell installation is proposed to be attached to an existing utility pole or wireless support structure owned by an entity other than the Town, sufficient evidence of the consent of the owner of such pole or wireless support structure to the proposed collocation.

M. Performance specifications and data that identify the maximum and minimum amount or level of radiofrequency emissions that are produced by the equipment when it is in full operating mode, and a monitoring plan for the Applicant's equipment capable of tracking and recording the daily amounts or levels of radiofrequency emissions that are produced by the equipment in order to verify that average emissions do not exceed the levels permitted either by Safety Code 6 or the Town's radiation exposure guideline, whichever of these two guidelines sets the lowest emission limit. **1.3 Application Fee.** The Town shall assess a per-installation fee of \_\_\_\_\_\_ to cover the Town's costs of processing, reviewing, evaluating, conducting a public hearing, and other activities involved in consideration of the application, and conducting oversight of the construction of the small cell installation to ensure compliance with zoning requirements.

**1.4 Consultant Fee.** The Town shall have the right to retain an independent technical consultant to assist the Town in its review of the application. The reasonable cost of the review shall be paid by the applicant.

**1.5 Hydro Fees**. Permittee shall pay to the Municipality an annual hydro consumption surcharge of two hundred and fifty dollars (\$250) per Structure. This amount is due on January 2 of each year and is not pro-rateable or refundable.

**1.6 Compliance Bond.** Upon approval of the application, the Permittee shall be required to post a bond in the amount of \$50,000 for each small cell installation. Such bond is to be held and maintained during the entire period of Permittee's operation of each small cell installation in the Town as a guarantee that as determined by a qualified independent RF engineer, as outlined in Section 1.11.2 below, no such installation, including any co-located equipment exceeds or will exceed the allowable Safety Code 6 limits for RF radiation or the Town's radiation exposure guideline, whichever of these two guidelines sets the lowest emission limit.

**1.7 Indemnification.** Permittee shall provide an executed agreement in the form provided by the Town, pursuant to which Permittee agrees to defend, hold harmless and fully indemnify the Town, its officers, employees, agents, attorneys, and volunteers, from (i) any claim, action or proceeding brought against the Town or its officers, employees, agents, or attorneys to attack, set aside, void, or annul any such approval of the Town or (ii) a successful legal action brought against the Town for loss of property value or other harm caused by the placement or operation of a small cell installation. This indemnification agreement shall be in a form acceptable to the Town Attorney and shall include,

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but not be limited to, damages, fees and/or costs awarded against the Town, if any, and cost of suit, attorney's fees, and other costs, liabilities and expenses incurred in connection with such proceeding whether incurred by the Permittee, the Town and/or the parties initiating or bringing such proceeding. The agreement shall also include a provision obligating the Permittee to indemnify the Town for all of the Town's costs, fees and damages which the Town incurs in enforcing the indemnification provisions of this Section.

**1.8 Hazardous Substances.** Permittee specifically acknowledges that the Town is not responsible for the escape, discharge or release of any hazardous substances from the Equipment, and specifically agrees to indemnify, protect and save the Town harmless from any and all actions, causes of actions, claims and demands regarding any such hazardous substance that has escaped, been discharged or released from the Equipment unless caused by the gross negligence or willful misconduct of the Town, its elected officials, appointed officers, employees, agents, contractors or any person the Town is responsible for in law.

"Hazardous Substance" means any hazardous or toxic substance, and includes radiofrequency electromagnetic energy, or other radiation, petroleum products and byproducts, industrial wastes, contaminants, pollutants, dangerous substances, and toxic substances, as defined in or pursuant to any law, ordinance, rule, regulation, bylaw or code, whether federal, provincial or municipal.

**1.9 Environmental Liability.** Permittee agrees to assume all environmental liability under federal, provincial and local government laws in Canada, as a responsible person or otherwise, relating to its occupancy and use of the Facilities, including but not limited to any liability for clean-up of any Hazardous Substance in, on, under, along, across and around the Facilities, which are proven to result directly from:

(a) the installation, occupation, operation and removal by Permittee of the Equipment;

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(b) any materials or goods brought to the Facilities by Permittee, or by any other person with the express or implied consent of Permittee.

Permittee shall not be responsible for, or required to remove or remediate any Hazardous Substances that have migrated onto or into a Facility or which existed at a Facility prior to Permittee's occupation or use of such Facility.

**1.10 Insurance:** For the duration of the Term:

(a) Permittee shall maintain comprehensive general liability insurance with coverage up to five million dollars (\$5,000,000.00), per occurrence and in the annual aggregate for products and completed operations, to protect Permittee from claims for personal injury, bodily injury or property damage arising out of Permittee's Work and/or operation of the Equipment. In addition, Permittee agrees that:

(i) the Town shall be added as an additional insured but only with respect to Permittee's legal liabilities arising out of Permittee's operations under this Agreement; and

(ii) the insurance shall include coverage for: products and completed operations; blanket contractual liability; cross-liability; non-owned automobile liability; pollution liability with no electromagnetic field exclusions, cyber-security and data privacy protection, and broad form property damage.

(b) Permittee shall also maintain automobile liability insurance, with coverage for bodily injury and property damage, for any Permittee owned or leased vehicles used in the performance of the Work in the amount of two million dollars (\$2,000,000.00) per accident.

(c) The comprehensive general liability insurance policy shall contain a provision whereby the insurers will endeavour to provide the Town with sixty (60) days' notice of cancellation.

(d) Upon execution of this Agreement, Permittee shall file with the Town a certificate of insurance of each insurance policy required. Permittee shall also provide a certificate of insurance at any time upon reasonable written request by the Town. Failure to maintain the insurance policies as required by this Agreement is a material breach of contract.

(e) Excess (umbrella) liability insurance may be used to achieve the required insured limits.

## 1.11 Annual Re-certification.

**1.11.1** Each year, commencing on the first anniversary of the issuance of the permit, the Permittee shall submit to the Town an affidavit which shall list all active small cell wireless installations it owns within the Town by location, certifying that

(1) each active small cell installation is covered by liability insurance with no electromagnetic field exclusions in the amount of \$5,000,000 per installation, naming the Town as additional insured; and

(2) each active installation has been inspected for safety and found to be in sound working condition and in compliance with all federal safety regulations concerning radiofrequency exposure limits or the Town's radiation exposure guideline, whichever of these two guidelines sets the lowest emission limit.

**1.11.2** The Town shall have the right to employ a qualified RF engineer to conduct an annual random and unannounced test of the Permittee's small cell wireless installations located within the Town to certify their compliance with all Safety Code 6 radiofrequency emission limits or the Town's radiation exposure guideline, whichever of these two guidelines sets the lowest emission limit. The reasonable cost of such tests shall be paid by the Permittee.

**1.11.3** In the event that such independent tests reveal that any small cell installation or installations owned or operated by Permittee or its Lessees, singularly or in the aggregate, is emitting RF radiation in excess of Safety

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Code 6 exposure guidelines or the Town's radiation exposure guideline, whichever of these two guidelines sets the lowest emission limit, the Town shall notify the Permittee and all residents living within 500 metres of the small cell installation(s) of the violation, and the Permittee shall have fortyeight (48) hours to bring the small cell installation(s) into compliance. Failure to bring the small cell installation(s) into compliance shall result in the forfeiture of all or part of the Compliance Bond, and the Town shall have the right to require the removal of such installation(s), as the Town in its sole discretion may determine is in the public interest.

**1.11.4** Any small cell wireless installation which is no longer in use shall be removed by the Permittee within 30 days of being taken out of use.

**1.11.5** Any small cell wireless installation which is not removed within 30 days after being listed as no longer in use in the annual re-certification affidavit shall be subject to a fine of \$100/day until such installation is removed.

**1.11.6** Where such annual re-certification has not been properly or timely submitted, or equipment no longer in use has not been removed within the required 30-day period, no further applications for small cell wireless installations will be accepted by the Town until such time as the annual recertification has been submitted and all fees and fines paid.

**1.12 Non-Permitted Installations** Any small cell installation constructed, erected, modified or enhanced prior to the issuance of a site-specific permit from the Town shall be removed prior to the submission of any other application. No application for a small cell installation shall be considered while such unauthorized installations remain.

**1.13 Notice of Permit Filing.** Notice of the filing of any permit submitted pursuant to this protocol shall be sent to all property owners within 200 metres of each and every proposed small cell installation within five (5) days of such filing, such notice to be sent by certified mail at the expense of the Permittee.

**1.14 Public Availability of Permit Applications.** All permit applications submitted pursuant to this protocol, including all related documents, shall be made available for viewing and/or copying by any member of the public during normal business hours at the relevant office of the Town. Any charge for copies shall be limited to the Town's actual cost. No additional charges may be assessed against any member of the public for access to the entire permit and all of its related documents.

## Section 2: LOCATION AND CONFIGURATION PREFERENCES

**2.1 Siting Guidelines.** The purpose of this section is to provide guidelines to applicants and the reviewing authority regarding the preferred locations and configurations for small cell installations in the Town, provided that nothing in this section shall be construed to permit a small cell installation in any location that is otherwise prohibited by the Town code.

**2.2 Order of preference - Location.** The order of preference for the location of small cell installations in the Town, from most preferred to least preferred is:

- 1. Industrial zone
- 2. Commercial zone
- 3. Mixed commercial and residential zone
- 4. Residential zone

## **Discouraged Locations:**

- 1. Land use
  - o Medium and high density residential areas
  - o Schools, daycare facilities, playgrounds and similar facilities
  - o Areas that adversely impact view corridors
  - Heritage areas (unless visibly unobtrusive) or on heritage structures unless it forms an integrated part of the structure's overall design (i.e. through the use of stealth structures).
  - Nature protection areas
  - Environmentally sensitive ecosystems

## 2. Other considerations, irrespective of land use designation

- Locations directly in front of doors, windows, balconies or residential frontages. (Please see Section 3.7 for specific setback requirements)
- Community gathering places such as community halls, churches, commercial eating & drinking establishments
- Sites of topographical and geographic prominence

## (See Note 1)

## Section 3: INSTALLATION SPECIFICATIONS

**3.1** The Permittee must construct, install and operate the small cell installation in strict compliance with the plans and specifications included in the application.

**3.2** Where feasible, as new technology becomes available, the Permittee shall replace larger, more visually intrusive facilities with smaller, less visually intrusive facilities, after receiving all necessary permits and approval required by the Town.

**3.3** The Permittee shall submit and maintain current at all times basic contact and site information on a form to be supplied by the Town. The Permittee shall notify the Town of any changes to the information submitted within seven days of any change, including the name or legal status of the owner or operator.

**3.4** At all times, all required notices and signs shall be posted on the site as required by ISED and federal law, and as approved by the Town. The location and dimensions of a sign bearing the emergency contact name and telephone numbers shall be posted pursuant to the approved plans.

**3.5.** The Permittee shall maintain current at all times liability and property insurance including pollution liability with no electromagnetic field exclusions for each small cell installation in the Public Right of Way in the amount of \$5,000,000 (Five Million dollars) naming the Town as additional insureds.

**3.6.** The proposed small cell installation shall have an adequate fall zone to minimize the possibility of damage or injury resulting from pole collapse or

failure, icefall or debris fall, and to avoid or minimize all other impacts upon adjoining properties.

**3.7.** Every effort shall be made to locate small cell installations no less than 650 metres away from the Permittee's or any Lessee's nearest other small cell installation, or within 500 metres of any school (nursery, elementary, junior high, and high school), trail, park or outdoor recreation area, sporting venues, and residential zones. (*See Note 2*)

**3.8.** A single or co-located small cell installation must be mounted on an existing structure such as a utility or lighting pole that can support its weight and the weight of any existing co-located equipment. All new wires needed to service the small cell installation must be located within the width of the existing structure so as to not exceed the diameter and height of the existing utility pole.

**3.9.** All equipment not to be installed on or inside the pole must be located underground, flush to the ground, within one metre of the utility pole. Each installation is to have its own dedicated power source to be installed and metered separately.

**3.10** If a Permittee proposes to replace a pole in order to accommodate a small cell installation, the pole shall match the appearance of the original pole to the extent feasible, unless another design better accomplishes the objectives of this section. Such replacement pole shall not exceed the height of the pole it is replacing by more than two metres.

**3.11** Each small cell installation facility shall be designed to be resistant to, and minimize opportunities for, unauthorized access, climbing, vandalism, graffiti and other conditions that would result in hazardous situations, visual blight, or attractive nuisances. The Town may require the provision of warning signs, fencing, anti-climbing devices, or other techniques to prevent unauthorized access and vandalism when, because of their location or accessibility, a small cell installation has the potential to become an attractive nuisance.

**3.12** The Permittee shall repair, at its sole cost and expense, any damage including, but not limited to, subsidence, cracking, erosion, collapse, weakening,

or loss of lateral support to Town streets, sidewalks, walks, curbs, gutters, trees, parkways, street lights, traffic signals, improvements of any kind or nature, or utility lines and systems, underground utility line and systems, or sewer systems and sewer lines that result from any activities performed in connection with the installation or maintenance of a small cell installation in the public right-of-way. The Permittee shall restore such areas, structures and systems to the condition in which they existed prior to the installation or maintenance that necessitated the repairs. In the event the Permittee fails to complete such repair within the number of days stated on a written notice by the permitting authority, the permitting authority shall cause such repair to be completed at Permittee's sole cost and expense.

**3.13** Prior to issuance of a building permit, the applicant shall obtain the permitting authority's approval of a tree protection plan prepared by a certified arborist if the small cell installation will be located within the canopy of a street tree, or a protected tree on private property, or within a 5-metre radius of the base of such a tree. Depending on site-specific criteria (e.g., location of tree, size, and type of tree, etc.), a radius greater than 5 metres may be required by the permitting authority. If there is evidence that the radiation from nearby antennas is causing trees to weaken or die, these antennas must be removed by the Permittee at the Permittee's sole cost and expense.

**3.14** Applicant shall abide by all local, provincial and federal laws regarding design, construction and operation of the small cell installation, including all provincial and federal Occupational Health and Safety Regulations for worker safety in, around and above power lines and near radiation-emitting devices.

**Note 1:** The town may also wish to include preference for the *configuration* of small cell installations, from most preferred to least preferred. Configuration preferences might be: (1) Co-located with existing wireless facilities, (2) Mounted on existing utility poles, (3) Mounted on new poles or towers.

Considerations include the structural integrity of existing utility poles, the fact that mandating co-located equipment could result in an unfair aesthetic burden on some residents or neighborhoods, and the possibility that new poles might be bigger, heavier and more obtrusive. **Note 2:** Every effort should be made to avoid placing small cell installations in close proximity to residences. Viable and defendable setbacks will vary based on zoning.

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From: Dain-Owens, Susan FLNR:EX <<u>Susan.Dain-Owens@gov.bc.ca</u>>
Sent: June 19, 2020 11:12 AM
To: Dain-Owens, Susan FLNR:EX <<u>Susan.Dain-Owens@gov.bc.ca</u>>
Subject: Survey results - Meager & Keyhole visitor use management project, online survey

Hello All,

I wanted to share the final results from the public online survey for the Meager & Keyhole Hotsprings visitor use management project. I'm attaching the document here, but you can also find it on our project website:

https://landuseplanning.gov.bc.ca/api/document/5ee7b68a0d08e6001bcd14d7/fetch/WhatWeHeard\_S urveyResults HotSprings May2020.pdf

Feel free to share this with anyone who's interested.

Have a great weekend, Susie

#### Susie Dain-Owens

Land and Resource Specialist Sea to Sky Natural Resource District Ministry of Forests, Lands, Natural Resource Operations and Rural Development (236) 468-3977 (604) 815-3142 (mobile) MEAGER CREEK AND KEYHOLE HOT SPRINGS VISITOR USE MANAGEMENT PROJECT

**PUBLIC ONLINE SURVEY** 

# What We Heard

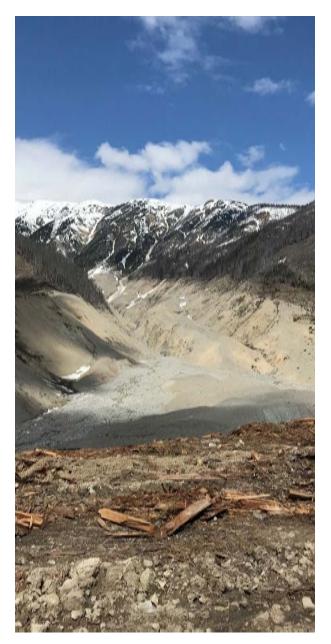
MAY 2020







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CAPRICORN LANDSLIDE (ABOVE PHOTO)

MEAGER CREEK AND KEYHOLE HOT SPRINGS VISITOR USE MANAGEMENT PROJECT PUBLIC ONLINE SURVEY WHAT WE HEARD MAY 2020

FRONT AND BACK COVER IMAGE: THE UPPER LILLOOET RIVER

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HOT SPRINGS PLATEAU ABOVE MEAGER CREEK (ABOVE PHOTO)

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## Meager Creek and Keyhole Hot Springs Public Online Survey Results

#### ABOUT THE MEAGER CREEK AND KEYHOLE HOT SPRINGS VISITOR USE MANAGEMENT PROJECT

The Province is partnering with Lílwat Nation to address visitor use management at Meager Creek and Keyhole Hotsprings. Meager Creek and Keyhole Hot Springs are both natural hot springs in the remote Upper Lillooet River Valley, located about 60 kilometers northwest of the Village of Pemberton, within the territory of Lílwat Nation. These hot springs have high cultural and spiritual values, wildlife and ecological values, as well as recreational values. However, both hot springs have seen negative impacts from overuse in the past.

Meager Creek Hot Springs was once a popular recreation site, but has been closed since the Capricorn landslide, the largest recorded landslide in Canada, destroyed road access in 2010. Road access has been re-established via a different route, but Meager Creek Hot Springs remains closed due to public safety concerns. Keyhole Hot Springs (also known as Pebble Creek Hot Springs) has been closed seasonally since 2017 due to wildlife conflicts caused by recreational users. In light of changes to access and recent increases in public visitation during site closures, the Province andLílwat Nation are taking this opportunity to enter into a planning process to reassess management of both hot springs. This process is guided by the **Visitor Use Management Framework**.<sup>1</sup>

The Fraser Basin Council, as an impartial facilitator, is assisting with collaboration and engagement with local government, stakeholders and the public. For more information please visit our **project website**.<sup>2</sup>

#### **ABOUT THE SURVEY**

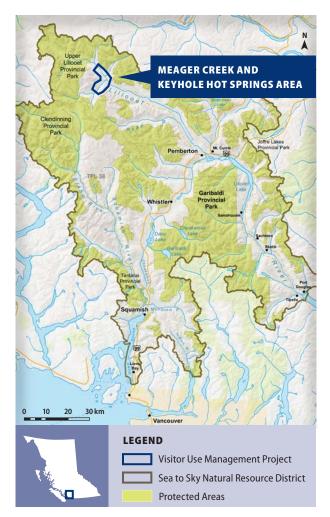
The Ministry of Forests, Lands, Natural Resource Operations and Rural Development is partnering with Lílwat Nation, and working with local government, stakeholder groups, and the public to understand the diversity of values, interests, and concerns at both hot springs. The Fraser Basin Council assisted with this survey. Input from this survey will inform the planning process and be considered by project partners to identify objectives for the future management of Meager Creek & Keyhole Hot Springs. Additional public engagement opportunities will be available at a later date once proposed management actions have been identified. Opportunities and information will be posted on our **project website**.<sup>3</sup>

#### **ENGAGEMENT TIMEFRAME**

January 12 – March 16, 2020

#### **RESPONSE RATE**

773 responses were received

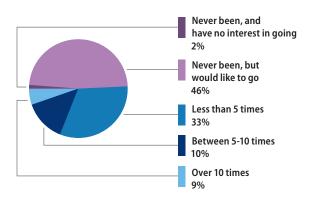


PROJECT AREA: SEA TO SKY NATURAL RESOURCE DISTRICT AND THE MEAGER CREEK AND KEY HOLE HOT SPRINGS VISITOR USE MANAGEMENT PROJECT AREA. (ABOVE MAP)

# Section 1: Meager Creek Hot Springs

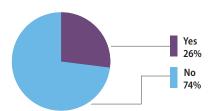
#### **QUESTION #1:**

How many times have you been to Meager Creek Hot Springs?



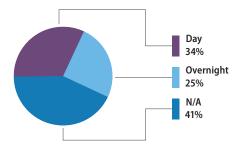
#### **QUESTION #2:**

Have you visited Meager Creek Hot Springs since the 2010 landslide?



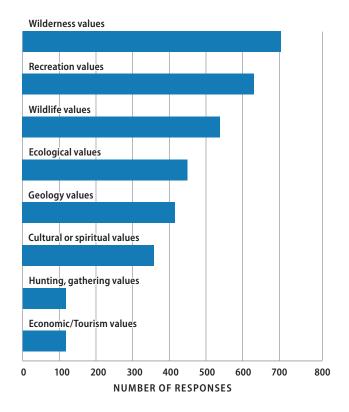
#### **QUESTION #3:**

Do you typically visit Meager Hot Springs for day use or overnight use?



#### **QUESTION #4:**

What do you think is special, meaningful or unique about Meager Creek Hot Springs and the surrounding area? (check all that apply)





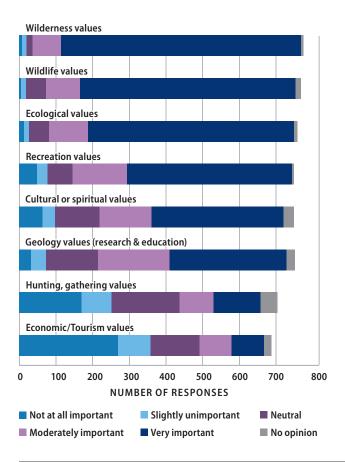
MEAGER CREEK NEAR MEAGER HOT SPRINGS (ABOVE PHOTO)



OLD SIGNAGE AT MEAGER CREEK HOTSPRINGS (ABOVE PHOTO)

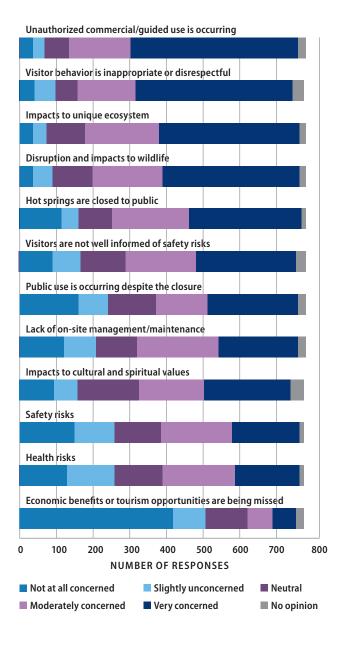
#### **QUESTION #5:**

How important to you is it that the following values are protected at Meager Creek Hot Springs?



#### **QUESTION #6:**

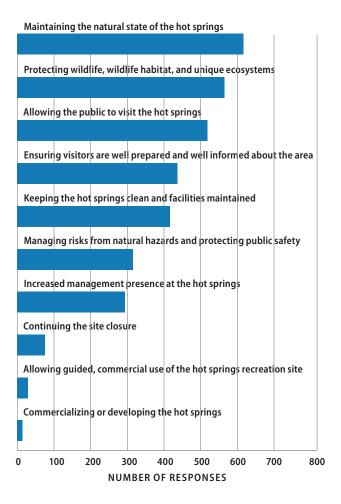
What concerns do you have with the current situation and activities at Meager Creek Hot Springs? (Please indicate how concerned you are with the following:)



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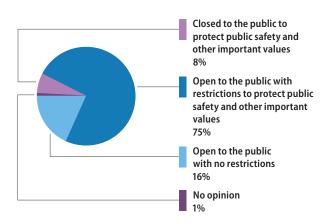
#### **QUESTION #7:**

What is most important to you for the future management and use of Meager Creek Hot Springs? (check all that apply)



#### **QUESTION #8:**

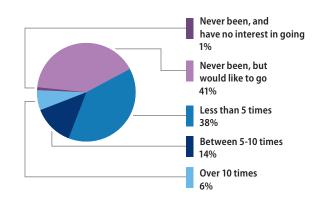
In your opinion, what would be the best option for future visitor use management at Meager Creek Hot Springs? (please check one)



# Section 2: Keyhole Hot Springs

#### **QUESTION #9:**

How many times have you been to Keyhole Hot Springs?



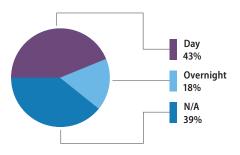
#### **QUESTION #10:**

Have you visited Keyhole Hot Springs since the new Lil'watátkwa7 trail was built in 2014?



#### **QUESTION #11:**

Do you typically visit Keyhole Hot Springs for day use or overnight use?

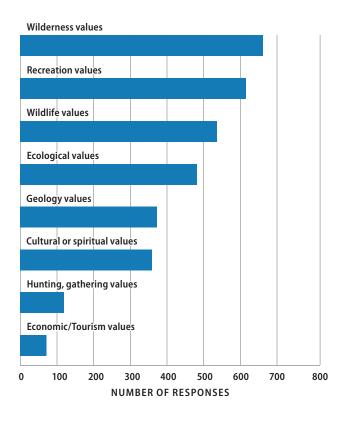




KEYHOLE HOT SPRINGS (ABOVE PHOTO)

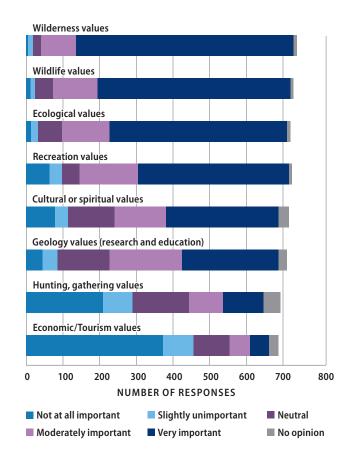
#### **QUESTION #12:**

What do you think is special, meaningful or unique about Keyhole Hot Springs and the surrounding area? (check all that apply)



#### **QUESTION #13:**

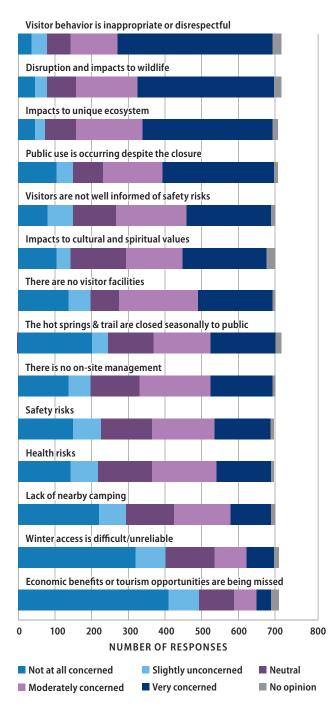
How important to you is it that the following are protected at Keyhole Hot Springs and the Lil'watátkwa7 trail?



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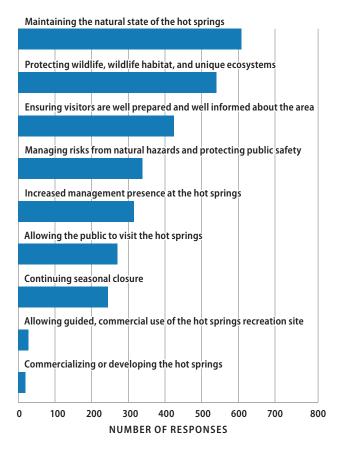
#### **QUESTION #14:**

What concerns do you have with the current situation and activities at Keyhole Hot Springs & the Lil'watátkwa7 trail? (Please indicate how concerned you are with the following:)



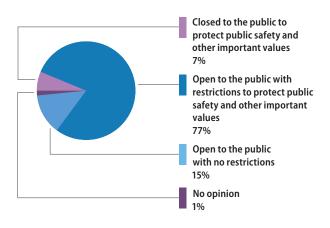
#### **QUESTION #15:**

What is most important to you about the future management and use of Keyhole Hot Springs & the Lil'watátkwa7 trail? (check all that apply)



#### **QUESTION #16:**

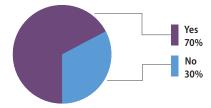
In your opinion, what would be the best option for future visitor use management at Keyhole Hot Springs? (please check one)



# Section 3: General

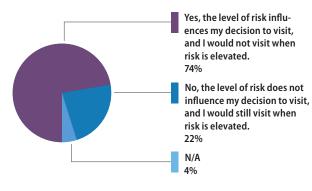
#### **QUESTION #17:**

Do you feel you have adequate knowledge about the risks to public safety from landslides in the Upper Lillooet River Valley?



#### **QUESTION #18:**

Does your knowledge of the level of risk to public safety from landslides influence your decision to visit this area?



#### **QUESTION #19:**

# Is there anything else you would like to share about Meager & Keyhole Hot Springs?

(This was an open-ended question; responses have been grouped into themes and listed below in order of frequency.)

- Do not commercialize or develop the hotsprings; do not allow guided tours.
- Allow public access to the backcountry; it is unacceptable to close public access to backcountry.
- These natural hotsprings are beautiful, unique, special places.
- Manage for recreational use, allow for some public use; do not turn a blind eye to the demand.
- Make it difficult to access Meager Hotsprings, this will deter disrespectful visitors and effectively limit visitation.

- >> Keep it natural & wild; maintain the feel of wilderness.
- » More education & information is needed.
  - Inform visitors of risks from natural hazards, how to behave respectfully, and the principals of Leave No Trace.
- » Limit the numbers of visitors.
  - Consider charging fees to support maintenance & management; require permits.
- Protect the hotsprings from impacts due to uneducated, ill-prepared, and/or disrespectful visitors.
- >> Prevent overuse.
- Provide basic facilities to minimize impacts from use (i.e. toilets, bear caches).
- » On-site management is needed (i.e. full-time caretaker).
- It is hypocritical to allow industrial use but restrict public access to the backcountry on account of wildlife and environmental protection. Impacts from industry are much greater and the risks from hazards are the same. This is why people don't respect the closures.
- Prioritize protecting wildlife & the environment over public use.
- Risks can be managed, let people make their own informed decisions around hazard & risk.
- More enforcement of rules & fines for those who break them.
- Prohibit helicopter access at either site; non-motorized access only.
- >> Site closures do not deter disrespectful use.
- First Nations should be actively involved in management.
- >> Do not advertise these hotsprings.
- Social media has contributed to issues with overuse; discourage the use of social media at these sites through signage.



MOUNT PLINTH, PART OF THE MOUNT MEAGER VOLCANIC COMPLEX (ABOVE PHOTO)

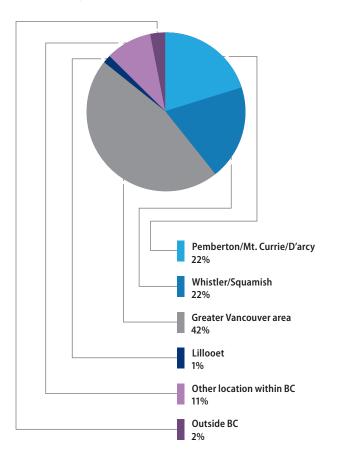


YELLOW MONKEY FLOWER AT KEYHOLE HOTSPRINGS (ABOVE PHOTO)

# Section 4: About You

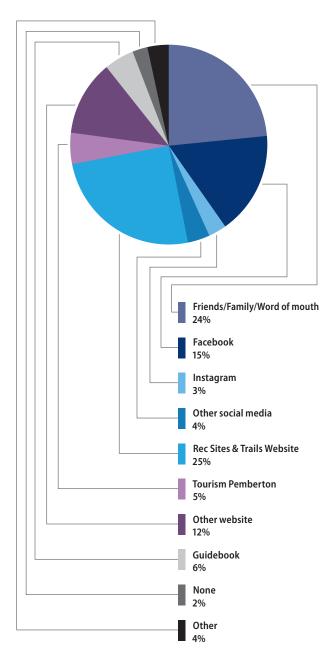
#### **QUESTION #20:**

Where are you from?



#### **QUESTION #21:**

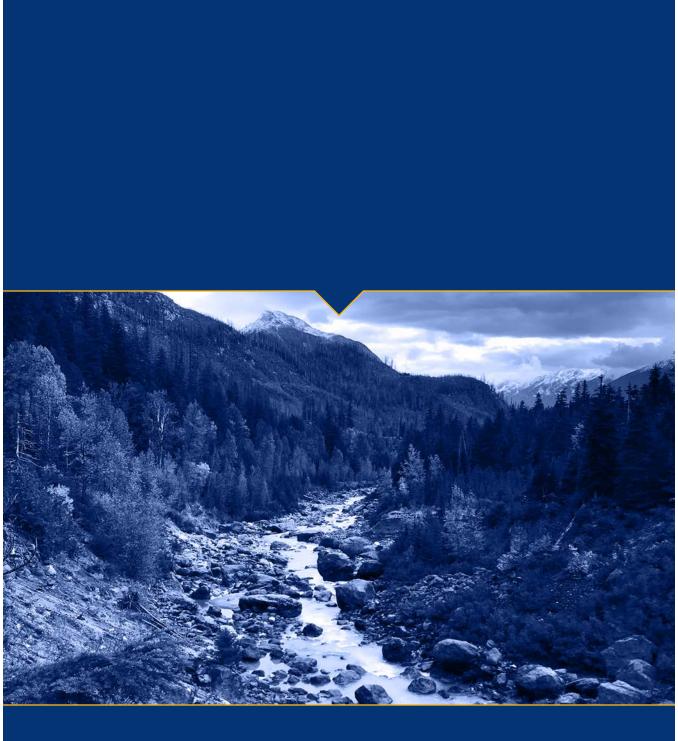
Where do you go for information on Meager and Keyhole Hot Springs? (check all that apply)



\* Other: 4wd Association of BC; Google; and Province's road conditions page.

## Footnotes

- <sup>1</sup> https://tinyurl.com/r6p3on2
- <sup>2</sup> https://tinyurl.com/ybwotuhh
- <sup>3</sup> https://tinyurl.com/ybltqp88







Village of Pemberton Regular Council Meeting No. 1518 Tuesday, June 30, 2020 275 of 279



June 22, 2020

Mayor and Council The Village of Pemberton Box 100 Pemberton, BC V0N 2L0

Attention: Nikki Gilmore

Dear Ms. Gilmore,

On behalf of the entire team at Blackcomb Helicopters, I am writing to express our appreciation to the Village of Pemberton for the assistance it provided to Blackcomb Helicopters recently in relation to the establishment of the Hydro Training Facility at the Pemberton Regional Airport. Blackcomb Helicopters is grateful to have had the support of the municipality in the creation of what we believe is a truly "First of its Kind", world class training facility. This new facility will enable ground-based hydro utility companies to provide their tradespeople with superior utility services training, and realworld experience with aviation-based utility operations. As the market is rapidly changing in the aviation-utility sector, we look forward to creating and maintaining a reputable world class training centre that will serve to strengthen and improve standards across the board.

Yours truly,

Andy Meeker Pemberton Base Manager Blackcomb Helicopters

Suite 400 - 375 Water Street, Vancouver, BC V6B 5C6 Canada T 604.273.5311 TF 877.273.5311 E info@blackcombhelicopters.com blackcombhelicopters.com

Village of Pemberton Regular Council Meeting No. 1518 Tuesday, June 30, 2020 276 of 279 RECEIVED

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## Village of Pemberton

June 19, 2020

Mayor Mike Richman Village of Pemberton Box 100 Pemberton, BC V0N 2L0

Dear Mayor Richman:

#### **Re: Provincial Response to 2019 Resolutions**

UBCM has received the Province's response(s) to your Council resolution(s) from 2019. Please find the enclosed resolution(s) and their provincial response(s).

Responses received from the Province have been posted to the UBCM web site under Resolutions & Policy.

If you have any questions about this process, please contact Jamee Justason, Resolutions and Policy Analyst at 604.270.8226 ext. 100 or jjustason@ubcm.ca

Yours truly,

Maja Tait UBCM President

Enclosure

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#### 2019 B193.1 Request for First Nations Participation on Commissions

Whereas the Village of Pemberton, in partnership with the regional district, other local governments, and First Nations in the Sea to Sky area are working collaboratively to develop a regional transit commission to establish a regional transit system to connect Mt. Currie to Metro Vancouver;

And whereas the current provincial transit commission model does not allow for representation from First Nations which does not allow for an equal representation or an equitable decision making platform process:

Therefore be it resolved that the Province of British Columbia work with First Nations and local governments to amend the legislation respecting the representation on transit commissions to enable inclusion of include First Nations.

Convention Decision:Not Considered - Automatic Referral to ExecutiveExecutive Decision:Endorsed as Amended

**Provincial Response** 

#### Ministry of Transportation and Infrastructure

The Province agrees that it is important that First Nations are involved in decisions affecting transportation to and from their communities. In the current letter of expectation to BC Transit, the Ministry has directed BC Transit to work with Indigenous communities to identify transit service needs and opportunities. In addition, Ministry staff are exploring this matter from a policy and legislative perspective.

The role of a regional transit commission is to represent the regional transit service area in transit planning and budgeting and to raise revenue to cover its share of the transit costs. One of the reasons that a region may wish to form a regional transit commission is to levy a regional property tax (and set the property tax rates) specifically to fund transit service.

The current regional transit commission model is set out under the British Columbia Transit Act. Members of a regional transit commission are appointed by Cabinet from among persons holding elected office on a municipal council or regional district board.

Under current legislation, regional transit commissions can only raise their share of funding, net of transit system revenue, through property taxes, motor fuel taxes or both. Any change to the commission model would have implications for the Victoria Regional Transit Commission and potential future transit commissions.

Several First Nations in the BC Transit service area are currently participating in transit decisions and funding through Community Partnership Agreements, such as between Witset First Nation and the Town of Smithers, or Village of Pemberton and Lil'wat Nation. There are also a number of First Nations in the Fraser Valley that work with the Regional District.



# **OPEN QUESTION PERIOD POLICY**

**THAT** the following guidelines for the Open Question Period held at the conclusion of the Regular Council Meetings:

- The Open Question Period will commence after the adjournment of the Regular Council Meeting;
- 2) A maximum of 15 minutes for the questions from the Press and Public will be permitted, subject to curtailment at the discretion of the Chair if other business necessitates;
- Only questions directly related to business discussed during the Council Meeting are allowed;
- 4) Questions may be asked of any Council Member;
- 5) Questions must be truly questions and not statements of opinions or policy by the questioner;
- 6) Not more than two (2) separate subjects per questioner will be allowed;
- 7) Questions from each member of the attending Press will be allowed preference prior to proceeding to the public;
- 8) The Chair will recognize the questioner and will direct questions to the Councillor whom he/she feels is best able to reply;
- 9) More than one Councillor may reply if he/she feels there is something to contribute.

Approved by Council at Meeting No. 920 Held November 2, 1999

Amended by Council at Meeting No. 1405 Held September 15, 2015