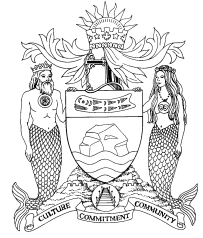


***Live Streaming/Telecast:** Please note that Standing Committees, Council Meetings, and Public Hearings held in the Council Chamber are being recorded and broadcasted as well included on the City's website at: www.whiterockcity.ca

Corporate Administration
E-mail

(604) 541-2212
clerksoffice@whiterockcity.ca

THE CORPORATION OF THE
CITY OF WHITE ROCK
15322 BUENA VISTA AVENUE, WHITE ROCK, B.C. V4B 1Y6



Click on title to take you
to the relative document.

ON TABLE ITEMS SEE PAGE 342 OR CLICK HERE

July 17, 2019

A **REGULAR MEETING** of CITY COUNCIL will be held in the **CITY HALL COUNCIL CHAMBERS** located at **15322 Buena Vista Avenue, White Rock, BC**, on **July 22, 2019** to begin at **7:00 p.m.** for the transaction of business as listed below.

T. Arthur, Director of Corporate Administration

A G E N D A

1. CALL MEETING TO ORDER

2. ADOPTION OF AGENDA

RECOMMENDATION

THAT the Corporation of the City of White Rock Council adopt the agenda for its regular meeting scheduled for July 22, 2019 as circulated.

3. ADOPTION OF MINUTES

a) July 8, 2019 – Meeting

Page 13

RECOMMENDATION

THAT the Corporation of the City of White Rock Council adopt the following meeting minutes as circulated:

a) July 8, 2019

4. QUESTION AND ANSWER PERIOD

Question and Answer period is an opportunity for the public to ask questions and make comments. There will be a Speaker's List available, each speaker will be given two (2) minutes and one (1) opportunity to ask a question(s) or make a comment. Question period shall be 15 minutes. Question and Answer Period is noted in the record and once the minutes are adopted, the questions and answers will be available on the [Question and Answer Period webpage](#).

Note: there are to be no questions or comments on a matter that will be the subject of a public hearing (time between the public hearing and final consideration of the bylaw).

4.1 CHAIRPERSON CALLS FOR SPEAKERS TO QUESTION AND ANSWER PERIOD

5. DELEGATIONS AND PETITIONS

5.1 DELEGATIONS

5.1.1 SUSAN POTZOLD: ADDITION OF “NO DOG” SIGNS AT THE GREEN SPACE AT THE FOOT OF FINLAY STREET

S. Potzold, resident, appearing as a delegation to request “No Dog” signs be posted at the green space at the foot of Finlay Street:

- One (1) East of the walkway to the beach – entering the grassy park/play space
- One (1) at the East Beach side steps coming off of the beach
- One (1) west off the walkway to the beach – facing the picnic tables

5.1.2 ALEX GALO: DOG WALKING ON THE PROMENADE

A. Galo, resident, appearing as a delegation and speak to the need for stricter enforcement regarding dog walking violations on the promenade.

5.1.3 RODERICK LOUIS: ABSENCE OF CAR SHARE COMPANIES IN WHITE ROCK/SOUTH SURREY

R. Louis, resident, appearing as a delegation to request the City contact all Car Share companies with a presence in Metro Vancouver, requesting the services be offered in White Rock / South Surrey (especially the Semiahmo Peninsula).

5.1.4 PAT HIGGINBOTHAM, SEMIAHMOO ARTS, MURAL CITY

P. Higginbotham & U. Maschaykh, Semiahmo Arts, appearing as a delegation regarding Public Art in the Semiahmo Region: Mural City.

5.1.5 GARY GUMLEY, COMMUNITY CLICKS MEDIA GROUP INC., FESTIVAL OF LIGHTS

G. Gumley, Community Clicks Media Group Inc., appearing as a delegation to request a corporate report be presented at the next Council meeting with details on hosting a “Festival of Lights” event in White Rock, and that the information presented be collaborative with the delegation.

5.2 PETITIONS

None

6. PRESENTATIONS AND CORPORATE REPORTS

6.1 PRESENTATIONS

6.1a JILLIAN GLENNIE AND JACQUELYN PERRY, SELF-ADVOCATES OF SEMIAHMOO, AND CATHERINE FERGUSON, UNITI: BEACH WHEELCHAIR USER PROGRAM ON WHITE ROCK BEACH AND ADDITIONAL ACCESSIBLE BEACH ACCESS POINTS

J. Glennie, J. Perry, and C. Ferguson, providing an overview of the Beach Wheelchair User Program on White Rock Beach and to request for increased accessible beach access points on the waterfront.

6.1b CHRIS ZOTA, DIRECTOR OF INFORMATION TECHNOLOGY (SMART CITIES)

Chris Zota, Director of Information Technology, to appear as a delegation to discuss smart cities.

6.2 CORPORATE REPORTS

6.2.1 PROPOSAL FOR DEDICATED MULTICOURT PICKLEBALL FACILITY

Corporate report dated July 22, 2019 from the Director of Recreation and Culture titled “Proposal for New Dedicated Multicourt Pickleball Facility”.

Page 26

RECOMMENDATION

THAT Council

1. Receive for information the corporate report dated July 22, 2019 from the Director of Recreation and Culture titled “Proposal for New Dedicated Multicourt Pickleball Facility”;
2. Direct staff to conduct research and host a public consultation meeting to determine a suitable location to build four (4) to eight (8) outdoor dedicated pickleball courts in White Rock;
3. Direct staff to prepare a corporate report following the public consultation meeting, including a recommended detailed design, taking into consideration community concerns and detailed budget estimates; and
4. Consider funding in the City’s 2020-2024 Financial Plan to build four (4) to eight (8) dedicated outdoor pickleball courts on City property.

6.2.2 RESPONSE TO METRO VANCOUVER 2040: SHAPING OUR FUTURE LAND USE DESIGNATION AMENDMENT REQUEST – MK DELTA LANDS

Page 41

Corporate report dated July 22, 2019 from the Director of Planning and Development Services titled “Response to *Metro Vancouver 2040: Shaping our Future* Land Use Designation Amendment Request – MK Delta Lands”.

RECOMMENDATION

THAT Council:

1. Receive for information the corporate report dated July 22, 2019 from the Director of Planning and Development Services titled “Response to *Metro Vancouver 2040: Shaping our Future* Land Use Designation Amendment Request – MK Delta Lands;” and
2. Authorize the Director of Corporate Administration to respond to the Metro Vancouver Board stating that the City does not object to the proposed amendment to the Regional Growth Strategy, and by sending Council commentary and any applicable resolution along with this corporate report as a response to the Metro Vancouver Board request for comment.

6.2.3 WHITE ROCK REPEALING BYLAW NO.’S 2303 AND 2304 FOR WATERFRONT PARKING FACILITY DESIGN AND CONSTRUCTION LOAN AUTHORIZATION BYLAW, 2017, NO. 2206

Page 85

Corporate report date July 22, 2019 from the Director of Financial Services titled “White Rock Repealing Bylaw No.’s 2303 and 2304 for Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206”.

RECOMMENDATION

THAT Council receive for information the corporate report dated July 22, 2019 from the Director of Financial Services, titled “White Rock Repealing Bylaw No.’s 2303 and 2304 for Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206.”

6.2.4 WHITE ROCK PIER UPDATE

Corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations titled “White Rock Pier Update”. **Page 90**

RECOMMENDATION

Council receive for information the corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations titled “White Rock Pier Update”.

6.2.5 2019 SANITARY AND STORM SEWER REHABILITATION CONTRACT AWARD

Corporate report date July 22, 2019 from the Acting Director of Engineering and Municipal Operations titled “2019 Sanitary and Storm Sewer Rehabilitation Contract Award”. **Page 92**

RECOMMENDATION

THAT Council

1. Receive for information the corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations Department titled “2019 Sanitary and Storm Sewer Rehabilitation Contract Award;” and
2. Approve the award of a contract for the trenchless storm and sanitary sewer rehabilitation to PW Trenchless Construction Inc. for \$594,150.18 (including GST).

6.2.6 FENCING FOR THE WATER SYSTEM AT 1444 OXFORD STREET

Corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations “Fencing for the Water System at 1444 Oxford Street”. **Page 94**

RECOMMENDATION

THAT Council receive for information the corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations titled “Fencing of the Water System at 1444 Oxford Street”.

6.2.7 UPDATE ON CITY OWNED PROPERTY (15463 BUENA VISTA)

Corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations “Update on City Owned Property (15463 Buena Vista)”. **Page 98**

RECOMMENDATION

THAT Council receive for information the corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations titled “Update on City Own Property (15463 Buena Vista).”

6.2.8 MARINE DRIVE “HUMP” VEGETATION MANAGEMENT PLAN

Corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations “Marine Drive “Hump” Vegetation Management Plan”.

Page 100

RECOMMENDATION

THAT Council

1. Receive for information the corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations titled “Marine Drive “Hump” Vegetation Management Plan”; and
2. Endorse the Marine Drive “Hump” Vegetation Management Plan as outlined in this corporate report.

6.2.9 FREEDOM OF INFORMATION UPDATE

Page 103

Corporate report dated July 22, 2019 from the Director of Corporate Administration titled “Freedom of Information Update”.

RECOMMENDATION

THAT Council receives for information the corporate report dated July 22, 2019 from the Director of Corporate Administration titled “Freedom of Information Task Update”.

7. MINUTES AND RECOMMENDATIONS OF COMMITTEES

7.1 STANDING AND SELECT COMMITTEE MINUTES

- Governance and Legislation Committee – July 8, 2019 **Page 107**
- Land Use and Planning Committee – July 8, 2019 **Page 114**
- Seniors Advisory Committee – July 2, 2019 **Page 117**
- History and Heritage Committee - July 3, 2019 **Page 123**
- Sea Festival Committee – July 4, 2019 **Page 127**
- Water Community Advisory Panel – July 9, 2019 **Page 134**
- Economic Development Advisory Panel – July 10, 2019 **Page 138**

RECOMMENDATION

THAT Council receive for information the following standing and select committee meeting minutes as circulated:

- a) Governance and Legislation Committee – July 8, 2019;
- b) Land Use and Planning Committee – July 8, 2019;
- c) Seniors Advisory Committee – July 2, 2019;
- d) History and Heritage Committee - July 3, 2019;
- e) Sea Festival Committee – July 4, 2019;
- f) Water Community Advisory Panel – July 9, 2019; and
- g) Economic Development Advisory Panel – July 10, 2019.

7.2 STANDING AND SELECT COMMITTEE RECOMMENDATIONS

Note: *The Seniors Advisory Committee put forth a recommendation regarding raising the CARP flag at their October 1, 2019 meeting in honour of Seniors' Day. It is noted that City Policy No. 146 (Use of City Flag Pole) allows for this flag to be raised without further Council approval. As such, this recommendation has not been noted for Council's endorsement, and further details can be found in the meeting minutes (Item 7.1c).*

7.2.1 The following recommendations from the July 8, 2019 **Governance and Legislation Committee** meeting held earlier this evening are being presented for Council's consideration at this time:

a. RECOMMENDATION: SPECIAL EVENT PROTOCOL GUIDELINES Page 142
THAT Council endorse the Special Event Protocol Guidelines as circulated in this agenda package.

Note: *The Special Event Protocol Guidelines (Guidelines) were a topic of discussion at the July 8, 2019 Governance and Legislation Committee meeting (minutes included in the agenda as Item 7.1a.. Revisions based on the Committee's discussion have been made to the Guidelines and are included in the agenda package for Council's endorsement.*

b. RECOMMENDATION: CITY OF WHITE ROCK TREE MATTERS
THAT the Governance and Legislation Committee recommends that Council refer the following documents to the City's Environmental Advisory Committee for input:

- White Rock Tree Management Bylaw, 2008, No. 1831; and
- Engineering and Municipal Operations Policy No. 611, with the following topics for consideration:
 - Tree Management on City Lands for review from an environmental perspective / protecting our environment for recommendations to come back to this committee in the Fall 2019.
 - Tree Management on City Lands for review and make recommendation(s) as to how they should change in regard to Council oversight of trees before they are taken down.

c. RECOMMENDATION: COUNCIL POLICY NO. 164: TERMS OF REFERENCE - HOUSING TASK FORCE TERMS OF REFERENCE
THAT Council endorse Policy No. 164: Terms of Reference – Housing Task force as circulated in the July 22, 2019 Governance and Legislation agenda package. **Page 158**

Note: *Due to timing, the following recommendation from the July 22, 2019 Governance and Legislation Committee meeting (held earlier today) is noted on the agenda for consideration. Council may choose to consider the recommendation or defer the matter to the next Regular Council meeting*

Note: *Any amendments made to the Terms of Reference during the July 22, Governance and Legislation Committee meeting must be noted at this time.*

- 7.2.2 The following recommendations from the July 8, 2019 **Land Use and Planning Committee** meeting held earlier this evening are being presented for Council’s consideration at this time:

RECOMMENDATION: INITIAL OCP AMENDMENT APPLICATION REPORT – 1485 FIR STREET (19-009 OCP/ZON/MJP)

THAT Council refuse the OCP amendment application, and direct staff to work with the applicant on a revised rezoning and Major Development Permit application, for a secured rental housing development that includes a reduced FAR (2.8 gross floor area ratio consistent with the OCP), and amended building and site design.

***Note:** The minutes of the July 8, 2019 LUPC meeting are included in the agenda as Item 7.1b the recommendation has been placed on the agenda to be ratified by Council at this time.*

- 7.2.3 The following recommendations from the July 3, 2019 **History and Heritage Advisory Committee** meeting held earlier this evening are being presented for Council’s consideration at this time: **Page 163**

RECOMMENDATION

THAT Council amend the History and Heritage Terms of Reference as follows:

1. New item under policy: **“Recommend opportunities to support the preservation and sharing of the Semiahmoo First Nations language, culture, and history”**;
2. Amend existing item “b” to read as follows (additions underlined): “Reviews and submits recommendations to Council on land use and planning matters which have heritage implications **and may impact culturally sensitive and archaeological areas**”.
3. Amend existing item “d’ under policy as follows (addition underlined): “Supports heritage education, **tourism**, and public awareness through programs such as Heritage week displays, newsletters, etc”.

- 7.2.4 The following recommendations from the July 9, 2019 **Water Community Advisory Committee** meeting held earlier this evening are being presented for Council’s consideration at this time:

RECOMMENDATION

THAT Council consider in addition to water rates, Financial Services provides information to the Panel regarding current projects and their associated costs in the Capital Plan and to determine the total costs for upgrades not already included in the budget.

- 7.2.5 The following recommendations from the July 10, 2019 **Economic Development Advisory Committee** meeting held earlier this evening are being presented for Council’s consideration at this time:

RECOMMENDATION #1

THAT Council consider having staff provide a corporate report to review what busking locations are working well, and whether the number of busking locations can be expanded.

RECOMMENDATION #2

THAT Council endorse in principal a joint Economic Development Advisory and Marine Drive Task Force sub-committee to focus on a business retention and expansion strategy.

7.2.6 FINANCE POLICY NO. 301: PROCUREMENT POLICY

Finance Policy No. 301: Procurement Policy is presented with revisions following Council’s resolution from the July 8, 2019 **regular Council meeting** that the contract values be exclusive of GST. **Page 169**

RECOMMENDATION

THAT Council endorse Finance Policy No. 301: Procurement Policy with an amendment in relation contract values being exclusive of GST.

8. BYLAWS AND PERMITS

8.1 BYLAWS

8.1.1 BYLAW 2302 – WATER SERVICES BYLAW, 2015, NO. 2117, AMENDMENT NO.6, BYLAW, 2019, NO. 2302 **Page 173**

Section 194 of the *Community Charter* authorizes Council, by bylaw, to establish municipal fees for services, for the use of municipal property or to exercise the authority to regulate, prohibit or impose requirements. Bylaw 2302 proposes an amendment to the Water Services, received three readings at the July 8, 2019 regular Council meeting, and is presented for consideration of final reading.

RECOMMENDATION

THAT Council give final reading to “*Water Services Bylaw, 2015, No. 2117, Amendment No. 6, Bylaw, 2019, No. 2302*”.

8.1.2 WHITE ROCK REPEALING BYLAWS FOR WATERFRONT PARKING FACILITY DESIGN AND CONSTRUCTION LOAN AUTHORIZATION BYLAW, 2017, NO. 2206

Bylaws 2303 and 2304 are necessary in order to repeal Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206. Further details regarding these proposed bylaws are noted in the corporate report considered earlier on the agenda (Item 6.2.3). Bylaws 2303 and 2304 are presented for consideration of first, second, and third reading.

a. BYLAW 2303 - WHITE ROCK REPEALING BYLAW FOR WATERFRONT PARKING FACILITY DESIGN AND CONSTRUCTION LOAN AUTHORIZATION BYLAW (BYLAW 2206), 2019, NO. 2303 **Page 176**

RECOMMENDATION

THAT Council give first, second, and third reading to “*White Rock repealing bylaw for Waterfront Parking Facility Design and Construction Loan Authorization Bylaw (Bylaw 2206), 2019, No. 2303*”.

Note: *City bylaws 2206 and 2275 are both impacted by repealing Bylaw No. 2303.*

b. BYLAW 2304 - WHITE ROCK REPEALING BYLAW FOR WATERFRONT PARKING FACILITY DESIGN AND CONSTRUCTION LOAN AUTHORIZATION BYLAW (BYLAW 2206), 2019, NO. 2304 **Page 177**

RECOMMENDATION

THAT Council give first, second, and third reading to White Rock Repealing Bylaw for “Waterfront Parking Facility Design and Construction Loan Authorization Bylaw (Bylaw 2206), 2019, No. 2304”.

Note: *City bylaws 2206 and 2275 are both impacted by repealing Bylaw No. 2304.*

8.2 PERMITS

None

9. CORRESPONDENCE

9.1 CORRESPONDENCE - RECEIVED FOR INFORMATION

Note: *Further action on the following correspondence items may be considered. Council may request that any item be brought forward for discussion, and may propose a motion of action on the matter.*

RECOMMENDATION

THAT Council receive correspondence items **9.1.1 to 9.1.5** for information:

- 9.1.1** Invitation dated July 11, 2019 from Hon. C. James, Minister/Deputy Premier, to participate in the first annual consultation regarding the Speculation and Vacation Tax (SVT) on September 12, 2019. **Page 178**

Note: *No action required at this time, further details regarding this session forthcoming.*

- 9.1.2** Letter dated June 27, 2019 from Acting Mayor Lahti, City of Port Moody, to inform of their request to the Province to develop enabling legislation for a strong and vibrant Property Assessed Clean Energy (PACE) Program. **Page 180**

- 9.1.3** Letter of support dated July 4, 2019 from Mayor Germuth, District of Kitimat, received in response to the City of White Rock’s UBCM resolution regarding a Proposed Vacancy Tax **Page 182**

- 9.1.4** Letter dated July 3, 2019 from C. Plagnol, Corporate Officer, advising of Metro Vancouver Board’s resolution regarding Best Management Practices for Invasive Species: English Holly, English and Irish Ivies, Yellow Archangell, Himalayan Balsam, and Parrot’s Feather. Due to the attachment size, the full report can be viewed online (within the agenda package section on the City’s website), or may be viewed in the Corporate Administration department. **Page 183**

- 9.1.5** Letter dated July 15, 2019 from Hon. K. Conroy, Minister of Children and Family Development, and Hon. K. Chen, Minister of State for Child Care, advising that the Provincial Government has tripled the funding maximums through the Childcare BC New Spaces Fund to create new spaces. **Page 191**

Note: *If Council is in support of the proposed resolutions outlined in correspondence Items 9.1.6 and 9.1.7, a resolution of support may be considered and staff will issue a letter advising of the decision.*

- 9.1.6** Letter dated July 2, 2019 from Mayor Hall, City of Prince George, requesting support of their UBCM resolution regarding Proceeds of Crime; and Clean-Up of Needles and Other Harm Reduction Paraphernalia. **Page 196**

Note: *Council may wish to consider a motion in support of the proposed resolution. If carried, staff would forward a letter of support under the Mayor's signature to the correspondent.*

- 9.1.7** Letter dated July 15, 2019 from W. Bauer, Township Clerk, requesting support for their resolution regarding Local Government Casino Revenue Sharing. The deadline to submit a letter of support is September 30, 2019. **Page 198**

Note: *Council may wish to consider a motion in support of the proposed resolution. If carried, staff would forward a letter of support under the Mayor's signature to the correspondent.*

10. MAYOR AND COUNCILLOR REPORTS

10.1 MAYOR'S REPORT

10.2 COUNCILLORS REPORTS

10.2.1 METRO VANCOUVER BOARD IN BRIEF

METRO VANCOUVER BOARD IN BRIEF – JUNE 28, 2019

Page 202

RECOMMENDATION

THAT Council receives for information the June 28, 2019 Metro Vancouver Board in Brief document.

11. MOTIONS AND NOTICES OF MOTION

11.1 MOTIONS

11.1a MOTION TO RECONSIDER: RENAMING OF TOTEM PLAZA

Mayor Walker Requires Reconsideration of a Matter in accordance with section 131 of the *Community Charter*:

Adopted resolution from July 8, 2019 regular Council meeting:

THAT Council:

WHEREAS the relationship with Semiahmoo First Nation is of the utmost of importance and it is with the deepest respect;

- 1. Endorses in honour of Grand Chief Bernard Robert Charles that Totem Plaza be officially renamed as Grand Chief Bernard Robert Charles Plaza; and*
- 2. Directs that all corresponding signage be amended to reflect this.*

WHEREAS a Notice of Motion regarding the renaming of Totem Plaza to Grand Chief Bernard Robert Charles Plaza was considered by Council on Monday, July 8, 2019;

WHEREAS this motion did not take into account the full historical account of Lions Lookout Park and the process of the original naming of Totem Plaza; and

WHEREAS this motion did not allow for a full corporate report, which would have allowed Council the benefit of all the background information around the original naming including the symbolic reconciliation recognition from the RCMP to Indigenous Peoples;

THEREFORE BE IT RESOLVED that I, Mayor Walker, will enact through the *Community Charter* section 131 as follows:

RECOMMENDATION#1 Motion to Reconsider

THAT Council reconsider resolution number 2019-297 as adopted by Council at the July 8, 2019 regular Council meeting as follows:

THAT Council:

WHEREAS the relationship with Semiahmoo First Nation is of the upmost of importance and it is with the deepest respect;

- 1. Endorses in honour of Grand Chief Bernard Robert Charles that Totem Plaza be officially renamed as Grand Chief Bernard Robert Charles Plaza; and*
- 2. Directs that all corresponding signage be amended to reflect this.*

RECOMMENDATION#2

THAT Council directs staff to bring forward a corporate report that includes:

- The history in regard to the formation and naming of Lions Lookout Park and Totem Plaza; and
- Possible options/consideration of future naming of the park and plaza.

11.1b PROPOSED CUT-THROUGH WALKWAY FROM OXFORD TO MARTIN STREET

Councillor Chesney put forward the following motion for consideration at this time. It was noted that the proposed motion will not only afford residents in the Oxford/Everall district a replaced green path which was lost by the fencing of said water property, but it will also become an integral walking route replacing the busy North Bluff corridor and the equally busy Thrift avenue.

RECOMMENDATION

THAT Council request staff prepare a report for the first Council meeting in September regarding the construction of the proposed cut-through walkway from Oxford to Martin Street.

11.1c ZONING BYLAW DEFINITIONS

Councillor Manning put forward the following motion for consideration at this time:

RECOMMENDATION

THAT Council directs staff to bring changes to the White Rock Zoning Bylaw that revises the definition of “residential floor area”, “residential gross floor area”, and any other terms and measurements so that green space on RS lots is increased.

11.2 NOTICES OF MOTION

None

12. RELEASE OF ITEMS FROM CLOSED COUNCIL MEETINGS

None

13. OTHER BUSINESS

14. CONCLUSION OF THE JULY 22, 2019 REGULAR COUNCIL MEETING

PRESENT: Mayor Walker
Councillor Kristjanson
Councillor Chesney
Councillor Fathers
Councillor Manning
Councillor Trevelyan

ABSENT: Councillor Johanson

STAFF: D. Bottrill, Chief Administrative Officer
T. Arthur, Director of Corporate Administration
R. Choy, Acting Director of Engineering and Municipal Operations
S. Kurylo, Director of Financial Services
C. Johannsen, Director of Planning and Development Services
J. Johnstone, Director of Human Resources
E. Stepura, Director of Recreation and Culture
C. Isaak, Manager of Planning
E. Keurvost, Manager of Culture
S. Lam, Deputy Corporate Officer

Press: 0
Public: 26

1. **CALL MEETING TO ORDER**
The meeting was called to order at 7:00 p.m.

2. **ADOPTION OF AGENDA**

2019-275

It was MOVED and SECONDED

THAT the Corporation of the City of White Rock Council adopts the agenda for its regular meeting scheduled for July 8, 2019 as circulated.

CARRIED

3. **ADOPTION OF MINUTES**

a) June 24, 2019 – Regular Meeting

2019-276

It was MOVED and SECONDED

THAT the Corporation of the City of White Rock Council adopts the following meeting minutes as circulated:

a) June 24, 2019 – Regular Meeting.

CARRIED

4. QUESTION AND ANSWER PERIOD

Question and Answer Period is noted in the record and once the minutes are adopted, the questions and answers will be available on the Question and Answer Period webpage.

4.1 CHAIRPERSON CALLS FOR SPEAKERS TO QUESTION AND ANSWER PERIOD

G. Wolgemuth, White Rock, inquired on the actual figures, not percentages, in regard to Council remuneration increases.

Would like to have the gross and net figures for the Mayor and Council remuneration for:

- December 2018
- January 2019
- The figures with the proposed 15% plus 2.9% increase; and what they would be with the originally proposed 26%
- How do the salaries compare on a per capita bases with the comparable cities noted in the Remuneration and Expense policy as follows:
 - City of Pitt Meadows
 - City of Port Moody
 - City of Langley
- What is the remuneration on a per area size for each of the areas noted as comparable cities within the Remuneration and Expense policy as follows and the City of White Rock:
 - City of Pitt Meadows
 - City of Port Moody
 - City of Langley

Staff response: the following gross amount of indemnification and noted further information will be brought forward on the website as part of the Question and Answer Period process:

- Mayor annual indemnification currently: \$86,080 with the proposed increase of 18.3% the indemnification will increase to \$101,860
- Council annual indemnification currently: \$34,430 with the proposed increase of 18.3% the indemnification will increase to \$40,740
- In addition the Deputy Mayor monthly indemnification currently \$1,430 per month and with the proposed increase of 18.3% the indemnification will increase to \$1,700

Alex Gallow, White Rock BC, stated he walks the promenade almost daily and since March has not had a day that he has not seen at least one dog on the promenade and dogs on the beach off leash.

Suggests a volunteer citizen group be established to monitor the promenade in relation to dogs not being permitted there.
Stated concern with the Council's selection of members to the Dogs on the Promenade Task Force (5 out of the 7 are supporters of permitting dogs on the promenade).

The Mayor stated in response that the City has Bylaw Enforcement Officers / staff to monitor the bylaws. The City does not enforce dogs on the beach; it is not in the City's jurisdiction.

The Task Force appointments are made by Council as a whole and will remain as it stands.

D. Bauer, White Rock BC, commented on proposed fencing expected to be placed around the water treatment plant site lands (Oxford Street to Everall Street). Stated that the fence is not for security as there are no structures on the site. The residents use the site and have done so for decades. Stated there was no consultation on this matter. Inquired how can we balance security and the resident's wishes to utilize the area in a respectful manner?

Staff noted the issue, as they understand it, is how can the fencing be adjusted so more area can be permitted for use by the citizens. A further report will be brought forward to a future meeting.

5. DELEGATIONS AND PETITIONS

5.1 DELEGATIONS

5.1.1 HANNAH NEWMAN & SHAWN MURPHY: WHITE ROCK NEWEST PARK - 15463 BUENA VISTA AVENUE

H. Newman and S. Murphy, residents, appeared as a delegation in regard "White Rock Newest Park – 15463 Buena Vista Avenue".

2019-277 It was MOVED and SECONDED

THAT Council directs staff to bring forward a corporate report working with the delegation of H. Newman and S. Murphy regarding concept(s) for development of a serenity/contemplation park at 15463 Buena Vista; and further that there be consideration of funding addressed in the corporate report.

CARRIED

5.1.2 SCOTT BROWN & BRIAN SHIGETOMI OF VANHOME PROPERTIES INC: 1453 STAYTE ROAD – COMMUNITY ENGAGEMENT REGARDING MODERATE DENSITY AND MORE AFFORDABLE HOUSING

S. Brown & B. Shigetomi of VanHome Properties Inc, appeared as a delegation to inform as to various community engagement they have steps undertaken and

results with respect to a proposed moderate density and more affordable housing development at 1453 Stayte Road.

5.1.3 SHELLY MARE & KERRY WRAY: VEGETATION ON THE HUMP

S. Mare & K. Wray, residents, appeared as a delegation in regard to vegetation on the hump.

They are looking for help in regard to having the foliage along the hump trimmed. Stating currently there is a danger as it has grown higher than the fence in some areas and noted they have pictures where people are seen climbing the fence in effort to see the view.

2019-278

It was MOVED and SECONDED

THAT Council directs staff to bring forward a corporate report that will outline what level of work can be done in regard to trimming / cutting along Marine Drive (maintaining vegetation on the hump).

CARRIED

5.1.4 SUE MCINTOSH, SENIORS COME SHARE SOCIETY: OVERVIEW OF SERVICES IN WHITE ROCK

S. McIntosh, Executive Director, Seniors Come Share Society, appeared as a delegation to provide an overview of services in White Rock.

5.2 PETITIONS

None

6. PRESENTATIONS AND CORPORATE REPORTS

6.1 PRESENTATIONS

6.1a RYAN WILLIAMS, TWI SURVEYS: 2019 EMPLOYEE SURVEY RESULTS

R. Williams, TWI Surveys, provided a presentation regarding the 2019 City of White Rock Employee Survey Results.

- It was requested that Council be given a hard copy of the presentation and the actual survey.

6.1b DR. SAAD JASIM, MANAGER OF UTILITIES: 2018 WATER ANNUAL REPORT

Dr. Saad Jasim, Manager of Utilities, provided a presentation regarding the City of White Rock's 2018 Water Annual report.

2019-279

It was MOVED and SECONDED

THAT Council directs staff to bring forward a corporate report outlining Dr. Jasim's new system for water treatment that has been devised and being utilized at the City's new water treatment plant and the possibility of obtaining a patent for the system.

CARRIED

6.2

CORPORATE REPORTS

6.2.1

ANNUAL WATER REPORT FOR 2018

Corporate report dated July 8, 2019 from the Director of Engineering and Municipal Operations titled "Annual Water Report for 2018".

2019-280

It was MOVED and SECONDED

THAT Council:

1. Receives for information the corporate report dated July 8, 2019 from the Director of Engineering & Municipal Operations titled "2018 Annual Water Report;" and
2. Endorses the "2018 Annual Water Report" attached to this Corporate Report as Appendix A".

CARRIED

6.2.2

OXFORD WATER FACILITY FENCING INSTALLATION, CONTRACT WR18-058

Corporate report dated July 8, 2019 from the Director of Engineering and Municipal Operations titled "Oxford Water Facility Fencing Installation, Contract WR18-058".

Discussion points noted:

- Inquiry in regard to the fence, it appears to be large and expensive, is it required?
Staff clarified that the fence around the water treatment plant is needed, since September 11th all water utilities have fences for the purpose of safety. It was clarified that there are not staff on site 24 hours per day, by the time you have an alarm the damage is likely to already be done.
- It was noted that effort will be made to leave as much green space for the community that is possible.

2019-281

It was MOVED and SECONDED

THAT Council:

1. Receives for information the corporate report dated July 8, 2019, from the Director of Engineering & Municipal Operations titled "Oxford Water Facility Installation, Contract WR18-058"; and

2. Approves the award of a contract for construction of the perimeter fence around the Oxford Water facility to Streamline Fencing Ltd. for \$242,894.88 (excluding GST).

CARRIED

Councillor Kristjanson voted in the negative

There was some further discussion around the need for an approval of the funds. The current bylaw and policy gives the Chief Administrative Officer up to \$250,000 to sign off on for expenditures (there is nothing noted in regard to applicable taxes). Discussion concluded it would be Council's interpretation that applicable taxes are excluded from the noted figure (GST is refundable to the City).

SUBSEQUENT MOTION

2019-282

It was MOVED and SECONDED

THAT Council directs staff bring forward the required amendment to policy giving the Chief Administrative Officer the authority sign off on funds up to \$250,000 plus all applicable taxes without further Council consent.

CARRIED

6.2.3

2019 SEWER CCTV INSPECTION AND SMOKE TESTING PROGRAM CONTRACT AWARD

Corporate report dated July 8, 2019 from the Director of Engineering and Municipal Operations titled "2019 Sewer CCTV Inspection and Smoke Testing Program Contract Award".

2019-283

It was MOVED and SECONDED

THAT Council:

1. Receives for information the corporate report dated July 8, 2019 from the Director of Engineering and Municipal Operations Department titled "2019 Sewer CCTV Inspection and Smoke Testing Program Contract Award"; and
2. Approves the award of a contract for the 2019 Sewer CCTV Inspection and Smoke Testing Program to C3 Mainline Inspections Inc. for \$246,973.92 (excluding GST).

CARRIED

6.2.4

WATER SERVICES BYLAW, 2015, NO. 2117, AMENDMENT NO. 6, BYLAW, 2019, NO. 2302

Corporate report dated July 8, 2019 from the Director of Financial Services titled "Water Services Bylaw, 2015, No. 2117, Amendment No. 6, Bylaw, 2019, No. 2302".

2019-284

It was MOVED and SECONDED

THAT Council receives for information the July 8, 2019 report from the Director of Financial Services, titled “*Water Services Bylaw, 2015, No. 2117, Amendment No. 6, Bylaw, 2019, No. 2302*”.

CARRIED

6.2.5

MUSEUM FUNDING REQUEST

Corporate report dated July 8, 2019 from the Director of Financial Services titled “Museum Funding Request”.

2019-285

It was MOVED and SECONDED

THAT Council receives for information the corporate report dated July 8, 2019 from the Director of Financial Services, titled “Museum Funding Request”.

CARRIED

7.

MINUTES AND RECOMMENDATIONS OF COMMITTEES

7.1

STANDING AND SELECT COMMITTEE MINUTES

- Governance and Legislation Committee – June 24, 2019
- Grants-in-Aid Sub Committee – June 27, 2019
- Marine Drive Task Force – June 18, 2019
- Tour de White Rock Committee – June 20, 2019
- Arts and Cultural Advisory Committee – June 25, 2019
- Parking Task Force – June 27, 2019

2019-286

It was MOVED and SECONDED

THAT Council receives for information the following standing and select committee meeting minutes as circulated:

- a) Governance and Legislation Committee – June 24, 2019;
- b) Grants-in-Aid Sub Committee – June 27, 2019;
- c) Marine Drive Task Force – June 18, 2019;
- d) Tour de White Rock Committee – June 20, 2019;
- e) Arts and Cultural Advisory Committee – June 25, 2019; and
- f) Parking Task Force – June 27, 2019.

CARRIED

7.2

STANDING AND SELECT COMMITTEE RECOMMENDATIONS

a)

The following recommendations have been brought forward from the **Governance and Legislation Committee** meeting held on June 24, 2019:

RECOMMENDATION: HOUSING TASK FORCE

2019-287

It was MOVED and SECONDED

THAT Council endorses the following:

1. A Housing Task Force being established where all aspects of housing in the Community will be reviewed;
2. A Community Forum regarding Affordable Housing be scheduled; and
3. Staff be directed to bring forward a draft Terms of Reference for the Housing Task Force.

CARRIED

Recommendations regarding Council Policy No. 106 were noted on the June 24, 2019 **regular agenda** and were deferred to the next meeting. They originated from the June 10, 2019 Governance and Legislation Committee meeting and are noted below for consideration.

COUNCIL POLICY NO. 106 – COUNCIL REMUNERATION AND EXPENSES

2019-288

It was MOVED and SECONDED

THAT Council:

1. Increases the Mayor and Council remuneration by 15%, enough to bring up the Council remuneration from what was lost with the new income tax act amendment that eliminated the nontaxable status of the non-accountable allowance for elected officials;
2. Includes in addition for 2019, the Canadian Price Index (CPI) rate to be added to the Mayor and Council Remuneration; and
3. Endorses Council Policy No. 106 – Council Remuneration and Expenses.

CARRIED

7.2.2

The following recommendation has been brought forward from the **Grants-in-Aid Sub Committee** meeting held on June 27, 2019:

2019-289

It was MOVED and SECONDED

THAT Council approves an Arts and Cultural program Grant-in-Aid in the amount of \$5,000 to the Semiahmoo Rotary Club for the Dancing at the Pier event.

CARRIED

7.2.3

The following recommendations have been brought forward from the **Parking Task Force** meeting held on June 27, 2019:

2019-290

It was MOVED and SECONDED

THAT Council directs that all development sites in the City of White Rock be mandated to prominently post their parking plan for all trades contractor staff.

CARRIED

The following recommendation was within the June 27, 2019 Parking Task Force minutes but not brought forward on the agenda this was noted and considered at this time.

2019-291

It was MOVED and SECONDED

THAT Council considers staff explore and report back with sign and permit options that could be considered to address construction related parking issued.

CARRIED

8. BYLAWS AND PERMITS

8.1 BYLAWS

8.1.1 BYLAW 2299 – FEES AND CHARGES BYLAW, 2019, NO. 2298, AMENDMENT NO. 1, 2019, NO. 2299

Bylaw 2299 proposes seasonal waterfront parking rates recommended by the Parking Task Force at its meetings to April 25, 2019. This bylaw was amended at the May 13, 2019 regular Council meeting and received three readings. This bylaw was scheduled for final reading at the May 27, 2019 regular meeting, where Council proposed the fees be amended further. Council referred the matter back to the Parking Task Force for their consideration and comment.

The Task Force reviewed Council's proposed change on June 13, 2019, and supported the Bylaw moving forward as originally presented and it was placed on the May 27, 2019 agenda for final reading.

At the June 24, 2019 regular Council meeting, Council further discussed the proposal. Bylaw 2299 had the third reading rescinded, and was reconsidered and given a new third reading as amended.

This bylaw was presented for consideration of final reading (as amended at the June 24, 2019 regular Council meeting).

The Chief Administrative Officer noted the bylaw as presented for final reading at this time will leave the City approximately \$400,000 short for the program and informed that this will have to be funded; this will need to be explored as part of the financial planning process.

2019-292

It was MOVED and SECONDED

THAT Council gives final reading to "*Fees and Charges Bylaw, 2019, No. 2298, Amendment No. 1, 2019, No. 2299*".

CARRIED

Councillors Chesney and Fathers voting in the negative

8.1.2 **BYLAW 2302 – WATER SERVICES BYLAW, 2015, NO. 2117,
AMENDMENT NO.6, BYLAW, 2019, NO. 2302**

Section 194 of the *Community Charter* authorizes Council, by bylaw, to establish municipal fees for services, for the use of municipal property or to exercise the authority to regulate, prohibit or impose requirements. Bylaw 2302 proposes an amendment to the Water Services, and was presented for first, second, and third reading.

2019-293

It was MOVED and SECONDED

THAT Council gives first, second, and third reading to “*Water Services Bylaw, 2015, No. 2117, Amendment No. 6, Bylaw, 2019, No. 2302*”.

CARRIED

8.2 **PERMITS**

None

9. **CORRESPONDENCE**

9.1 **CORRESPONDENCE - RECEIVED FOR INFORMATION**

9.1.1 Letter dated June 18, 2019 from S. Young, Secretary of the National Energy Board, regarding Trans Mountain Pipeline ULC (Trans Mountain), Trans Mountain Expansion Project (Project), Order in Council P.C. 2019-0820: Project Update

9.1.2 Letter dated June 27, 2019 from A. Singh, Union of British Columbia Municipalities (UBCM) President, acknowledging receipt of the City of White Rock’s June 24, 2019 resolution requesting a change to the *Community Charter* so that municipalities may impose a vacancy tax to residential and commercial properties

2019-294

It was MOVED and SECONDED

THAT Council receives for information **correspondence Items 9.1.1 and 9.1.2** as circulated in the agenda.

CARRIED

10. **MAYOR AND COUNCILLOR REPORTS**

10.1 **MAYOR’S REPORT**

Mayor Walker noted the following community events/information:

- June 25, South Surrey White Rock Chamber of Commerce Annual General meeting
- June 25, White Rock Official Community Plan Review, Open House
- June 26, City of White Rock Community Forum
- June 27, TransLink Mayors’ Council on Regional Transportation meeting

- June 27, George Massey Task Force
- June 28 Metro Vancouver Board of Directors' meeting
- June 29, Opening Ceremonies for the Fourth Annual Henri Lorieau Mini 8's Memorial Tournament
- July 1, Canada Day By the Bay and Opening of the newly revitalized Memorial Park
- Jul 3, Metro Vancouver Housing Committee meeting
- July 4, Metro Vancouver Performance and Audit Committee meeting and the TD Concerts for the Pier Series
- July 5, Metro Vancouver Mayors' Committee meeting and the Opening Reception for "The Uptown Art Affair – The Art of Color" at the Landmark Pop Up Town Gallery Uptown Art Pop Up Art Gallery
- July 6, Town Centre Design Workshop (OCP)

10.2

COUNCILLORS REPORTS

Councillor Kristjanson noted the following community events/information:

- June 25, White Rock Official Community Plan Review, Open House
- June 26, City of White Rock Community Forum
- July 1, Canada Day By the Bay and Opening of the Newly Revitalized Memorial Park
- July 6, Let's Talk, Community Conversation

Councillor Fathers noted the following community events/information:

- June 25, along with Councillor Chesney met with City of Surrey Councillor Steven Pettigrew to show him around White Rock
- July 1, Canada Day By the Bay and Opening of the Newly Revitalized Memorial Park
- July 6, Let's Talk, Community Conversation, White Rock Social Justice Film Society, Town Centre Design Workshop (OCP)
- June 27, Grants-in-Aid Subcommittee meeting

Councillor Trevelyan noted the following community events/information:

- June 26, met with Surrey Councillor Linda Annis Rail Safety
- June 26, City of White Rock Community Forum
- June 27, OCP
- July 1, Canada Day By the Bay and Opening of the Newly Revitalized Memorial Park

Councillor Manning noted the following community events/information:

- June 25, OCP review
- June 26 City's Community Forum
- June 27, Waterfront Enhancement Strategy
- June 29, Opening Baseball Tournament

- July 1, Canada Day By the Bay and Opening of the Newly Revitalized Memorial Park
- July 2 Seniors Advisory Committee
- July 3, History and Heritage Advisory Committee
- July 5, Art of Color: Pop
- July 6, Let's Talk, Community Conversation and the Town Centre Review (OCP)

Councillor Chesney noted the following community events/information:

- July 3, History and Heritage Advisory Committee
- Reminder that this weekend is the 40th Anniversary of the Tour de White Rock

10.2.1 METRO VANCOUVER BOARD IN BRIEF

METRO VANCOUVER BOARD IN BRIEF

None

11. MOTIONS AND NOTICES OF MOTION

11.1 MOTIONS

None

11.1a PARKING ENFORCEMENT IN UPTOWN WHITE ROCK

Councillor Trevelyan served the following Notice of Motion at the June 24, 2019 regular Council meeting. It was on the agenda for Council's consideration at this time:

2019-295 **It was MOVED and SECONDED**

THAT Council endorses:

WHEREAS the Parking Task Force is looking into parking issues Uptown;

WHEREAS the Parking Task Force is looking for an immediate stop-gap to the scenario; and

1. Directs staff to increase parking enforcement, targeting the Uptown area, to fine those that illegally park past their time limit.

CARRIED

11.1 b RENAMING OF TOTEM PLAZA

Councillor Fathers brought forward the following Motion for Council's consideration at this time:

2019-296

It was MOVED and SECONDED

THAT Council:

WHEREAS the relationship with Semiahmoo First Nation is of the upmost of importance and it is with the deepest respect;

1. Endorses in honour of Grand Chief Bernard Robert Charles that Totem Plaza be officially renamed as Grand Chief Bernard Robert Charles Plaza; and
2. Directs that all corresponding signage be amended to reflect this.

2019-297

MOTION TO REFER TO STAFF

It was MOVED and SECONDED

THAT Council refers the motion 2019-296 to staff for a full review and to bring back a corporate report with their findings and recommendations.

DEFEATED

Councillors Chesney, Fathers, Manning voted in the negative
(only six members of Council present in attendance at the meeting)

Question was called on the Main Motion and it was

CARRIED

12.

RELEASE OF ITEMS FROM CLOSED COUNCIL MEETINGS

None

13.

OTHER BUSINESS

None

14.

CONCLUSION OF THE JULY 8, 2019 REGULAR COUNCIL MEETING

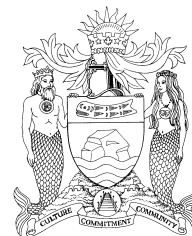
The Chairperson declared the meeting concluded at 9:48 p.m.



Mayor Walker

Tracey Arthur, Director of
Corporate Administration

THE CORPORATION OF THE
CITY OF WHITE ROCK
CORPORATE REPORT



DATE: July 22, 2019
TO: Mayor and Council
FROM: Eric Stepura, Director of Recreation and Culture
SUBJECT: Proposal for Dedicated Multicourt Pickleball Facility

RECOMMENDATIONS

THAT Council

1. Receive for information the corporate report dated July 22, 2019 from the Director of Recreation and Culture titled “Proposal for Dedicated Multicourt Pickleball Facility”;
 2. Direct staff to conduct research and host a public consultation meeting to determine a suitable location to build four (4) to eight (8) outdoor dedicated pickleball courts in White Rock;
 3. Direct staff to prepare a corporate report following the public consultation meeting, including a recommended detailed design, taking into consideration community concerns and detailed budget estimates; and
 4. Consider funding in the City’s 2020-2024 Financial Plan to build four (4) to eight (8) dedicated outdoor pickleball courts on City property.
-

INTRODUCTION

On May 13, 2019, a delegation of two local pickleball players (Chuck Lefaive and Bert Coates) made a presentation to Council requesting more courts and amenities to accommodate the sport of pickleball in White Rock.

Council received the delegation and approved the following two motions:

2019-173 *THAT Council endorses the following proposal in relation to pickleball in White Rock:*

Following staff working with the lacrosse and tennis groups for compromise:

- *Share with lacrosse the daytime or early afternoon – double mark 5-6 pickleball courts which will not interfere with the playing of lacrosse or ball hockey which also shares the lacrosse box.*
- *Add pickleball markings to the other three (3) tennis courts at Centennial Park.*

2019-175 *THAT Council authorizes items included in the proposal by the delegation for two (2) additional benches for the existing pickleball courts, and two (2) lock boxes, one (1) for the lower 12 pickleball courts and one (1) for the lacrosse box, and a small storage shed to put equipment chairs, hoppers etc.*

As requested, staff have met with representatives of the Semiahmoo Minor Lacrosse Club and the White Rock Tennis Club. Staff also conducted a survey of the users of the public tennis courts at Centennial Park to determine if they support or oppose the installation of pickleball court markings on the Taylor Lacrosse Box and the three (3) remaining tennis only public tennis courts. The results of this consultation is outlined in this corporate report, along with a proposal for Council to consider funding the construction of a new dedicated multicourt pickleball facility as part of the City's 2020-2024 Financial Plan.

BACKGROUND

The City of White Rock has five (5) publicly accessible outdoor tennis courts, of which two have dual court markings so they can be used for either tennis or pickleball play. These five (5) courts are located at Centennial Park in White Rock.

The sport of pickleball has been played at Centennial Park for over ten years. Initially, black pickle ball court markings were painted on the northwest tennis court. These black court markings were very difficult to see, and so in 2015, a group of local pickleball players lead by Mr. Chuck Lefaive asked the City to paint four (4) pickleball court markings in yellow paint on the northwest tennis court. City staff agreed to add pickleball court markings to the north west tennis court on the condition that the court be allocated for public use as follows:

- Pickleball users would get first priority for use of the court on Mondays and Thursday from 9:00am to 12:00 noon.
- If this court was not in use, pickleball or tennis could be played and regular court etiquette would apply.

The yellow pickleball court markings were painted in June 2015 at a cost of roughly \$1,900, plus \$500.00 for a lockable storage box and \$100.00 for signage for a total cost of about \$2,500.00

Following a one year trial period, staff received very little opposition from the local tennis players to the pickleball lines being added to the northwest tennis court, therefore, the time on this court allocated to priority use for pickleball was increased to Monday to Friday from 9am-12noon.

By the Fall of 2017, participation in the sport of pickleball in the White Rock/South Surrey area had greatly increased, while participation in the sport of tennis remained somewhat stable. Once again, a group of local pickleball players lead by Mr. Chuck Lefaive asked the City to paint four (4) pickleball court markings in yellow paint on the northeast tennis court at Centennial Park. City staff agreed to add yellow pickleball court markings on this second court on the condition that the court be allocated for public use as follows:

- Pickleball users would get first priority for use of the northwest court on Monday to Friday from 9:00am to 12:00 noon.
- If this court was not in use, pickleball or tennis could be played and regular court etiquette would apply.

The yellow pickleball court markings were painted on the northeast court in the spring of 2018 at a cost of roughly \$2,000, plus another \$1,000 for amenities such as a lockable storage box, nets and signage for a total cost of \$3,000.00

Appendix A are photographs of the two (2) existing combination tennis/pickleball courts at Centennial Park. Appendix B is a photograph of the three (3) remaining tennis only courts at Centennial Park.

Staff received very little opposition from tennis players about the pickleball line markings being added to the northeast tennis court, however, staff observed that tennis players, especially instructors of beginner players, preferred to use the three remaining tennis only courts when they arrived to play tennis or teach lessons at Centennial Park public tennis courts.

In addition to the City's current eight (8) outdoor pickleball courts, for the past two years Peace Arch Curling Club has offered drop in pickleball on four (4) indoor pickleball courts on Monday to Friday from 9:00am-11:30am and Tuesday and Thursday nights from 6:45 pm to 9:15pm during the spring/summers months.

It is also important to note that many of the participants who play pickleball in Centennial Park are not White Rock residents. However, many White Rock residents also play pickleball at south Surrey facilities including the eight (8) shared use indoor pickleball courts at South Surrey Recreation Centre and the twelve (12) outdoor shared use (with tennis) outdoor pickleball courts at South Surrey Sport Complex. The City of Surrey has plans to build a further twelve (12) dedicated pickleball courts at the South Surrey Sport Complex which should be playable by the Fall 2019.

Staff also reached out to Hugh Ellenwood, White Rock Museum Society to understand the history of the Taylor Lacrosse Box in Centennial Park. The Taylor Lacrosse Box was originally built and fully funded by White Rock Minor Lacrosse in the late 1960's at a cost of \$20,000.

In 2002, the original lacrosse box had deteriorated to a level where it was not safe to use. At that time, the Semiahmoo Minor Lacrosse Association raised \$40,000 and the City contributed \$20,000 for the replacement of the lacrosse box.

ANALYSIS

As a followup to the May 13, 2019 delegation of local pickleball players to Council requesting more pickleball courts and amenities, staff have met with representatives of the Semiahmoo Minor Lacrosse Club and the White Rock Tennis Club, and have conducted a survey of the users of the public tennis courts at Centennial Park. The purpose of this consultation was to determine if our lacrosse and tennis facility users support or oppose the installation of pickleball court markings on the Taylor Lacrosse Box and the three (3) remaining tennis only public tennis courts at Centennial Park. The results of this consultation are as follows:

Semiahmoo Minor Lacrosse Association

The executive of Semiahmoo Minor Lacrosse Association strongly oppose adding pickleball court markings onto the playing surface at the Taylor Lacrosse Box. The Taylor Lacrosse Box was originally funded and donated to the City by the Taylor family as a sport venue for the use and promotion of the sport of lacrosse. Appendix C is a letter from Randy Ellis, President of Semiahmoo Minor Lacrosse Association which states that they are strongly opposed to pickleball lines being added to the playing surface of the Taylor Lacrosse Box.

White Rock Tennis Club

The executive of the White Rock Tennis Club strongly oppose adding pickleball lines to any of the three (3) remaining tennis only public tennis courts at Centennial Park. The White Rock Tennis Club has in excess of 250 members that share their three (3) Club courts, and during prime time spring/summer months and for tournaments, their members use the public tennis courts at Centennial Park due to the high demand for tennis court time. Appendix D is a letter from Mr. George Whitfield, President of White Rock Tennis Club which states many reasons why the Club executive strongly oppose marking the three (3) remaining tennis only public tennis courts at Centennial Park with pickleball lines.

Survey of Centennial Park Public Tennis Court Users

A survey of past and present Centennial Park tennis lesson participants was conducted by City staff to determine whether or not there is support amongst the local tennis community for adding pickleball court markings to the three (3) remaining tennis only public tennis courts at Centennial Park. Staff used the City's Talk White Rock community engagement on-line survey program. A total of 249 former tennis lesson participants were sent the survey and 192 responses were received. The survey consisted of four (4) questions. Appendix E shows the results of the survey. The most relevant question asked in the survey was: "*Are you in favor of painting the three (3) lower tennis only courts with pickleball lines so they can be dual sport courts?*" Out of 192 responses, 181 or 94.3% answered "no". The results of this survey indicate that the majority of Centennial Park public tennis court users are opposed to adding pickleball courts onto the three (3) remaining tennis only courts at Centennial Park.

Recommended Option for Accommodating the Growth in Pickleball Participation – New Dedicated Multicourt Facility

An alternative to painting pickleball court lines onto existing City lacrosse and tennis facilities is for the City to consider building a dedicated multicourt pickleball facility at a yet to be determined City property.

The recommended process for moving ahead with this new facility option is for Council to:

- Direct staff to conduct research and host a public consultation meeting to determine a suitable location to build four (4) to eight (8) outdoor dedicated pickleball courts in White Rock;
- Direct staff to prepare a corporate report following the public consultation meeting, including a recommended detailed design, taking into consideration community concerns and detailed budget estimates; and
- Consider funding in the City's 2020-2024 Financial Plan to build a four (4) to eight (8) court dedicated outdoor pickleball facility on City property.

Dedicated Multicourt Pickleball Facility Considerations

The following are some facility design considerations when building multicourt pickleball facilities:

- Each pickleball court is 20' x 44', and the total recommended size of each court with buffers outside of the sidelines and endlines for overruns is 30' x 60'.
- Four (4) standard pickleball courts will fit on a tennis court as long as it is a regulation size 60' x 120'.
- Pickleball courts should be built in clusters of four (4) so that so that if the sport of pickleball decreases in popularity in the future, that the courts could easily be converted to one tennis court (regulation size 60' x 120') or a basketball court (approximately 50' x 84' plus buffers outside of the sidelines and endlines for overruns is 60' x 94').
- Pickleball facilities should be fenced to reduce the amount of time players spend gathering balls that go off the playing surface . A fence height of two (2) metres behind the courts and along the side of the courts is recommended. Greater fence heights are recommended if the playing surface is located near traffic.
- Court surfaces should be plexipaved material over asphalt (the same surfacing as tennis courts).
- Permanent net posts should be installed.

- Windscreens on the fences provide better playing conditions by reducing the impact of wind as well as providing a background against which the ball can be better seen.
- The best sun orientation for the sport of pickleball in North America is to position the courts north/south.
- A pickleball facility should be located near washrooms and have adequate parking.
- It would be preferable to build eight (8) pickleball courts at one location, which would enable the pickleball players to host tournaments.
- A lockable storage box or shed should be provided for the storage of extra nets, paddles, balls etc.
- Benches should be provided outside of the fenced in court area for players waiting to play

BUDGET IMPLICATIONS

Should Council decide to consider a dedicated multicourt pickleball facility, the costs of construction would be dependent on location and number of courts. The corporate report would provide that information once the research and analysis was complete.

CONCLUSION

Following the May 13, 2019 delegation of local pickleball players to Council requesting more courts and amenities to accommodate the growing sport of pickleball in White Rock, staff have met with representatives of the Semiahmoo Minor Lacrosse Club and the White Rock Tennis Club and have conducted a survey of users of the public tennis courts at Centennial Park.

The result of this consultation with community lacrosse and tennis users of Centennial Park has indicated strong opposition to adding pickleball court marking to the playing surface at Taylor Lacrosse Box and the three (3) remaining tennis only public courts at Centennial Park.

Staff recommend that Council consider directing staff to research and prepare a corporate report on suitable pickleball site locations including detailed design and costs with a view to building a new dedicated multicourt pickleball facility with four (4) to eight (8) courts in White Rock.

Respectfully submitted,



Eric Stepura
Director of Recreation and Culture

Comments from the Chief Administrative Officer:

I concur with the recommendations of this corporate report.

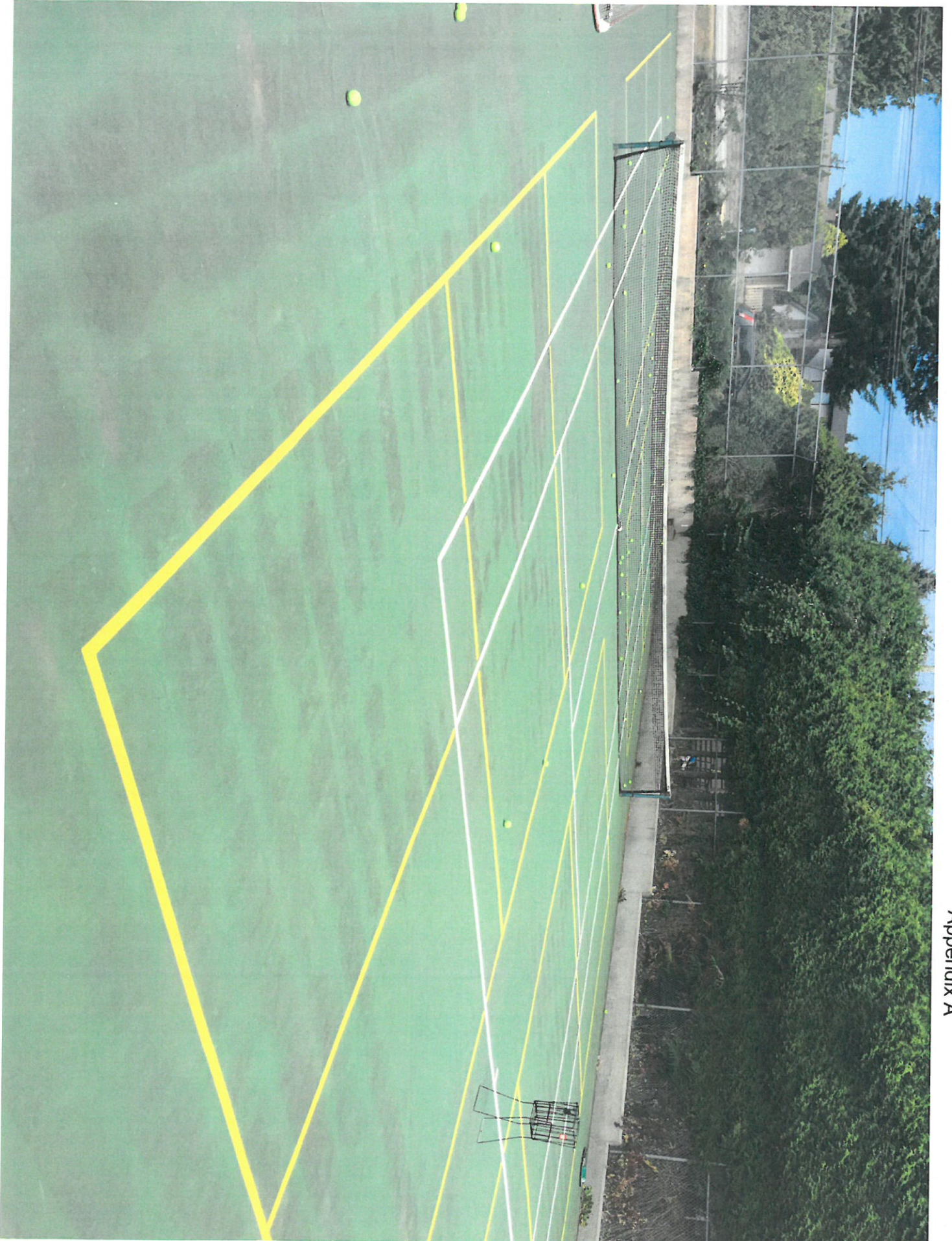


Dan Bottrill
Chief Administrative Officer

- Appendix A - Photograph of existing dual use tennis/pickleball courts at Centennial Park
- Appendix B – Photograph of existing three remaining tennis only courts at Centennial Park
- Appendix C – Letter from President, Semiahmoo Minor Lacrosse Association
- Appendix D – Letter from President, White Rock Tennis Club
- Appendix E – Tennis Court Survey
- Appendix F – Peace Arch News Article – Taylor Lacrosse Box



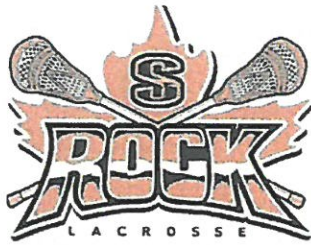
Appendix A



Appendix A



Appendix B



SEMAIHMUO MINOR LACROSSE ASSOCIATION
HOME OF THE ROCK

July 11, 2019

Eric Stepura
Director of Leisure Services
City of White Rock
15154 Russell Avenue
White Rock, BC V4B 2P6

RE: TAYLOR BOX

Thank you for reaching out to us at Semiahmoo Minor Lacrosse Association (SMLA) regarding the proposed painting of lines for 5 pickleball courts in Taylor Box.

Semiahmoo Minor Lacrosse Association is **STRONGLY OPPOSED** to any additional lines being added to the lacrosse box – Taylor Box.

Taylor Box was donated to SMLA by the Taylor family to promote lacrosse in our community.

Taylor Box is our only practice facility. During the season we have 4-5 practices each weeknight (4pm-9pm) and 7-8 practices on Sat/Sun (9am-6pm). As well, players freely practice outside of these hours daily.

The painting of additional lines would be very confusing for our players, especially the younger ones. Taylor Box is a lacrosse facility and the lines on the floor are specific to the game of lacrosse. Lacrosse is a very fast paced sport and the players need to be able to recognize the lines at all times. Our players are boys & girls, ages range from 5 to 16 years old.

The tennis courts to the East of Taylor Box or the tennis courts at Crescent Park Elementary are two locations that may be suitable options for the proposed pickleball courts.

Sincerely,

Randy Ellis, President
Semiahmoo Minor Lacrosse Association

Eric Stepura

From: Eric Stepura
Sent: July 12, 2019 3:25 PM
To: Eric Stepura
Subject: Request to add pickleball markings to the 3 tennis only courts at Centennial Park
Importance: High

Hi Eric,

I think I speak on behalf of the White Rock Tennis Club executive when I say it would be totally detrimental to both the City of White and White Rock Tennis Club to mark these courts with pickleball lines. Once the courts are marked up it is impossible to play a game of tennis on them. White Rock Tennis Club has in excess of 250 members sharing three courts. In prime time during the summer months our courts get so busy that many times our members move to the Centennial courts to play.

We have three leagues (two men's and one ladies) through Tennis BC which we would lose if these courts were marked up. We also have a junior program which plays league matches against Crescent Beach, Sunshine Hills and Surrey Tennis Centre that also require a fourth court. Although we are grandfathered in with the league despite us having only three courts it is only because we are able to utilize one of the Centennial courts during league play, if these courts were to be marked up that would mean the end of our league participation through Tennis BC as the other league teams would refuse to play on them.

The two courts already marked up provide eight pickleball courts accommodating 32 people whilst the remaining courts total three accommodating 12 tennis players per game. To my knowledge these are the only tennis courts in the whole of White Rock which is growing at an extremely fast rate. The courts are well utilized by local tennis players not associated with White Rock Tennis Club both in summer and in winter, where would these people go to play? Most of the pickleball courts are empty during the afternoon and evening period whilst the tennis courts often have people waiting to go on. Even during the morning period the Centennial tennis courts can be extremely busy during the summer season and especially on weekends when people are not working.

I cannot stress enough that playing tennis on a court marked up with pickleball lines is utterly impossible due to the confusion caused by the additional lines. Even playing alongside a court marked with pickleball lines is difficult as the lines catch the eye and make it difficult to concentrate.

Also the junior and adult programs provided by White Rock Leisure Services are held on Centennial courts. I would suggest you contact Bruce Webster who runs these programs and ask for his input.

Regards,
George Whitfield, President, WRTC

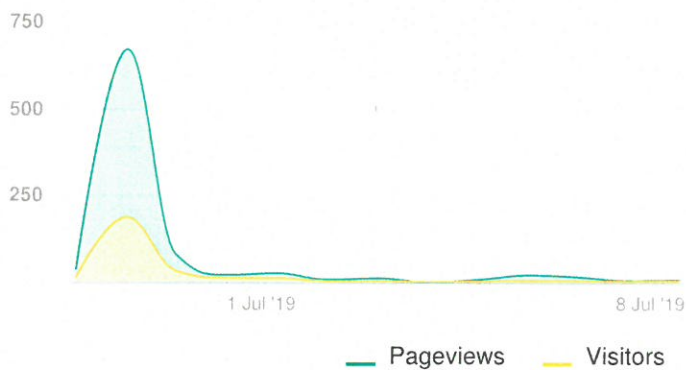
Project Report

10 June 2019 - 09 July 2019

Talk White Rock Tennis Courts Survey



Visitors Summary

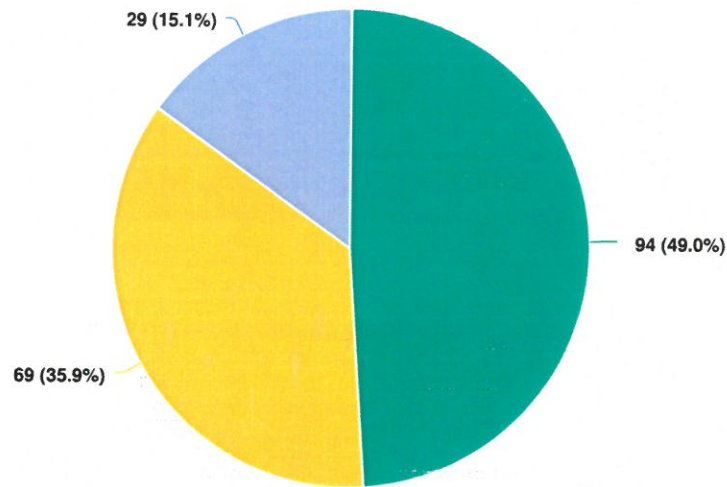


Highlights

TOTAL VISITS	301	MAX VISITORS PER DAY	185
NEW REGISTRATIONS	0		
ENGAGED VISITORS	173	INFORMED VISITORS	198
		AWARE VISITORS	249

Aware Participants		Engaged Participants		
249		173		
Aware Actions Performed	Participants	Engaged Actions Performed		
Visited a Project or Tool Page	249	Registered	Unverified	Anonymous
Informed Participants	198	Contributed on Forums	0	0
Informed Actions Performed	Participants	Participated in Surveys	1	0
Viewed a video	0	Contributed to Newsfeeds	0	0
Viewed a photo	0	Participated in Quick Polls	0	0
Downloaded a document	0	Posted on Guestbooks	0	0
Visited the Key Dates page	4	Contributed to Stories	0	0
Visited an FAQ list Page	0	Asked Questions	0	0
Visited Instagram Page	0	Placed Pins on Places	0	0
Visited Multiple Project Pages	34	Contributed to Ideas	0	0
Contributed to a tool (engaged)	173			

How often do you play Tennis/Pickleball at Centennial Park?

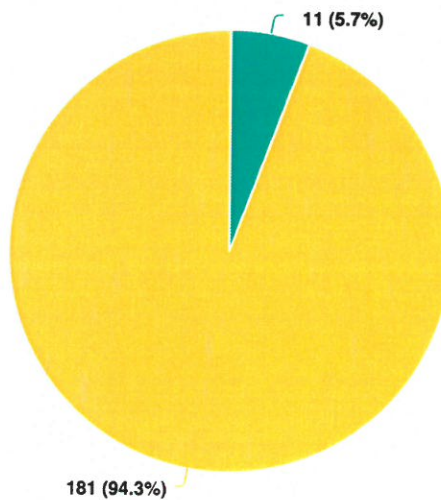


Question options

- 1-2 days/week
- 3-4 days/week
- 5+ days/week

(192 responses, 0 skipped)

Are you in favour of painting the 3 lower tennis only courts with Pickleball lines so they can be dual sports courts?



Question options

- Yes
- No

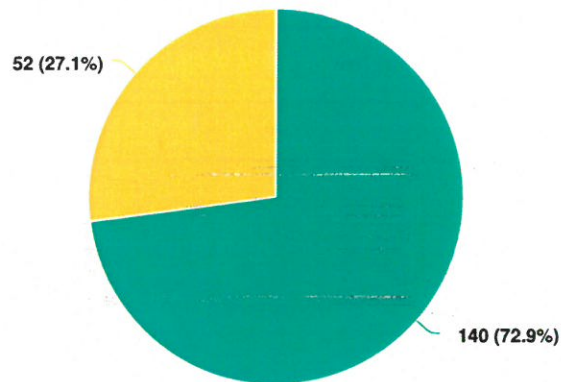
(192 responses, 0 skipped)

ENGAGEMENT TOOL: SURVEY TOOL

Tennis Court Survey

VISITORS	204	CONTRIBUTORS	173	CONTRIBUTIONS	192
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Do you live in White Rock?

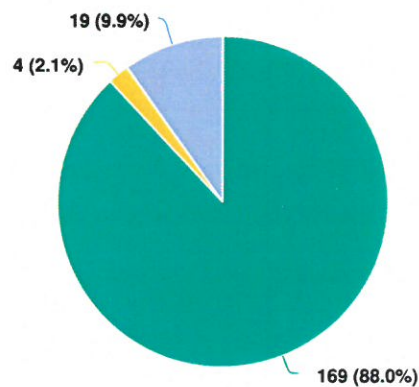


Question options

- Yes
- No

(192 responses, 0 skipped)

Which sport do you play at the Centennial Park Tennis/Pickleball Courts



Question options

- Tennis
- Pickleball
- Both

(192 responses, 0 skipped)

Taylor Box scores \$60,000 City bucks-up to match community's effort

by **Steven Addison**

Staff Reporter

Chalk up a victory for minor athletes, who Monday scored more than \$20,000 from the City of White Rock to refurbish a popular Peninsula sports facility that fell victim to two unbeatable opponents—time and age.

City politicians agreed to pony-up to help re-build Taylor Box, meaning athletes will be dishing out hits and filling the net by May this year.

"We are very much ready to go on this project," city works boss Doug Stone told council.

"We are in a position to proceed quickly and I do believe we will be able to meet the (May 1) deadline date, if not sooner."

Few should be surprised at Stone's enthusiasm to re-build the 30-year-old box, torn down last fall amid safety concerns. The entire community seems to have rallied behind the effort.

"It's truly one of those projects that makes you proud to live in this community," said Dave Mitchell, who teamed with Rob Wesley to raise money for the facility, which will be used for lacrosse, ball hockey and other sports.

The duo put together an information package in January



Brian Giebelhaus photo
Johnny Wesley and Jon Mitchell are looking forward to the rebuilt Taylor Box, where both roller hockey and lacrosse will make a comeback this spring.

PAN Feb. 27/02

and hit the streets in search of sponsors. In just weeks they collected \$37,500.

Atlas Signs and Awning jumped aboard, as did Scotiabank, PCS Wireless Communication, Re/Max, Windsor Square and Heather Brae Construction Company.

"The response was phenomenal. We didn't get any negative reaction," said Mitchell.

KN&V Chartered

Accountants agreed to help out. So did CIBC Wood Gundy, Molson, Semiahmoo Minor Hockey and Semiahmoo Minor Lacrosse.

White Rock-South Surrey Foundation came up with \$5,000 and White Rock Firefighters, who chipped in \$2,000, are tossing around ideas for a pancake breakfast when restoration is complete.

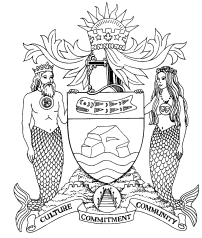
"One of the guys used to play and thought it was a great idea," Wesley said of the firefighters.

Top sponsors—\$2,000 or more—get corporate signage at Centennial Arena for a year.

Surplus funds from last year will be used to pay the city's share of the \$60,000 restoration.

LACROSS

THE CORPORATION OF THE
CITY OF WHITE ROCK
CORPORATE REPORT



DATE: July 22, 2019

TO: Mayor and Council

FROM: Carl Johannsen, Director of Planning and Development Services

SUBJECT: Response to *Metro Vancouver 2040: Shaping our Future* Land Use Designation Amendment Request – MK Delta Lands

RECOMMENDATIONS

THAT Council:

1. Receive for information the corporate report dated July 22, 2019 from the Director of Planning and Development Services titled “Response to *Metro Vancouver 2040: Shaping our Future* Land Use Designation Amendment Request – MK Delta Lands;” and
 2. Authorize the Director of Corporate Administration to respond to the Metro Vancouver Board stating that the City does not object to the proposed amendment to the Regional Growth Strategy, and by sending Council commentary and any applicable resolution along with this corporate report as a response to the Metro Vancouver Board request for comment.
-

BACKGROUND

The purpose of this report is to notify Mayor and Council of a proposed amendment to the Regional Growth Strategy (RGS), and to provide Council with an opportunity to comment on the proposed amendment. The City of Delta, in support of a development application, has initiated an amendment to the RGS to change the regional land use designation of a 62.7 hectare (155 acre) parcel located adjacent to the Highway 99 connector from “Agricultural” to “Industrial” and to include the lands within the Urban Containment Boundary. The proposal also involves the transfer of 132.7 hectares (328 acres) of environmentally sensitive lands owned by the MK Delta Lands Group to the City of Delta, 78 hectares (193 acres) of which has received conditional approval for inclusion into the Agricultural Land Reserve (ALR).

Prior to the City of Delta approving an Official Community Plan amendment bylaw, and the Agricultural Land Commission giving final approval to the exclusion of the subject property from the ALR, the RGS would need to be amended by the Metro Vancouver Regional District (MVRD) Board to change the regional land use designation from Agricultural to Industrial, and to revise the region’s Urban Containment Boundary.

The proposed changes to the land use designation and Urban Containment Boundary are a ‘Type 3’ minor amendment to the RGS, requiring a 50%+1 weighted vote of the Metro Vancouver Board in favour of the amendment, and no regional public hearing is required. First and second readings of the MVRD amendment bylaw were given on May 24, 2019, and MVRD staff were directed to notify local governments to obtain input. Following consideration of written

comments from local governments and other agencies (up to September 6, 2019), the MVRD Board will consider third reading and final adoption of the bylaw.

To provide further detail on the proposed amendment, the letter from Metro Vancouver inviting comment from local governments, and the MVRD Board report are attached as Appendices A and B, for Council's information.

ANALYSIS

White Rock Implications

The proposed RGS amendment is not anticipated to have a direct impact on services provided by the City of White Rock, as the location of the subject property is fourteen (14) kilometres from the City's boundaries.

Regional Planning Implications

Metro Vancouver staff assessed the proposed amendment for its alignment with the RGS and recommended that the MVRD Board approve the requested amendment, noting alignment with regional goals, including:

- increasing the supply of industrial lands in the region
- increasing land in the ALR and providing funds to improve the productivity of other agricultural lands; and
- increasing the protection of ecologically important lands contiguous with Burns Bog by eliminating the potential for permitted industrial extraction activities on three additional parcels by transferring them to public ownership.

Staff have reviewed the commentary provided in the MVRD Board report dated March 15, 2019, and concur with the regional staff's interpretation of the Regional Growth Strategy and the consistency between this proposed amendment and the goals of the RGS. The MVRD report is included as Appendix B.

Staff Commentary

Staff do not anticipate direct impacts to the City of White Rock from the proposed amendment and support the MVRD staff assessment for this application; therefore staff have no objection to this proposed amendment. Staff recommend this corporate report, along with Council comments and any applicable resolution be sent to Metro Vancouver Board as a response to their request for comments.

BUDGET IMPLICATIONS

There are no financial implications associated with the proposed amendment.

OPTIONS

The following options are available for Council's consideration:

Option 1: Authorize the Director of Corporate Administration to respond to the Metro Vancouver Board stating the City has no objection to the proposed amendment to the RGS by sending Council commentary and any applicable resolution along with this corporate report as a response to the Metro Vancouver Board request for comment; or

Option 2: Direct staff to provide another response to Metro Vancouver.

Staff recommend Option 1, which is reflected in the recommendations of this corporate report.

CONCLUSION

Metro Vancouver is seeking comment on a proposed amendment to the Regional Growth Strategy. The requested Type 3 amendment to the RGS is not expected to directly affect the City's interests and staff have reviewed the assessment by MVRD staff regarding the regional planning implications from this proposed amendment and concur with the support expressed by MVRD staff. As such, staff have no objection to the proposed RGS amendment. Staff recommend that Council authorize the Director of Corporate Administration to respond to the Metro Vancouver Board by sending Council commentary and any applicable resolution along with this corporate report as a response to the Metro Vancouver Board request for comment.

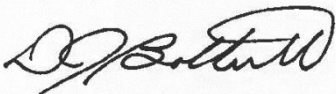
Respectfully submitted,



Carl Johannsen, MCIP, RPP
Director of Planning and Development Services

Comments from the Chief Administrative Officer:

I concur with the recommendations of this corporate report.



Dan Bottrill
Chief Administrative Officer

Appendix A: Letter from Metro Vancouver received June 10, 2019

Office of the Chair
Tel. 604 432-6215 Fax 604 451-6614

JUN 10 2019

File: CR-12-01
Ref: RD 2019 May 24

Mayor Darryl Walker and Council
City of White Rock
15322 Buena Vista Avenue
White Rock, BC V4B 1Y6

Dear Mayor Walker and Council:

Re: Metro 2040 Land Use Designation Amendment Request from the City of Delta – MK Delta Lands Regional Growth Strategy Amendment Bylaw No. 1283, 2019

On February 12, 2019, the City of Delta submitted a request to Metro Vancouver to amend *Metro 2040: Shaping Our Future (Metro 2040)* for a 62.7 ha (155 ac) property located at 7969 Highway 91 Connector, by changing the regional land use designation from “Agricultural” to “Industrial” and to include the lands within the Urban Containment Boundary.

At its May 24, 2019 regular meeting, the Board of Directors of the Metro Vancouver Regional District (Metro Vancouver) adopted the following resolutions:

That the MVRD Board:

- a) *initiate the regional growth strategy amendment process for the City of Delta’s proposed regional growth strategy amendment for the property located at 7969 Highway 91 Connector;*
- b) *give first and second readings to “Metro Vancouver Regional District Regional Growth Strategy Amending Bylaw No. 1283, 2019”;*
- c) *direct staff to notify affected governments as per Metro Vancouver 2040: Shaping Our Future Section 6.4.2; and,*
- d) *direct staff to request additional information from City of Delta staff as laid out in the report dated March 15, 2019, entitled “Metro 2040 Land Use Designation Amendment Request from the City of Delta – MK Delta Lands”.*

As required in both the *Local Government Act* and *Metro 2040*, amendment processes include a notification period to allow all affected local governments to provide comment on the proposed amendment. Following the comment period, Metro Vancouver will review all comments received, and consider third and final reading of the amendment bylaw.

The proposed amendment is a Type 3 minor amendment to *Metro 2040*, which requires an amendment bylaw be passed by Metro Vancouver by a 50%+1 weighted vote. No regional public hearing is required. For more information on regional growth strategy amendment procedures,

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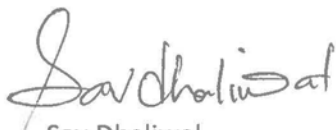
please refer to Sections 6.3 and 6.4 in *Metro 2040*. A Metro Vancouver staff report providing background information and an assessment of the proposed amendment regarding consistency with *Metro 2040* is enclosed.

You are invited to provide written comments on the proposed amendment. Please provide your comments by Friday, September 6, 2019. Comments can be provided via Council resolution.

As per MVRD Board resolution (d), Metro Vancouver staff will be in contact with City of Delta staff to request additional information, as laid out in the report dated March 15, 2019.

If you have any questions with respect to the proposed amendment, please contact Gord Tycho, Senior Planner, Regional Planning by email at Gordon.Tycho@metrovancover.org or by phone at 604-456-8805.

Yours sincerely,



Sav Dhaliwal
Chair, Metro Vancouver Board

SD/CM/NC/gt

Encl: Report dated May 15, 2019, titled "Metro 2040 Land Use Designation Amendment Request from the City of Delta – MK Delta Lands" (Doc #29622457)

To: MVRD Board of Directors

From: Neal Carley, General Manager, Planning and Environment

Date: May 15, 2019 Meeting Date: May 24, 2019

Subject: **Metro 2040 Land Use Designation Amendment Request from the City of Delta – MK Delta Lands**

At its April 5, 2019 meeting, the Regional Planning Committee considered the attached report, supported the staff recommendation, and advanced the report to the Board. At its April 26, 2019 meeting, the MVRD Board withdrew the attached report from its agenda at the request of the applicant. The City of Delta expressed interest in bringing the application to two additional Standing Committees for information, and as a result appeared as a delegation at the May 2, 2019 Industrial Lands Strategy Task Force meeting and the May 15, 2019 Regional Parks Committee meeting.

Regional Planning staff provided a presentation to describe the Metro 2040 amendment process, and considerations in evaluating the proposed amendment's impacts on the regional growth strategy's goals and policy actions. Staff noted to Committee members that if any comments were provided, they would be conveyed to the Board with the attached report.

At the Industrial Lands Strategy Task Force meeting, members articulated:

- that if approved, the type of industrial development should be consistent with the parcel's location on the goods movement network and support trade-enabling uses;
- concern about potential impact on bog hydrology;
- the uniqueness of the proposal in having multiple parcels with which to meet a broad range of regional and local objectives; and
- the inclusion of land into the Agricultural Land Reserve seems challenging as a regional benefit given there is no intent to farm the land.

At the Regional Parks Committee meeting, members articulated:

- concern about the potential impacts of the proposed development on the bog, particularly regarding fill, settlement on the site and water management;
- desire for ongoing monitoring post construction;
- continued involvement of the Burns Bog Scientific Advisory Panel at the design, construction and monitoring phases;
- that if approved, lots A, B and C be included in the Burns Bog Ecological Conservancy Area;
- recognition that with the current zoning, lots A, B and C are at risk;
- concern about speculation and an anticipated proposal for the lot to the east;
- the challenges with these types of complex applications and the inherent trade-offs; and
- that if approved, the type of industrial development be limited to activities that will minimize potential impacts on the bog.

Attachment:

“Metro 2040 Land Use Designation Amendment Request from the City of Delta – MK Delta Lands”,
dated March 15, 2019

29622457

To: Regional Planning Committee

From: James Stiver, Division Manager, Growth Management and Transportation
Gord Tycho, Senior Planner, Regional Planning

Date: March 15, 2019 Meeting Date: April 5, 2019

Subject: **Metro 2040 Land Use Designation Amendment Request from the City of Delta – MK Delta Lands**

RECOMMENDATION

That the MVRD Board:

- a) initiate the regional growth strategy amendment process for the City of Delta’s proposed regional growth strategy amendment for the property located at 7969 Highway 91 Connector;
- b) give first and second readings to “Metro Vancouver Regional District Regional Growth Strategy Amending Bylaw No. 1283, 2019”;
- c) direct staff to notify affected governments as per *Metro Vancouver 2040: Shaping Our Future* Section 6.4.2; and,
- d) direct staff to request additional information from City of Delta staff as laid out in the report dated March 15, 2019, entitled “Metro 2040 Land Use Designation Amendment Request from the City of Delta – MK Delta Lands”.

PURPOSE

To provide, for Regional Planning Committee and MVRD Board consideration, Metro Vancouver staff’s analysis and recommendations regarding the City of Delta’s proposed Type 3 Land Use Designation amendment to *Metro Vancouver 2040: Shaping our Future (Metro 2040)*, the regional growth strategy, for the MK Delta Lands (Attachment 1).

BACKGROUND

On February 12, 2019, the City of Delta submitted a proposed *Metro 2040* amendment to Metro Vancouver for the property located at 7969 Highway 91 Connector (Attachment 2). The proposed amendment is to change the regional land use designation of the subject property from “Agricultural” to “Industrial”, and to include the lands within the Urban Containment Boundary.

On June 10, 2016, Delta Council gave 1st reading to Official Community Plan Amendment Bylaw No. 7505, and 2nd reading was given on July 5, 2016. A local public hearing was held on July 26, 2016 and the Bylaw was subsequently given 3rd reading. The application was then referred to the Agricultural Land Commission, seeking exclusion of the subject property from the Agricultural Land Reserve (ALR), complemented by a proposal to add a second parcel to the ALR. In September of 2018, the Agricultural Land Commission conditionally approved the exclusion of the subject property and inclusion of the second parcel.

SITE DESCRIPTION

The subject property is a 62.7 ha (155 ac) undeveloped site located at 7969 Highway 91 Connector, just south of Highway 17 (South Fraser Perimeter Road) and adjacent to the Burns Bog Ecological Conservancy Area (BBECA) (Figure 1). The subject property is owned by MK Delta Lands Group. It is located in the ALR, but the owner is currently satisfying exclusion conditions with the Agricultural Land Commission. To the east are privately-owned undeveloped lands located in the ALR, a provincial highway maintenance area and Highway 91. Industrial uses are located to the north and east in the Sunbury industrial business area across the Highway 91 Connector and Highway 17 along Nordel Way and River Road. To the south are Lots A, B, and C (also owned by MK Delta Lands Group), and the BBECA to the south and west.

Figure 1: Subject Property Map



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In addition to the proposed regional land use redesignation of Lot 4, the three additional parcels noted are part of the overall proposal. The property owner has committed to transfer Lots A, B, and C to the City of Delta for protection from future development, and include Lot B in the ALR. Lots A, B, and C are located adjacent to the BBECA and Lots B and C are wooded.

Burns Bog Ecological Conservancy Area

Burns Bog is a raised bog ecosystem covering approximately 3,000 ha (7,413 ac) of the Fraser River delta between the south arm of the Fraser River and Boundary Bay. The largest undeveloped urban landmass in North America, Burns Bog is globally unique because of its chemistry, form, flora and size. The BBECA consists of approximately 2,000 ha (5,000 ac) of land that was purchased in 2004 in an agreement between senior levels of government, Metro Vancouver and the City of Delta. As part of this agreement, a conservation covenant was registered on title of these lands that ensures the ecological integrity of the lands is protected. The BBECA is jointly operated by Metro Vancouver and the City of Delta.

Table 1: Subject Property (Lot 4) - Summary

Parcel Location	7969 Highway 91 Connector, City of Delta	
Parcel Size	62.7 ha (155 ac)	
Proposed Development	Development of a 9-lot industrial subdivision over a developable area of 43.79 ha (108.2 ac). Remainder of area to occupied by internal roads and utilities, future highway access, and protection (buffer) / enhancement areas.	
	Current	Proposed
Urban Containment Boundary (UCB)	Outside of the UCB	Include the parcel within the UCB
Metro 2040 Designation	Agricultural	Industrial
City of Delta OCP Designation	Agricultural (A)	Industrial (I)
Municipal Zoning	I3 Extraction Industrial*	CD Comprehensive Development (site-specific)**
ALR	Exclusion granted by ALC subject to conditions (agriculture / environment buffers). History of peat extraction.	
<p>* Extraction activities are subject to non-farm use approval by ALC.</p> <p>** Proposed CD Zone allows light industrial uses on the majority of the site with environmental buffers along the perimeter. Allowable light industrial uses include warehousing, wholesaling and distribution, transportation, communication, equipment sales, repair and servicing, etc., but restrict container storage and uses with higher potential for emissions of air contaminants and spills of hazardous materials.</p>		

APPLICATION HISTORY

The subject property owner (MK Delta Lands Group) owns approximately 202 hectares (500 acres) of land in or near Burns Bog. In 2015, the owner submitted applications to the City of Delta to amend the City’s Official Community Plan (OCP), the zoning bylaw, the sanitary sewer area, and for a development permit, to allow for the development of an industrial business park on the subject property.

The application also included requests to:

- exclude the subject property (Lot 4) from the ALR;
- amend the regional land use designation of Lot 4 in *Metro 2040* from Agricultural to Industrial, and include the lands within the Urban Containment Boundary;
- amend the Fraser Sewerage Area to include the subject property;
- include Lot B (one of three other lots owned by MK Delta Lands Group to the south) into the ALR (Figure 1); and
- transfer three other parcels of land owned by the property owner (i.e. Lots A, B and C) into public ownership.

In July 2016, City of Delta Council gave the OCP Amendment Bylaw 3rd reading, and referred the application to the Agricultural Land Commission for consideration to exclude the subject property from the ALR and to include Lot B into the ALR. In August 2017, the Agricultural Land Commission conditionally approved the application. In September 2018, the Agricultural Land Commission Executive Committee upheld the South Coast Panel’s August 2017 decision.

Metro 2040 sets out that an ALR exclusion must be granted before Metro Vancouver can consider an application for amendment from the *Metro 2040*’s Agricultural designation (Section 2.3.4). The City of Delta and the owner are working with Agricultural Land Commission staff to finalize the conditions of approval.

Proposed *Metro 2040* Amendment

As per Section 6.3.4(f) of *Metro 2040*, for sites that are contiguous with the Urban Containment Boundary and are not within the ALR, a land use amendment from Agricultural to Industrial, and the associated Urban Containment Boundary adjustment, requires a Type 3 minor amendment to *Metro 2040* (i.e. an amendment bylaw passed by a majority weighted vote and no regional public hearing).

The proposed *Metro 2040* amendment also triggers the need for a revised Regional Context Statement from the City of Delta so that the mapping in the City’s OCP, the RCS and *Metro 2040* will be consistent. The City’s amended RCS request will be forwarded to the MVRD Board for consideration should direction be given to initiate the regional growth strategy amendment, consistent with *Regional Growth Strategy Implementation Guideline #1: Regional Context Statements*.

ANALYSIS OF ALIGNMENT WITH *METRO 2040*

Metro 2040 provides a framework for assessing the proposed amendments. Consideration has been given to each of the five *Metro 2040* goals and applicable strategies, which are summarized below.

GOAL 1 – CREATE A COMPACT URBAN AREA

Strategy 1.1: Contain Urban Development within the Urban Containment Boundary

Given the location and site context of the subject property, an extension of the Urban Containment Boundary will likely not lead to a proliferation of applications. It is noted that there is one large property to the east that is currently in the ALR. If the redesignation application for the subject

property is successful, this large remaining parcel will be additionally isolated, and one can anticipate an increased likelihood of a future application for a *Metro 2040* amendment for that property.

GOAL 2 – SUPPORT A SUSTAINABLE ECONOMY

Strategy 2.2: Protect the supply of Industrial land

The addition of the subject property to the regional industrial lands inventory would provide an additional 43.8 ha (108.2 ac) of industrial land, which would be of local and regional benefit from an industrial-activity, goods movement, and employment generating perspective. Locally, the subject property is in an area contiguous with other industrial lands along the Fraser River, and is in close proximity to Sunbury, Tilbury, and other River Road industrial activities. Regionally, the subject property has direct access to the South Fraser Perimeter Road, a key transportation connector for moving people and goods in and through the region.

It is beyond the scope of the assessment of the proposed regional land use redesignation to consider the type and tenure of industrial activity planned for the subject property. That said, the specifics associated with type and tenure of activity do have regional implications. For example, if the site is developed as a strata development, having a large number of owners on site likely increases the impact risk to the adjacent Burns Bog. Conversely, with a shortage of large, flat, accessible distribution-oriented parcels available in the regional industrial land inventory, this site would serve well for a trade-enabling supportive use given its proximity to the Port and goods movement network.

Strategy 2.3: Protect the supply of agricultural land and promote agricultural viability with an emphasis on food production

The subject property has a regional Agricultural land use designation as it was within the ALR at the time *Metro 2040* was adopted. As part of the application process, the owner sought to have the subject property excluded from the ALR. It had never been farmed. The Agricultural Land Commission has granted conditional approval to the exclusion subject to the addition of a buffer to the adjacent property to the east to support agriculture. In addition, \$6 million will be put toward drainage and irrigation improvements for Westham Island and East Delta, and, Lot B (approximately 78 ha) has been included in the ALR. There is a resulting net gain of approximately 15 ha (37 ac) of agricultural land in the proposal, and the Agricultural Land Commission states that Lot B is more agriculturally viable than Lot 4.

GOAL 3 – PROTECT THE ENVIRONMENT AND RESPOND TO CLIMATE CHANGE IMPACTS

Strategy 3.1: Protect Conservation and Recreation lands

The owner is proposing to transfer its remaining holdings in the area to the City of Delta, which has committed to manage these lands consistent in the BBCEA. Lots A, B, and C, total 132.7 ha in size. All three parcels currently have a regional Conservation and Recreation land use designation, however these privately-owned lands are currently zoned Extraction-industrial (I3) in the City's zoning bylaw. This zoning permits a range of industrial extraction activities for sand, gravel, and peat, as well as related processing, such as crushing, screening, and stockpiling. The City of Delta application states that the transfer of these lands into public ownership protects additional bog lands from future development and resolves the remaining MK Delta Lands Group holdings adjacent to the bog.

An Environmental Effects Assessment for the subject property was prepared by Environmental Dynamics as part of the proposal. The study concludes that the proposed industrial development, in

conjunction with the transfer of approximately 132 ha (326 ac) of Lots A, B, and C to public ownership results in a net gain in ecologically-sensitive lands, vegetation, and wildlife habitat protection. The study also finds a net gain for all broad ecosystem types, save for herb dominated habitat. Metro Vancouver staff note that Lots 4, A, B, and C are entirely comprised of sensitive ecosystems in the Metro Vancouver Sensitive Ecosystem Inventory. Lots 4, A, and B are wetland bog, and exhibit evidence of past peat harvesting, but recovery is in progress for all three sites. Lot 4 is in moderately better condition than Lot B, and Lot C is a mix of wetland bog and wetland swamp.

Strategy 3.2: Protect and enhance natural features and their connectivity

Looking at the overall trade-offs for the environment given the four properties at play is one aspect to consider, but the potential impacts for the subject property of the amendment from Agricultural to Industrial and the potential impacts on the adjacent bog is of critical importance to consider. To mitigate and monitor the proposal, environmental buffers are proposed around the perimeter of the development area, with the objective of separating bog waters and any run-off from the proposed industrial development. The proposed protection and enhancement areas on the subject property total approximately 12 ha (30 ac). Water quality and water level monitoring will be undertaken as part of stormwater management activities before, during, and after construction to ensure effective protection of adjacent bog lands. The owner has committed to 50 m buffers along the southern and western property border at the request of the Burns Bog Ecological Conservancy Area Scientific Advisory Panel.

The proposed development of the subject property will require up to 6 m (20 ft) of fill to raise the elevation and offset an anticipated 3 m of ground settlement. Potential impacts to the bog from surcharge loading and other construction activities are being addressed through water quality and water level monitoring. The introduction of fill to the site and the resulting sub-surface effects could have wide-ranging impacts including peat damage / fissures, a lowered water table, the intrusion of nutrient water, and an increased risk of fire and invasive species on the bog.

Metro Vancouver staff recommend that further information be sought from the City of Delta about the potential impacts and planned mitigation efforts for the addition of fill. Staff also recommend that the City of Delta consult with the Burns Bog Scientific Advisory Panel on these potential impacts.

GOAL 5 – SUPPORT SUSTAINABLE TRANSPORTATION CHOICES

Strategy 5.2: Coordinating land use and transportation to support the safe and efficient movement of vehicles for passengers, goods, and services

The subject property is well positioned to support regional goods movement due to its proximity to the U.S. border, Roberts Bank Container terminal, and other industrial docks and facilities along the Fraser River (i.e. Sunbury, River Road, Tilbury). Immediate adjacency to Hwy 17 allows direct access to an important regional goods movement corridor, thereby minimizing impact on residential areas and improving safety.

REQUEST FOR ADDITIONAL INFORMATION

As part of the review of the proposed amendment submission, Metro Vancouver staff identified a number of areas that would benefit from further information from the City of Delta. Two of these areas deal with the width of the proposed environmental buffers for the subject property and clarity

on the potential impacts of site surcharge loading. In addition, Water and Liquid Waste staff are also seeking further information.

Delta's application noted that environmental buffers will be provided and that water quality and water level monitoring will be undertaken as part of stormwater management activities before, during, and after construction to ensure effective protection of adjacent bog lands. In June 2016, the Burns Bog Scientific Advisory Panel recommended increasing the environmental buffers from 30 to 50 metres along both the west and south sides of the subject property. City of Delta staff have confirmed that, in response to the Scientific Advisory Panel's June 2016 comments, the property owner committed to increase the west perimeter buffer on the subject property from 30 m to 50 m.

City staff also stated that the plans, reports and detailed engineering servicing drawings will be revised to reflect the adjusted buffers should this application receive approval from Metro Vancouver. It has also been confirmed with the City of Delta the intent to have the Burns Bog Scientific Advisory Panel comment on any mitigation, maintenance and monitoring plans to be prepared for the environmental buffer as this application progresses.

Should the MVRD Board initiate the proposed amendment, staff will follow up with City staff regarding the following:

- 1) the rationale for maintaining the southern perimeter buffer width at 30 m and not 50 m.
- 2) Clarity on the information regarding the potential impacts of site surcharge loading, both over the short and long term and a rationale as to why the proposed surcharge loading of fill on Lot 4 is not expected to have an impact on the Bog's integrity.
- 3) Additional information on the anticipated impacts of the proposed amendment on the City's estimated water purchases from Metro Vancouver as a result of the proposed industrial development.
- 4) A request that, for consideration of the requested extension of the Fraser Sewerage Area, general design features be provided for the proposed sanitary system including projected flows.

Staff will provide any new information related to responses obtained to the above questions at the time it receives the comments from affected local governments and the MVRD Board considers subsequent readings of the amendment bylaw.

REGIONAL PLANNING ADVISORY COMMITTEE REVIEW

As per *Regional Growth Strategy Procedures Bylaw No. 1148, 2011* (amended in 2014) and *Regional Growth Strategy Implementation Guideline #2 Amendments to the Regional Growth Strategy*, the City of Delta application for the MK Delta Lands and staff assessment presented in this report was presented to the Regional Planning Advisory Committee at its meeting on March 15, 2019. No comments were made.

NEXT STEPS

Should the process for considering the *Metro 2040* amendment be initiated by the MVRD Board and the draft bylaw be given 1st and 2nd readings, staff will notify affected governments as per *Metro 2040* Section 6.4.2., and provide a comment period of approximately 45 days. The proposed amendment also triggers the need for a revised Regional Context Statement from the City of Delta so that mapping in the City's OCP, RCS and *Metro 2040* will be consistent. The City of Delta will forward its Regional Context Statement to Metro Vancouver for consideration by the MVRD Board.

Should the initial readings of the amendment bylaw be given, staff anticipate reporting back to the MVRD Board at its July 2019 meeting with a summary of comments on the proposed amendment, the updated Regional Context Statement, and the draft amendment bylaw for consideration of 3rd and final reading. If approval is given, consideration of the City's requested extension of the Fraser Sewerage Area could then be considered by the Liquid Waste Committee and Greater Vancouver Sewerage & Drainage District Board.

ALTERNATIVES

1. That the MVRD Board:
 - a) initiate the regional growth strategy amendment process for the City of Delta's proposed regional growth strategy amendment for the property located at 7969 Highway 91 Connector;
 - b) give first and second readings to "Metro Vancouver Regional District Regional Growth Strategy Amending Bylaw No. 1283, 2019";
 - c) direct staff to notify affected governments as per *Metro Vancouver 2040: Shaping Our Future* Section 6.4.2; and,
 - d) direct staff to request additional information from City of Delta staff as laid out in the report dated March 15, 2019, entitled "Metro 2040 Land Use Designation Amendment Request from the City of Delta – MK Delta Lands".
2. That the MVRD Board decline the proposed amendment for the MK Delta Lands and notify the City of Delta of the decision.

FINANCIAL IMPLICATIONS

If the MVRD Board chooses Alternative 1, notification will be given to all affected local governments as laid out in the *Local Government Act* and *Regional Growth Strategy Implementation Guideline #2: Amendments to the Regional Growth Strategy*.

If the MVRD Board chooses Alternative 2, the City of Delta will be notified of the Board's decision. A dispute resolution process may take place as described in the *Local Government Act*. The cost of this dispute resolution is prescribed based on the proportion of assessed land values. Metro Vancouver would be responsible for most of the associated costs.

SUMMARY / CONCLUSION

On February 12, 2019, the City of Delta submitted a request to Metro Vancouver to amend the regional land use designation for a property located at 7969 Highway 91 Connector in Delta. The City is requesting an amendment to the regional land use designation for the subject property from

Agricultural to Industrial, and to include the subject property within the Urban Containment Boundary.

Should the amendment be approved, the property owner has committed to transfer three other lots that it owns, totalling 132 ha (328 ac), that are located adjacent to the Burns Bog Ecological Conservancy Area, to the City of Delta for protection from future development. In addition, one of those properties will also be included in the ALR, and funds will be provided by the owner to improve drainage and irrigation on agricultural lands elsewhere in the municipality.

Staff conclude that the proposed amendment will result in a net benefit to the municipality and region by: increasing the supply of industrial lands in the region; increasing land in the ALR and providing funds to improve the productivity of other agricultural lands; and increasing the protection of ecologically important lands contiguous with Burns Bog by eliminating the potential for permitted industrial extraction activities on three additional parcels by transferring them to public ownership.

Staff note a concern with the mitigation measures proposed for the industrial development on lands to be redesignated (Lot 4). There is likely a significant environmental impact to converting these lands to industrial uses, and an increased risk to the BBECA. Given that the parcel to the east of Lot 4 would be further isolated as a result of the proposal, the likelihood of a future application for its redesignation also increases.

As a result of the complete analysis, staff recommend Alternative 1, to initiate the proposed amendment and request further information from the City of Delta regarding proposed environmental mitigation measures for the subject property.

Attachments:

1. Metro Vancouver Regional District Regional Growth Strategy Amending Bylaw No. 1283, 2019.
2. City of Delta Referral to Metro Vancouver for the MK Delta Lands Group Industrial Development Application at 7969 Highway 91 Connector, Delta (569244 BC Ltd.) (*orbit doc #28905443*)

28905446

**METRO VANCOUVER REGIONAL DISTRICT
REGIONAL GROWTH STRATEGY AMENDMENT BYLAW NO. 1283, 2019**

A Bylaw to Amend "Greater Vancouver Regional District Regional Growth Strategy
Bylaw Number 1136, 2010"

WHEREAS the Metro Vancouver Regional District (the "MVRD) Board (the "Board") has adopted the "Greater Vancouver Regional District Regional Growth Strategy Bylaw Number 1136, 2010" on July 29, 2011;

WHEREAS the Metro Vancouver Regional District wishes to amend "Greater Vancouver Regional District Regional Growth Strategy Bylaw Number 1136, 2010";

NOW THEREFORE the Metro Vancouver Regional District Board of Directors enacts as follows:

1. "Greater Vancouver Regional District Regional Growth Strategy Bylaw Number 1136, 2010" is hereby amended as follows:
 - a) Re-designating the subject property at 7969 Highway 91 Connector (Lot 4 Plan NWP1180 District Lot 437 Land District 2 Land District 36 Except Plan EPP375) from Agricultural to Industrial, as shown in the maps contained in Schedule "A" attached to and forming part of this Bylaw;
 - b) Extending the Urban Containment Boundary to encompass the subject property at 7969 Highway 91 Connector (Lot 4 Plan NWP1180 District Lot 437 Land District 2 Land District 36 Except Plan EPP375), as shown in the maps contained in Schedule "A" attached to and forming part of this Bylaw; and
 - c) Maps 2, 3, 4, 6, 7, 11, and 12, contained in Greater Vancouver Regional District Regional Growth Strategy Bylaw Number 1136, 2010 are deleted and replaced with Maps 2, 3, 4, 6, 7, 11, and 12 as contained in Schedule "B" attached to and forming part of this Bylaw.
2. This bylaw shall be cited as "Metro Vancouver Regional District Regional Growth Strategy Amendment Bylaw No. 1283, 2019". This bylaw may be cited as "Regional Growth Strategy Amendment Bylaw No. 1283, 2019".

READ A FIRST TIME this _____ day of _____, 2019.

READ A SECOND TIME this _____ day of _____, 2019.

READ A THIRD TIME this _____ day of _____, 2019.

PASSED AND FINALLY ADOPTED this _____ day of _____, 2019.

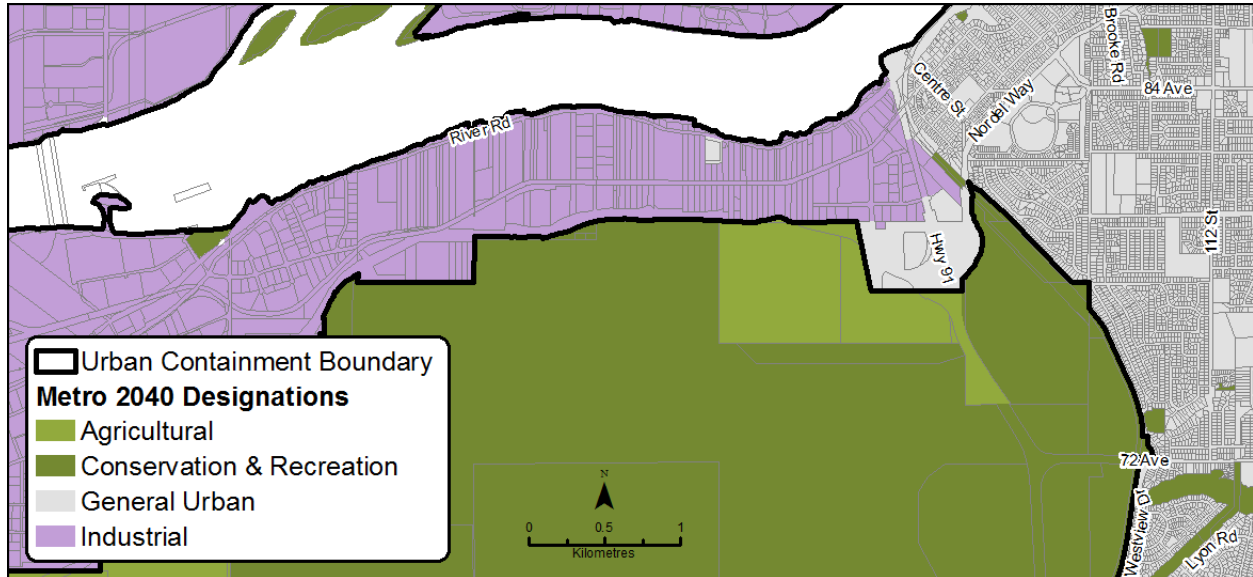
Sav Dhaliwal, Chair

Chris Plagnol, Corporate Officer

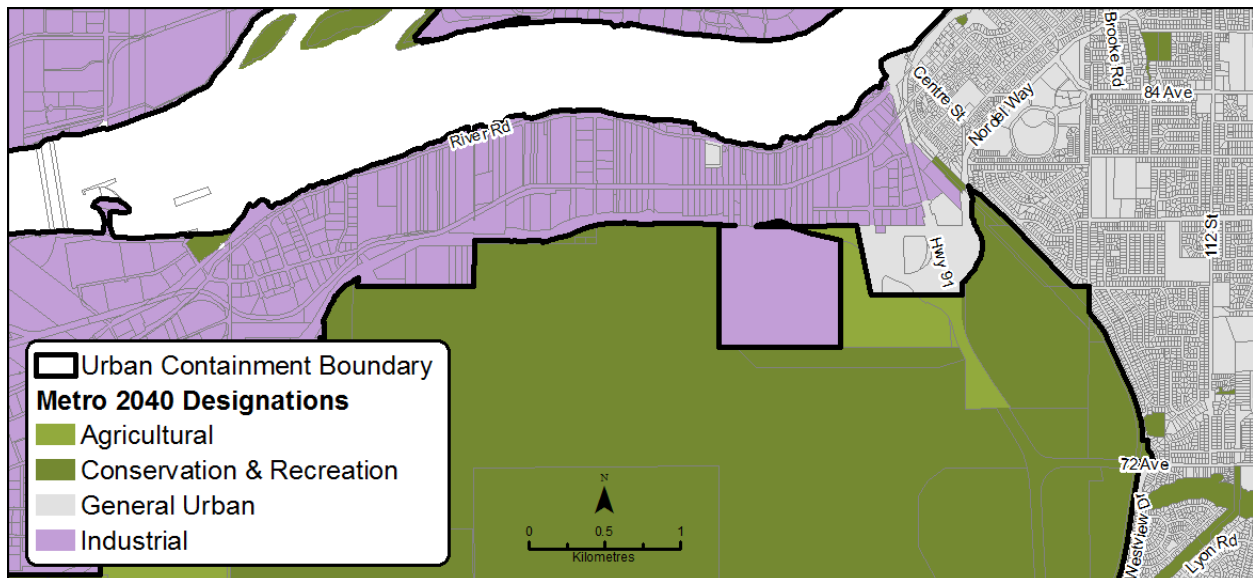
SCHEDULE A

The subject property at 7969 Highway 91 Connector includes lands redesignated from Agricultural to Industrial.

PRIOR TO AMENDMENT

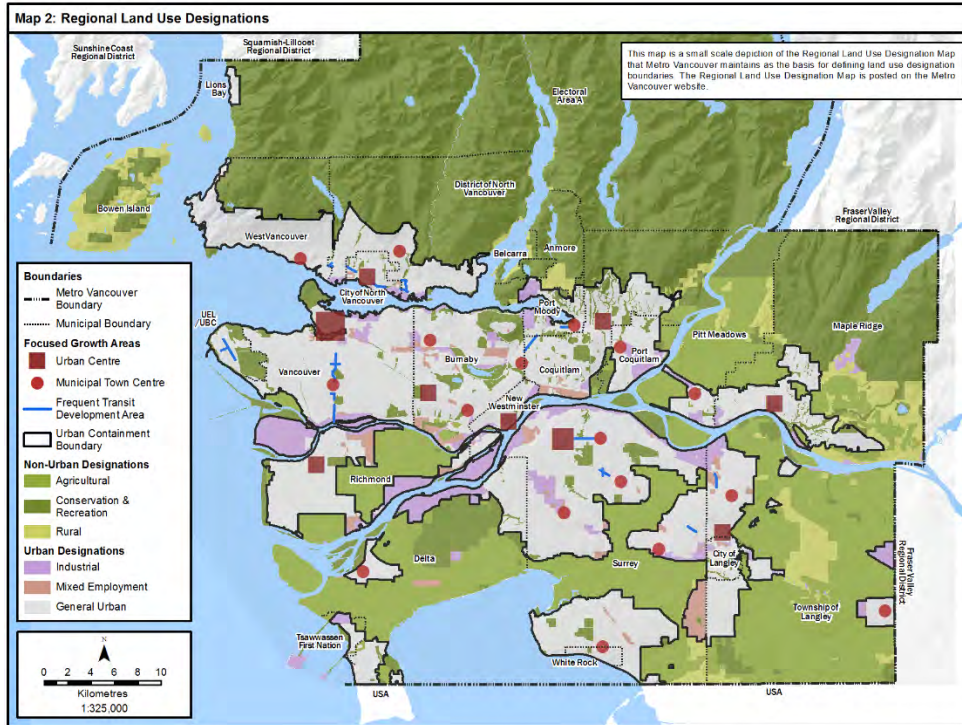


POST AMENDMENT

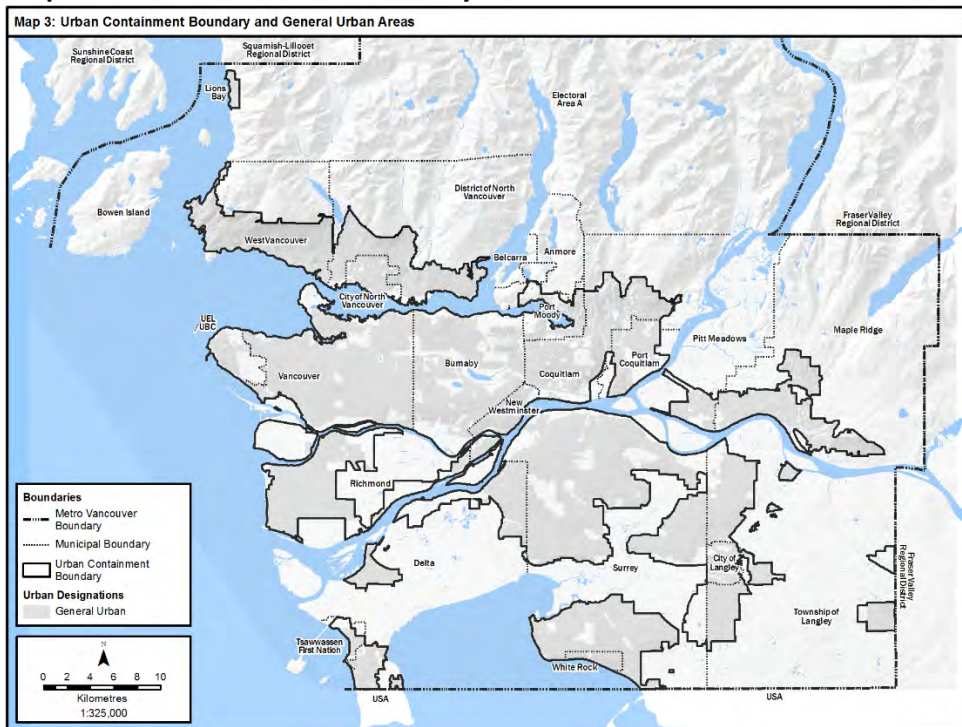


SCHEDULE B

Map 2 Regional Land Use Designations

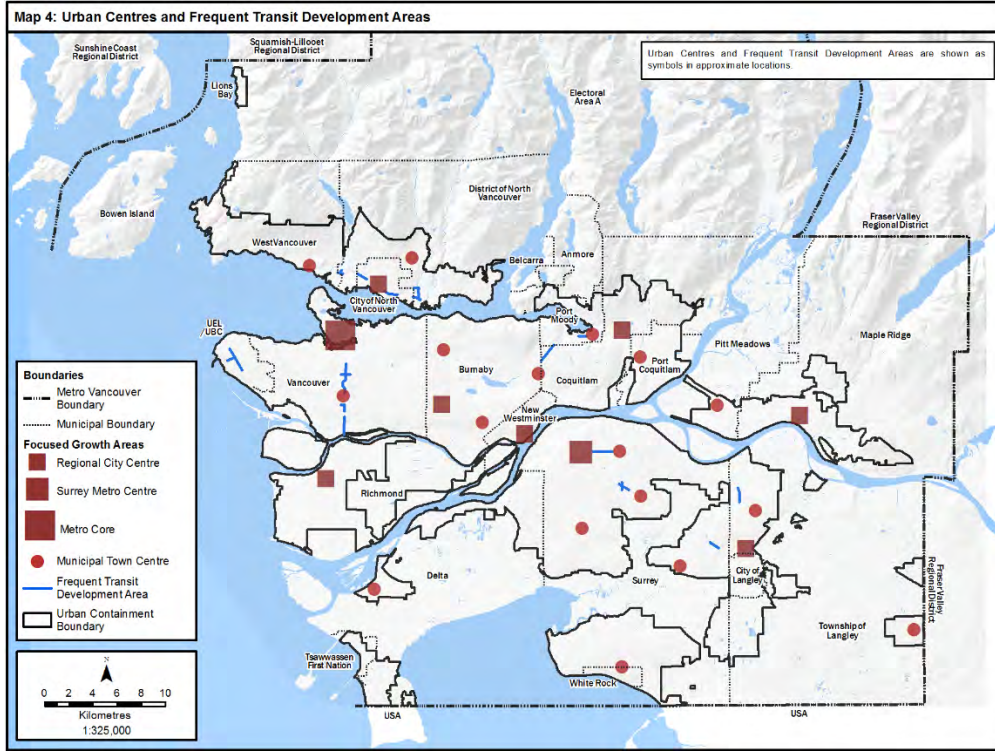


Map 3 Urban Containment Boundary and General Urban Areas

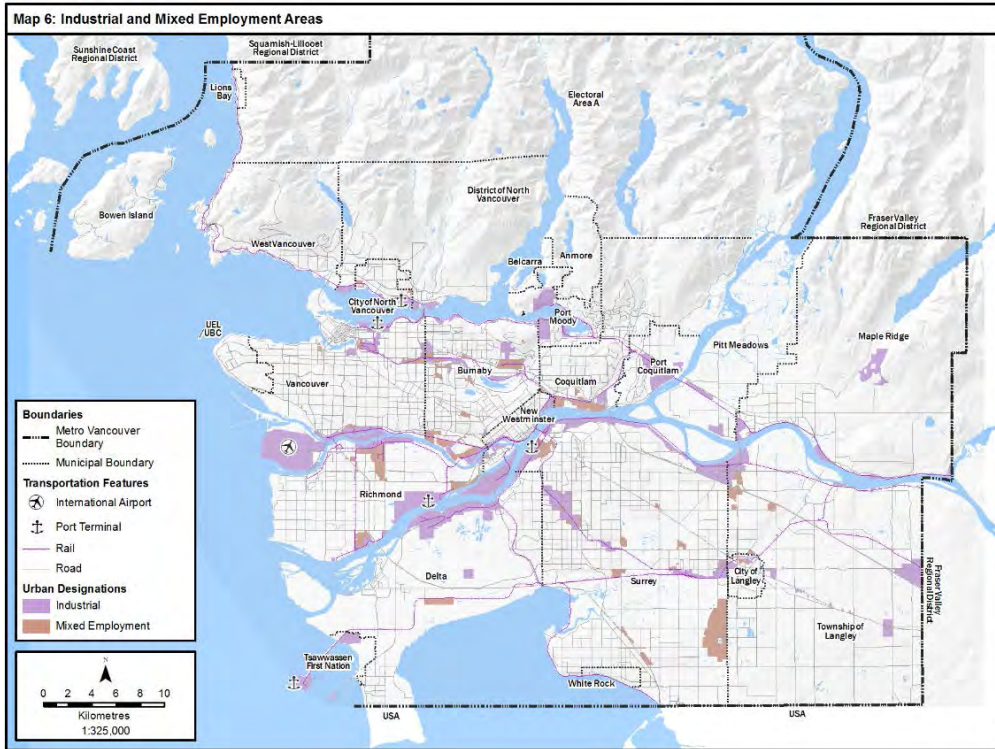


SCHEDULE B (continued)

Map 4 Urban Centres and Frequent Transit Development Areas

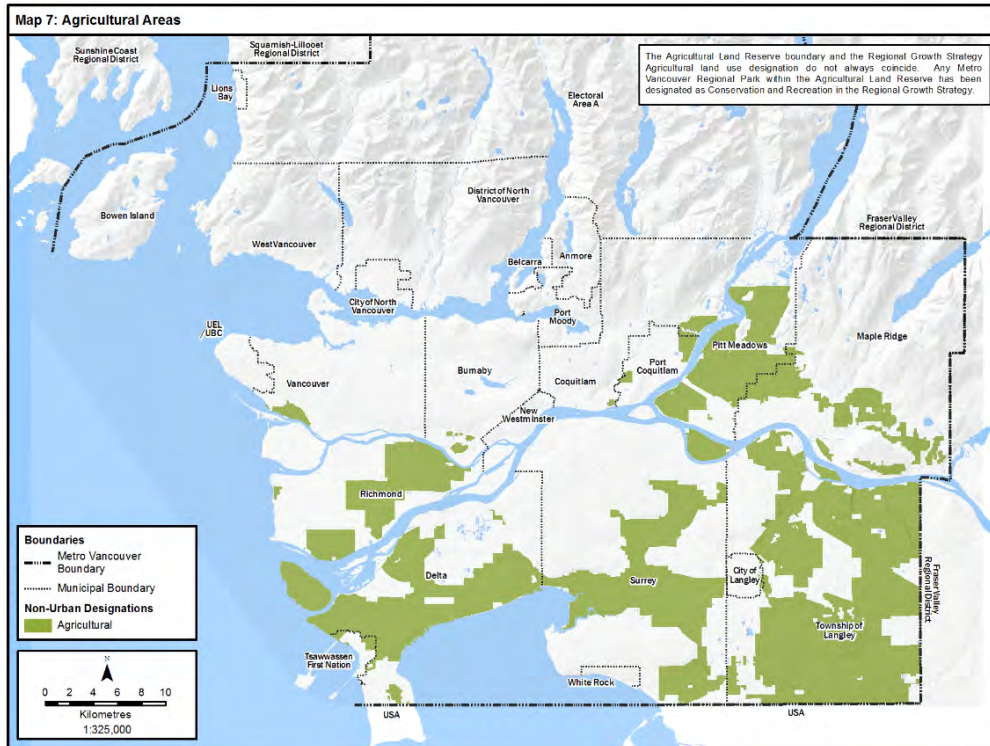


Map 6 Industrial and Mixed Employment Areas

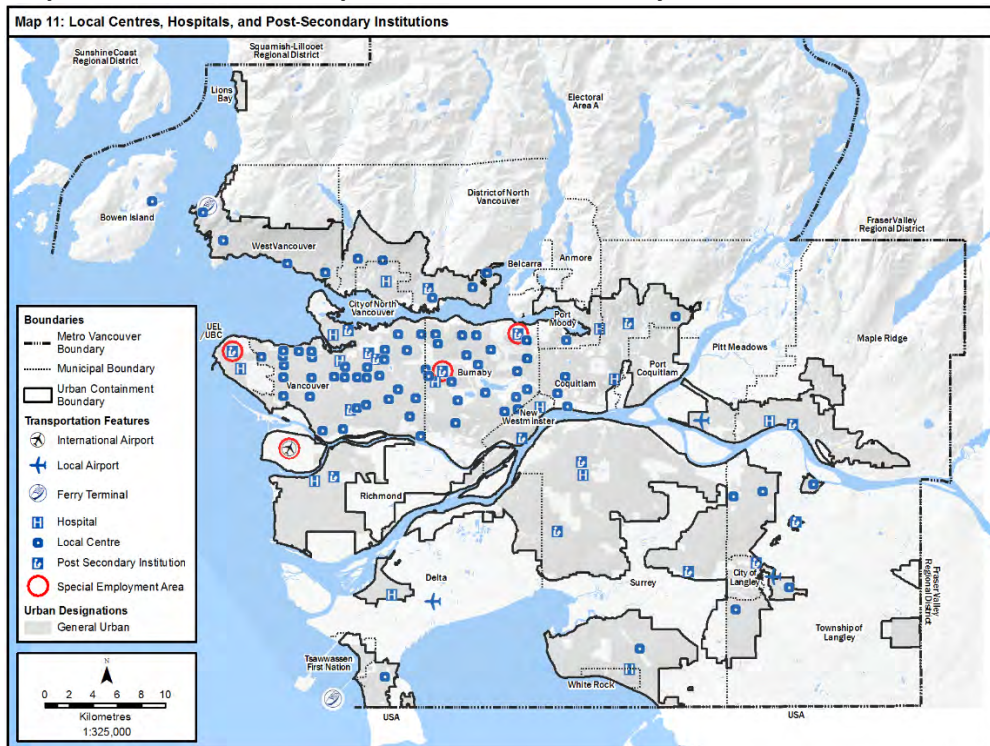


SCHEDULE B (continued)

Map 7 Agricultural Areas

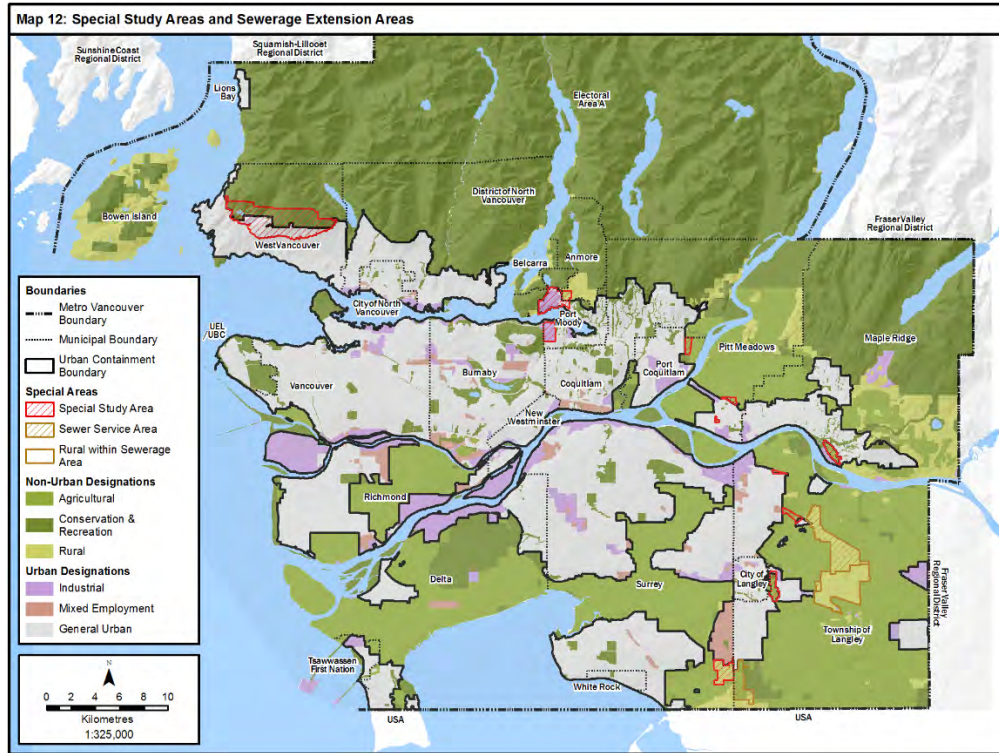


Map 11 Local Centres, Hospitals and Post-Secondary Institutions



SCHEDULE B (continued)

Map 12 Special Study Areas and Sewerage Extension Areas





CITY OF DELTA
Office of The Mayor, George V. Harvie



February 19, 2019

Sav Dhaliwal, Chair
 Metro Vancouver Board of Directors
 4730 Kingsway, Metro Tower III
 Burnaby, BC V5H 0C6

Dear Chair Dhaliwal,

Re: Referral to Metro Vancouver for the MK Delta Lands Group Industrial Development Application at 7969 Highway 91 Connector, Delta (569244 BC Ltd.)

The purpose of this letter is to refer the industrial development application for the MK Delta Lands Group to Metro Vancouver, and to seek approval of amendments to the Regional Growth Strategy and Fraser Sewerage Area.

Proposal

The MK Delta Lands Group application involves a master-planned industrial subdivision with environmental and agricultural buffers on the 62.7 ha (155 ac) site at 7969 Highway 91 Connector as shown on the Location Map on the following page. The site is located just south of Highway 17 (South Fraser Perimeter Road) and the existing Sunbury industrial business area and it is adjacent to the Burns Bog Ecological Conservancy Area (BBECA). The subject property is located within the Agricultural Land Reserve (ALR), but has received conditional approval for exclusion. The subject property is currently designated Agricultural (A) in Delta's Official Community Plan and zoned Extraction Industrial (I3) in Delta's Zoning Bylaw. The following is a summary of the proposed land use components which are illustrated on the development concept plan in Attachment A:

Proposed Land Use	Area
Industrial (developable area)	43.79 ha (108.2 ac)
Internal Roads and Utilities	3.38 ha (8.4 ac)
Future Highway Access	3.08 ha (7.6 ac)
Protection/Enhancement Areas:	
West and South Perimeter Buffer, Fill Slope and Maintenance Access	5.92 ha (14.6 ac)
North Undisturbed Area and Fill Slope	6.23 ha (15.4 ac)
East Perimeter Ditch and Fill Slope	0.3 ha (0.74 ac)
Total:	62.7 ha (155 ac)

Location Map



Environmental and Agricultural Benefits and Community Amenities

Given the location of the site, the applicant is proposing buffers around the perimeter of the development area to protect the adjacent BBECA by keeping development run-off and bog waters separate (refer to the BBECA mitigation buffer in Attachment A). The buffer areas to the west and south would be owned and managed by Delta; however, the applicant would be responsible for the installation of the berm and fill slope and interim maintenance and monitoring prior to Delta assuming responsibility for the buffer area. The north and east buffers would be on privately owned lands. Water quality and water level monitoring would be done before, during and after construction to ensure effective protection of the BBECA.

Access to the site is proposed from an improved connection to the Highway 91 Connector. The existing Highway 17 (SFPR) and Highway 91 Connector junction is a signalized at-grade intersection and is currently operating at capacity during the peak periods. To support the continual traffic growth on the SFPR and the Highway 91 Connector, the Province is undertaking improvements to the Sunbury Interchange involving grade separation of the intersection of Highway 91 Connector and SFPR, upgrade of the Highway 91 and Nordel Way interchange, and access improvements at River Road and SFPR. The proposed industrial development on the subject property would be contingent upon or phased to coincide with the completion of the Sunbury Interchange project.

Should the industrial development application be approved, the applicant has committed to providing land dedication and \$11 million towards the following:

- Transferring the following lands to Delta:
 - 132.7 ha (328 ac) of land (Lots A, B and C) as shown on the Location Map. This would place additional bog lands in public ownership. These privately owned lands are currently located outside of the ALR and the BBECA. As part of this application, Lot B (7007 Highway 91) would be included in the ALR. Lots A, B and C are zoned Extraction Industrial (I3) which permits a range of industrial extraction activities including peat extraction. Dedication to Delta would protect these lands from future development or disturbance.
 - 5.92 ha (14.6 ac) as shown as the BBECA mitigation buffer on Attachment A. This lot would contain an environmental buffer area along the west and south property lines and maintenance access.
- \$6 million towards agricultural drainage and irrigation improvements. The applicant commissioned a study to identify opportunities to improve agricultural capability and suitability on Westham Island that found that unless sufficient suitable irrigation water and improved drainage can be supplied to Westham Island, crop production is anticipated to decrease and the effects of salinity on soils may increase. Improving components of Delta's existing irrigation and drainage system would increase the availability of non-saline irrigation water to Westham Island. Part of the financial contribution would also be set aside for East Delta drainage and irrigation improvements.
- \$5 million towards transportation improvements and community amenities as determined by Council.

Process

The proposal requires amendments to Delta's Official Community Plan and Zoning Bylaw, a sanitary sewer area extension and a development permit in order to allow for an industrial subdivision. The application also included a request to exclude the subject property from the ALR, a request to amend the Metro Vancouver Regional Growth Strategy to permit industrial uses on the subject property, and a request to include Lot B (7007 Highway 91) into the ALR. The

Provincial Agricultural Land Commission (ALC) has conditionally approved the exclusion and inclusion applications (refer to the ALC Decision section below).

This application has been under consideration since April 2015. Delta has, throughout that period, undertaken extensive analysis of the project and has consulted with the community. The consultation process included:

- Public Information Meeting hosted by the MK Delta Lands Group on February 25, 2016
- Public Information Meeting hosted by Delta on May 25, 2016
- Public Hearing on July 26, 2016

Throughout the application process, a number of technical studies have been completed. The application analysis is provided in the staff report dated June 10, 2016 which was considered by Council at their June 20, 2016 Regular Meeting. The studies and other documents are available through Delta's website at www.delta.ca/mkindustrial.

On June 20, 2016, Council gave first and second readings to Bylaws No. 7505, 7506 and 7507, and first, second and third readings to Bylaw No. 7508. On July 11, 2016, Council rescinded second reading of Bylaw No. 7505, and gave second reading to an amended bylaw that corrected an error in the regional land use designation. These bylaws would:

- amend the regional land use designation in the Regional Context Statement in Schedule A of the Official Community Plan from Agriculture to Industrial and extend the Urban Containment Boundary to include the subject property (Bylaw No. 7505);
- amend the land use designation for the subject property in the Future Land Use Plan in Schedule A of the Official Community Plan from Agricultural (A) to Industrial (I) (Bylaw No. 7506);
- rezone from I3 Extraction Industrial to Comprehensive Development Zone No. 474 (C.D. 474) to permit industrial uses on a majority of the site with environmental buffers along the perimeter (Bylaw No. 7507); and
- extend the Sewer Area boundary to include the subject property in Delta's Sewer Area and Metro Vancouver's Fraser Sewerage Area (Bylaw No. 7508).

On June 20, 2016, Council also received Development Permit LU007445 which would address environmental setbacks within the Streamside Protection and Enhancement (SPEA) Development Permit Area.

Bylaws No. 7505, 7506 and 7507 and Development Permit LU007445 were referred to the July 26, 2016 Public Hearing. At the Public Hearing there were:

- 25 speakers: 11 in support, 10 in objection, 3 with concerns, and 1 comment;
- 89 letters: 36 in support, 45 in objection and 8 with concerns; and

- 5 petitions in objection with a total of 1,416 hard copy signatures and 944 online.

At the Meeting Following the Public Hearing on July 26, 2016, Council gave third reading to Bylaws No. 7505, 7506 and 7507. On July 24, 2017, Council extended third reading of Bylaws No. 7505, 7506, 7507 and 7508 to December 31, 2018.

On July 26, 2016, Council also endorsed the following motions:

- THAT the Metro Vancouver Board be requested to amend "Greater Vancouver Regional Growth Strategy Bylaw No. 1136, 2010" by changing the regional land use designation of the property at 7969 Highway 91 Connector from Agriculture to Industrial and to include the subject property in the Urban Containment Boundary; and
- THAT the Metro Vancouver Board be required to approve "Delta Sewer Area Extension and Enlargement (MK Delta Lands Group – LU007445) Bylaw No. 7508, 2016" to extend the sewer area to include the property at 7969 Highway 91 Connector.

Referrals for the amendments to the Regional Growth Strategy and the Fraser Sewerage Area are now being undertaken following the ALC's recent conditional approvals (see below).

Provincial Agricultural Land Commission Decision

The applications to exclude the 62.7 ha (155 ac) property at 7969 Highway 91 Connector from the ALR and to include the 78.1 ha (193 ac) property at 7007 Highway 91 (Lot B) into the ALR were conditionally approved by the ALC on September 11, 2018. The majority of the ALC Executive Committee upheld an August 2017 conditional approval decision of the South Coast Panel. The key points of the decision include:

1. The proposed industrial property at 7969 Highway 91 Connector (subject property) has a history of peat extraction and has been disturbed to a greater extent than the property proposed for inclusion at 7007 Highway 91 (Lot B). The Panel found that both properties exhibit a bog ecosystem and that a cranberry operation would be the most suitable agricultural use; however, establishing a cranberry operation on the subject property would be unreasonably difficult due to the degree of disturbance exhibited. As such, the property at 7969 Highway 91 Connector is suitable for exclusion from the ALR.
2. Due to the lesser degree of disturbance and the greater probability of future agricultural remediation, 7007 Highway 91 (Lot B) is suitable for inclusion into the ALR.
3. A covenant that restricts agricultural uses on 7007 Highway 91 (Lot B) is not appropriate for a parcel within the ALR as it would preclude any future remediation and use of the property for agriculture. The Panel is opposed to a restrictive covenant or any future Official Community Plan and rezoning amendment that would prohibit agricultural uses on Lot B.

The ALR exclusion and inclusion approval are subject to the following conditions:

- Submission of a vegetative buffering plan, prepared by a qualified professional, for all boundaries of 7969 Highway 91 Connector that abut ALR lands consistent with section 3.8b in the Ministry of Agriculture and Lands' Guide to Edge Planning. The plan must be reviewed and approved by the ALC;
- Installation of the required vegetative buffering plan;
- Agriculture cannot be restricted on 7007 Highway 91 (Lot B) by covenant or otherwise; and
- Any future Official Community Plan or rezoning amendments for 7007 Highway 91 (Lot B) Connector must include agricultural uses and be subject to ALC review and approval.

ALC staff have advised that the exclusion conditions would be satisfied by the submission and approval of the vegetative buffering plan, registration of a covenant on the property at 7969 Highway 91 Connector between the applicant, Delta and the ALC for the installation and maintenance of the agricultural buffer and provision of a letter of credit for the cost of agricultural buffer to be held by the ALC. The applicant prepared a vegetative buffering plan that was accepted by ALC staff on January 24, 2019. Delta staff are in the process of preparing the terms of the covenant for the three parties to sign. Prior to registration of the covenant, the applicant would deposit the letter of credit, based on an accepted cost estimate, with the ALC. Delta staff will update Metro Vancouver on the status of the exclusion process when final confirmation is received from the ALC.

With respect to the ALC's conditions for 7007 Highway 91 (Lot B), Delta agreed to not restrict agriculture on the property by covenant or otherwise, and to include agricultural uses in any future Official Community Plan or zoning amendments for the property subject to ALC's review and approval. Having satisfied the conditions for inclusion, ALC staff advised in December 2018 that the property at 7007 Highway 91 (Lot B) would be added to the ALR.

Local and Regional Context

The Regional Growth Strategy Amendments Map provided in Attachment B illustrates the proposed regional land use designation amendment from Agriculture to Industrial and amendment to the Urban Containment Boundary to include the subject property. Metro Vancouver staff provided comments on the MK Delta Lands Group application on May 27, 2016. The comments identified regional factors, which should be considered should Council submit a request for a Regional Growth Strategy amendment and sanitary sewer area extension. Further discussion on the regional factors and technical information identified by Metro Vancouver and Delta staff response are provided in Attachments C and D to this letter, and were also included in the staff report dated June 10, 2016 to Council. Also attached is a certified copy of Bylaw No. 7508 to extend the sanitary sewer area (Attachment E).

In Delta's view, some of the significant regional benefits that would be generated by this proposal include the following:

- Dedication to Delta of 132.7 ha (328 ac) of land adjacent to the BBECA would protect these lands from future development and would place additional bog lands in public ownership.
- Environmental and agricultural buffer areas are proposed on the subject property around the perimeter of the development. The buffers would protect the adjacent BBECA by keeping development run-off and bog waters separate, and would mitigate potential conflicts between industrial and agricultural uses should the adjacent lands to the east within the ALR be farmed.
- This proposal would create an additional 43.79 ha (108.2 ac) of industrial lands for development which would contribute to Delta's and the region's supply of industrial lands.
- The loss of ALR lands is proposed to be offset by:
 - The inclusion of a 78.1 ha (193 ac) parcel (7007 Highway 91) with similar agricultural capability into the ALR.
 - The applicant's proposal to contribute a minimum \$6 million for irrigation and drainage improvements for Westham Island and East Delta would assist in increasing the agricultural productivity of valuable cultivated lands in Delta.

Conclusion

In forwarding this application to Metro Vancouver, we have prepared a comprehensive package that contains all of the information noted in Attachment F, including staff reports, minutes of Council meetings and the Public Hearing, applicable technical reports and the vegetative buffering plan for 7969 Highway 91 Connector.

Delta's request for an amendment to the Regional Context Statement will be forwarded to Metro Vancouver for consideration should the amendments to the Regional Growth Strategy and Fraser Sewerage Area be approved.

Should you require any further information, please contact Marcy Sangret, Director of Community Planning & Development, by phone at 604.946.3219 or email at msangret@delta.ca.

Yours truly,



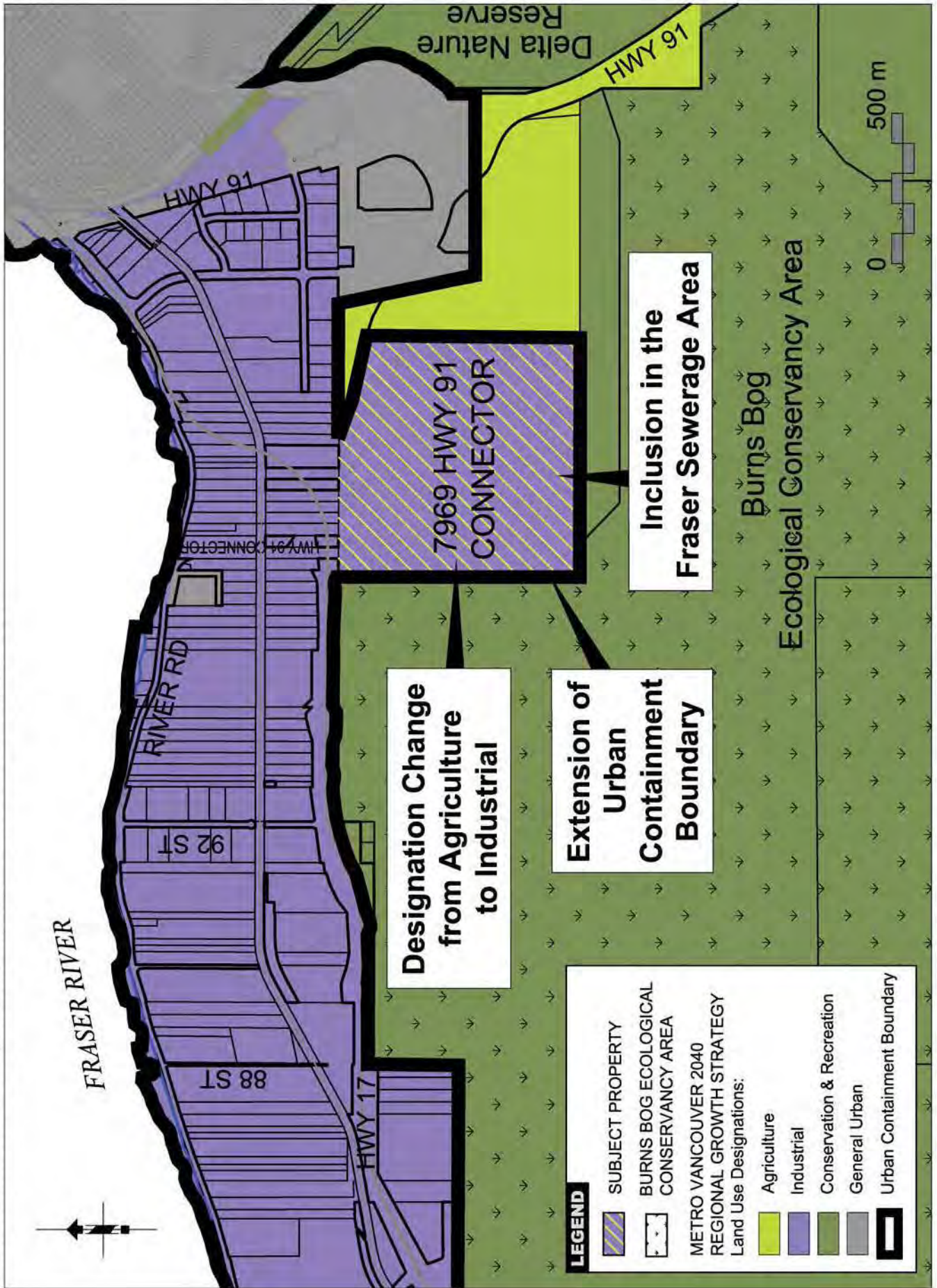
George V. Harvie
Mayor

Enclosures:

- A. Development Concept Plan
- B. Proposed Regional Growth Strategy Amendments Map
- C. Regional Factors to Consider for the Proposed Regional Growth Strategy Amendments
- D. Sewer Area Extension Evaluation Summary and Sanitary Sewer Area Map
- E. Sanitary Sewer Area Extension Bylaw No. 7508 Certified Correct
- F. List of Information Included in Referral Package to Metro Vancouver

cc: Delta Council
Metro Vancouver Board of Directors
Carol Mason, Commissioner/Chief Administrative Office, Metro Vancouver
Heather McNell, Director of Regional Planning & Electoral Area Services, Metro Vancouver
Mark Wellman, Senior Project Engineer, Liquid Waste Services, Metro Vancouver
Sean McGill, City Manager, City of Delta
Steven Lan, Director of Engineering, City of Delta
Marcy Sangret, Director of Community Planning & Development, City of Delta

Amendments Requiring Metro Vancouver Approval



Regional Factors to Consider for the Proposed Regional Growth Strategy Amendments for the MK Delta Lands Group Application

The subject property at 7969 Highway 91 Connector is currently designated Agriculture in the Metro Vancouver Regional Growth Strategy, and is located outside of the regional Urban Containment Boundary. The following section responds to comments received by Metro Vancouver based on the preliminary application circulation for the proposed industrial business park application which would require amendments to the Regional Growth Strategy to change the regional land use designation of the subject property to Industrial and to include the property within the Urban Containment Boundary.

1) Support a Sustainable Economy (Goal 2)

2.1 Promote land development patterns that support a diverse regional economy and employment close to where people live.

The property is situated directly south of the Sunbury industrial business park area and is located in close proximity to both Highway 17 and Highway 91. The proposed industrial development would create an employment area that is located in close proximity to the North Delta community.

2.2 Protect the supply of industrial land.

Metro Vancouver studies show the demand for industrial land is increasing and the region will face a shortage in the next 10 to 15 years. The applicant has provided an Industrial Development, Market and Impact Study prepared by Site Economics Ltd., dated November 2015, which also provides an analysis of the industrial land supply with similar conclusions. This proposal would create an additional 43.79 ha (108.2 ac) of developable industrial lands which would contribute to Delta's and the region's supply of industrial lands.

2.3 Protect the supply of agricultural land and promote agricultural viability with an emphasis on food production.

The property has a regional Agriculture land use designation and is located with the Agricultural Land Reserve; however, the Provincial Agricultural Land Commission has conditionally approved the subject property for exclusion. The applicant has provided an Agricultural Capability Assessment for the subject property prepared by PGL Environmental Consultants, dated March 2016. The assessment found that drainage improvements would be required to improve the agricultural capability of the lands to organic Class 4 soils with excess water. Given the property's proximity to the much larger Burns Bog Ecological Conservancy Area, surface drainage for any crops other than cranberries would be a significant undertaking.

The applicant proposes to offset the requested Agricultural Land Reserve exclusion for the subject property by:

- providing Delta with a \$6 million contribution towards drainage and irrigation improvements for Westham Island and East Delta. This proposal is based on the conclusions of the Agricultural Benefit for Westham Island Salinity Analysis by PGL Environmental Consultants, dated March 2016, that identified opportunities to improve agricultural capability and suitability on Westham Island. The study found that unless sufficient suitable irrigation water can be supplied to Westham Island, crop production is anticipated to decrease and the effects of salinity on soils may increase. Improving components of Delta's existing irrigation system would increase the availability of non-saline irrigation water to Westham Island. Part of the contribution would also be set aside for East Delta drainage. Improvement options in the vicinity of Lorne Ditch would be reviewed. The applicant's proposal to contribute \$6 million for irrigation and drainage improvements for Westham Island and East Delta would assist in increasing the agricultural productivity of valuable cultivated lands in Delta; and
- including the property at 7007 Highway 91 (Lot B) as shown on the Location Map below, totaling 78.1 ha (193 ac) into the Agricultural Land Reserve.

Location Map



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Inclusion of this property was not part of the original application as Lot B has considerable ecological values. However, it is recognized that there are existing environmentally sensitive lands located within the Burns Bog Ecological Conservancy Area that are also located within the Agricultural Land Reserve. The Provincial Agricultural Land Commission has approved inclusion of Lot B into the Agricultural Land Reserve. Should the industrial business park application be approved and the land transferred, Delta would manage Lot B consistent with the Burns Bog Ecological Conservancy Area and apply a conservation covenant.

2) Protect the Environment and Respond to Climate Change (Goal 3)

3.1 Protect Conservation and Recreation lands.

The applicant is proposing to transfer to Delta a total of 132.7 ha (328 ac) of land (Lots A, B and C). These lands have a regional land use designation of Conservation & Recreation. These privately-owned lands are currently located outside of the Burns Bog Ecological Conservancy Area. They are zoned Extraction Industrial (I3) which permits a range of industrial extraction activities including peat extraction. Dedication to Delta would protect these lands from future development and would place additional bog lands in public ownership.

3.2 Protect and enhance natural features and their connectivity.

The applicant submitted an Environmental Effects Assessment, dated April 2016, prepared by Environmental Dynamics Inc. that found that the proposed industrial development would realize a net gain in ecologically sensitive lands, vegetation and wildlife habitat protection with the proposed transfer of 132.7 ha (328 ac) of land (Lots A, B and C as shown on the Location Map) to Delta for protection from development. Other than the change in habitat for the subject site, development impacts can be minimized through the implementation of mitigation measures for fish and fish habitat, wildlife and vegetation. A covenant would be registered on the subject property that would require implementation and monitoring of the proposed mitigation measures.

Environmental buffer areas are proposed around the perimeter of the development area on the subject property to protect the adjacent Burns Bog Ecological Conservancy Area by keeping development run-off and bog waters separate. In addition to the peat berm and perimeter ditches, the site would be surrounded by a fill slope that would transition from the development site down to the perimeter ditches. A fence would be placed at the top of the slope to prevent public access to the perimeter buffer areas and the adjacent Burns Bog Ecological Conservancy Area and to maintain continuity of the South Fraser Perimeter Road wildlife fence. The buffer areas to the west and south would be owned and managed by Delta; however, the applicant would be responsible for

the installation of the berm and fill slope and interim maintenance and monitoring prior to Delta assuming responsibility for the buffer area. The north buffer and the east perimeter ditch and fill slope would be on privately-owned lands. Water quality monitoring would be done before, during and after construction to ensure effective protection of the Burns Bog Ecological Conservancy Area.

3.3 Encourage land use and transportation infrastructure that reduce energy consumption and greenhouse gas emissions, and improve air quality.

The industrial development on the subject property would be contingent upon or phased to coincide with the completion of the Sunbury Interchange Project which would reduce congestion and the associated idling thereby improving local air quality and reducing greenhouse gas emissions from transportation.

The development itself would have a 3 m (10 ft) wide multi-use pathway to encourage walking and connectivity to public transit. Links to the local and regional cycling network would provide options for employees to seek alternative modes of transportation and thereby reducing greenhouse gas emissions.

The proposed design guidelines encourage the implementation of sustainable, energy-efficient design standards in building and site design. It is noted that energy-efficient design standards utilizing natural lighting, promoting renewable energy use and adhering to LEED standards would be implemented wherever applicable. Opportunities to incorporate renewable energy systems into buildings would also be pursued.

3.4 Encourage land use and transportation infrastructure that improve the ability to withstand climate change impacts and natural hazard risks.

The development site would be elevated significantly above existing site grades to about 5.3 m geodetic with mineral fill. This is in excess of the design flood proofing grade and current height of the Fraser River dike.

Stormwater infrastructure proposed includes increased pumping capacity with a new pump station at the Silda outfall which would provide drainage for the project site as well as improving drainage for the existing Nordel Industrial area. This would accommodate the more intense storm events predicted due to climate change.

3) Support Sustainable Transportation Choices (Goal 5)

5.1 Coordinate land use and transportation to encourage transit, multiple-occupancy vehicles, cycling and walking.

The development would have 3 m (10 ft) wide multi-use pathways on both sides of the internal roads to encourage walking and cycling. Possible links to the local and regional cycling network such as Highway 17 would provide options for employees to seek alternative modes of transportation.

5.2 Coordinate land use and transportation to support the safe and efficient movement of vehicles for passengers, goods and services.

The proposed development is ideally positioned for supporting goods movement in the region due to its proximity to the US border, Roberts Bank Container Terminal, and other industrial docks and facilities along the Fraser River. As the site can be directly accessed from Highway 17, commercial truck traffic would be separated from residential areas thus improving community safety.

Sewer Area Extension Evaluation Summary and Sanitary Sewer Map

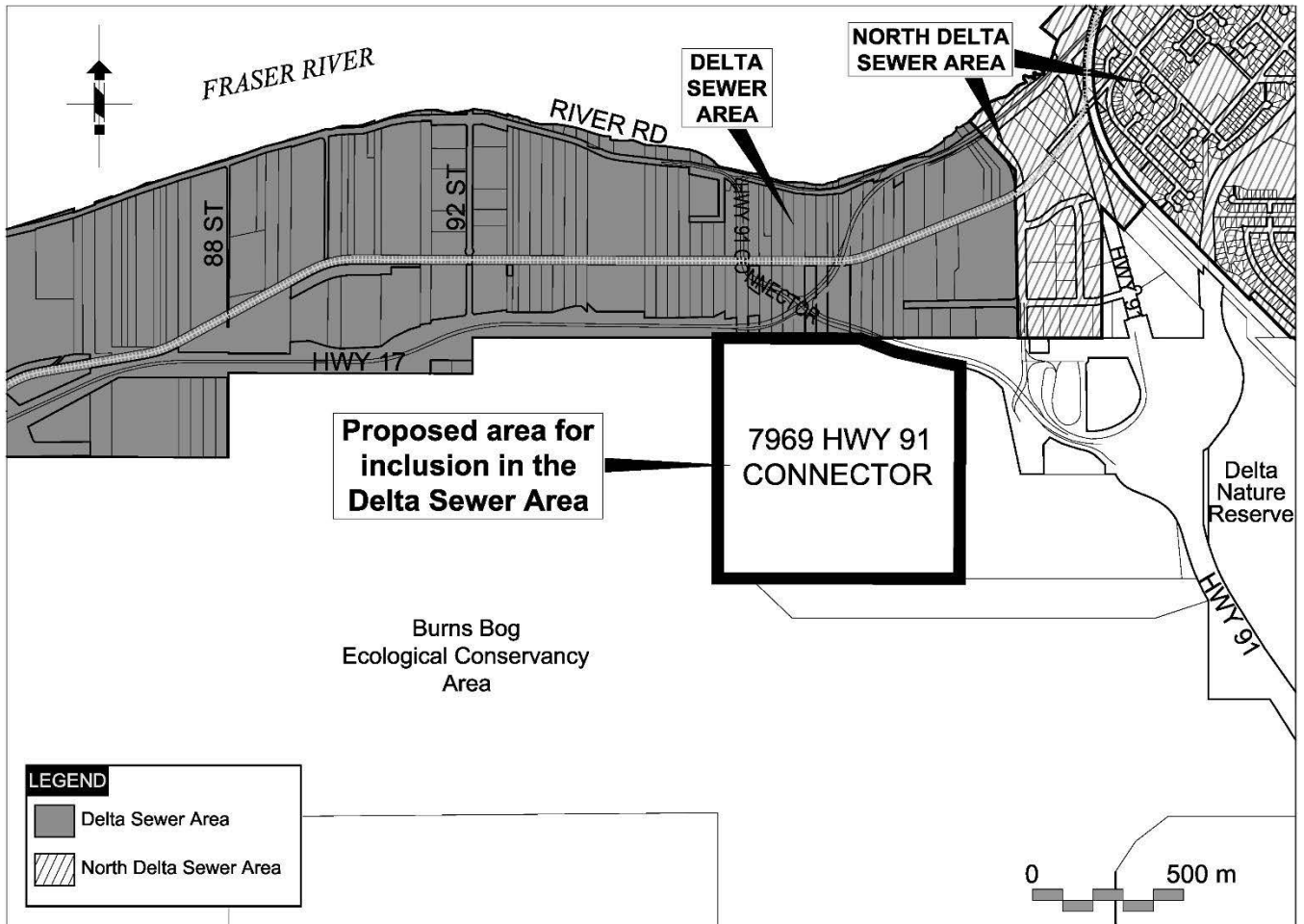
Applications to extend the Sewer Area are reviewed with consideration given to a number of factors including: consistency with local policy and land use designations; the technical, operation and financial impacts of the proposed extension; and the goals, objectives and land use designations of the Regional Growth Strategy.

An application is in process for the property at 7969 Highway 91 Connector to permit the property to be included in the Delta Sewer Area in order to allow for an industrial development with approximately 43.79 ha (108.2 ac) of net developable land into Delta's sanitary sewer system. The property is currently designated Agricultural in Delta's Official Community Plan and Agriculture in Metro Vancouver's Regional Growth Strategy and is outside of Metro Vancouver's Urban Containment Boundary. The property is also located within the Agricultural Land Reserve. The property is located adjacent to the Urban Containment Boundary and lands designated Industrial in Delta's Official Community Plan and Metro Vancouver's Regional Growth Strategy. The applicant has submitted applications to exclude the property from the Agricultural Land Reserve, which the Provincial Agricultural Land Commission has conditionally approved, and to amend the land use designations in Delta's Official Community Plan and Metro Vancouver's Regional Growth Strategy from Agricultural and Agriculture, respectively, to Industrial. The applicant is also requesting that the lands be included within Metro Vancouver's Urban Containment Boundary.

There is an existing 1,050 mm (41 in) diameter sanitary sewer forcemain located approximately 400 m (1,312 ft) north of the property. Sanitary flows from the property would be pumped to Delta's sanitary sewer forcemain from a proposed onsite sanitary sewer pump station. The average flow rate from the development is estimated at approximately 22 litres per second, and a peak discharge rate of 79 litres per second. This additional flow can be accommodated within Delta's collection system, and will enter into Metro Vancouver's South Surrey's Interceptor at the Tilbury Meter Chamber.

Metro Vancouver approval is required in order to extend the Sewer Area. The applicant is requesting consideration of their sewer area extension request in conjunction with the applications to amend the local and regional land use designations and to include the site in the Urban Containment Boundary. Sites within the Urban Containment Boundary which are designated Industrial would be eligible for sewerage services, subject to Greater Vancouver Sewerage and Drainage District technical considerations, provided that the proposed development complies with the applicable policies under the General Urban designation. In the absence of specific criteria, Delta staff have evaluated the proposal in the same manner as has been done for previous sewer area extensions. A summary of the areas evaluated is presented in the table below.

Financial	The proposed sewer extension would be paid for by the owner at the time of connection. There would be no capital cost to Delta or Metro Vancouver. If connected, the land owner would be charged regular sewer charges offsetting financial impacts of operating Delta's overall sewer system.
Land Use Compliance	The proposed industrial use requires an amendment to Delta's Official Community Plan and Metro Vancouver's Regional Growth Strategy.
Service Levels	The applicant has indicated that the anticipated average flow rate from the proposed industrial development is 22 litres per second, and a peak flow rate of 79 litres per second.
Technical/Operational	This incremental increase in flow can be accommodated within Delta's existing sanitary sewer collection system.
Local Community	The proposed industrial use would be compatible with the adjacent industrial uses along Nordel Way and River Way.
Regional Concepts	The applicant is requesting that the property be included in the Urban Containment Boundary in Metro Vancouver's Regional Growth Strategy



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THE CORPORATION OF DELTA

BYLAW NO. 7508

A Bylaw to extend the boundaries and area of the "Delta Sewer Area"

WHEREAS the Council of The Corporation of Delta has adopted a bylaw entitled "Delta Sewer Area Merger Bylaw No. 2551, 1976" which outlined areas specified as the "Delta Sewer Area" created for the purpose of providing a sanitary sewer system for the special benefit of the said areas;

AND WHEREAS it is deemed desirable and expedient to extend the specified area serviced by the sewer system;

NOW THEREFORE, the Municipal Council of The Corporation of Delta in open meeting assembled, ENACTS AS FOLLOWS:

1. This Bylaw may be cited for all purposes as "**Delta Sewer Area Extension and Enlargement (MK Delta Lands Group– LU007445) Bylaw No. 7508, 2016**".
2. Any liabilities incurred, on behalf of the "Delta Sewer Area" as created by the "Delta Sewer Area Merger Bylaw No. 2551, 1976" shall be borne by all the owners of parcels of lands in the "Delta Sewer Area" as extended and enlarged by this bylaw.

- 3. The "Delta Sewer Area" as created by the "Delta Sewer Area Merger Bylaw No. 2551, 1976" and as extended from time to time is hereby further extended and enlarged to include the property described as "Proposed Sewer Area Extension" as shown outlined in bold on the plan attached hereto and identified as Schedule "A".

READ A FIRST time the 20th day of June, 2016.

READ A SECOND time the 20th day of June, 2016.

READ A THIRD time the 20th day of June, 2016.

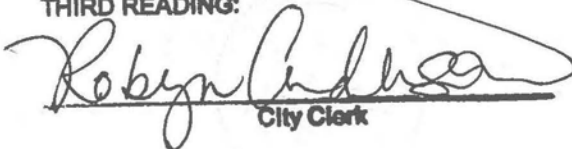
THIRD READING EXTENSION APPROVED the 24th day of July, 2017.

APPROVED BY the Greater Vancouver Sewer & Drainage District
the day of 201 .

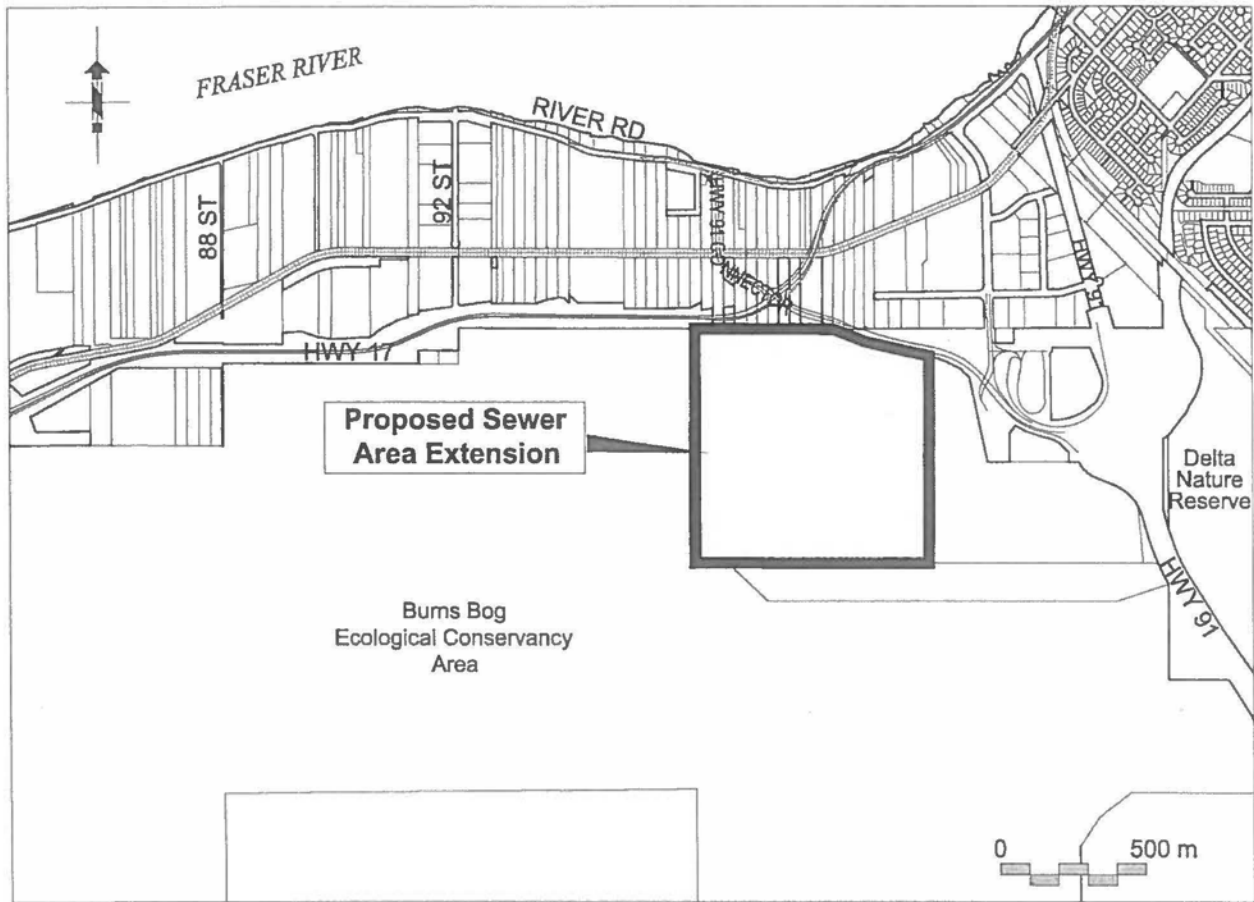
FINALLY CONSIDERED AND ADOPTED the day of , 20 .

Lois E. Jackson
Mayor

Robyn Anderson
Municipal Clerk

**CERTIFIED CORRECT AS AT
THIRD READING:**


City Clerk



This is Schedule "A" to
"Delta Sewer Area Extension and Enlargement
(MK Delta Lands Group – LU007445) Bylaw
No. 7508, 2016"

Legal:
P.I.D. 000-915-025
Lot 4 District Lot 437 Group 2
New Westminster District Plan 1180 Except Plan EPP375

List of Information Included in Referral Package to Metro Vancouver

1. Cover Letter to Metro Vancouver Board Chair with attachments:
 - a. Development Concept Plan
 - b. Proposed Regional Growth Strategy Amendments Map
 - c. Regional Factors to Consider for the Proposed Regional Growth Strategy Amendments
 - d. Sewer Area Extension Evaluation Summary and Sanitary Sewer Area Map
 - e. Sanitary Sewer Area Extension Bylaw No. 7508 Certified Correct

2. Staff Reports Dated:
 - a. June 10, 2016
 - b. July 5, 2016
 - c. January 29, 2019

3. Council Meeting Minutes:
 - a. Regular Council Meeting on June 20, 2016
 - b. Regular Council Meeting on July 11, 2016
 - c. Public Hearing on July 26, 2016
 - d. Meeting Following the Public Hearing on July 26, 2016
 - e. Regular Council Meeting on February 11, 2019

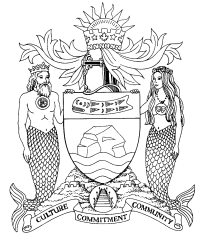
4. Provincial Agricultural Land Commission Decision dated September 11, 2018

5. Technical Reports:
 - a. Servicing Master Plan Design Brief dated May 6, 2016
 - b. Traffic Impact Study – Draft Report (Revision 3) dated April 14, 2016
 - c. Industrial Development, Market and Impact Study dated November 2015
 - d. Environmental Effects Assessment (Revision 3) dated April 2016
 - e. Agricultural Capability Assessment dated March 2016
 - f. Agricultural Benefit for Westham Island Salinity Analysis dated March 2016

6. Agricultural Buffer:
 - a. Vegetative Buffering Plan dated December 2018

Note: Additional information and documents relating to the MK Delta Lands industrial development application, including copies of presentations, can be found on Delta's website at www.delta.ca/mkindustrial.

THE CORPORATION OF THE
CITY OF WHITE ROCK
CORPORATE REPORT



DATE: July 22, 2019

TO: Mayor and Council

FROM: Sandra Kurylo, Director of Financial Services

SUBJECT: White Rock Repealing Bylaw No.'s 2303 and 2304 for Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206

RECOMMENDATION

THAT Council receive for information the corporate report dated July 22, 2019 from the Director of Financial Services, titled "White Rock Repealing Bylaw No.'s 2303 and 2304 for Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206."

INTRODUCTION

This corporate report introduces the following two bylaws to Council for consideration of first, second and third readings:

- White Rock Repealing Bylaw for Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206, No. 2303; and
- White Rock Repealing Bylaw for Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206, No. 2304

PAST PRACTICE/POLICY/LEGISLATION

Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206, attached as Appendix A, was adopted by Council in July 2017. After third reading, but before being adopted, it required the approval of the Inspector of BC Municipalities. Electoral approval was also required, and this was obtained through a counter petition process. After being adopted, a final Certificate of Approval was issued by the Inspector of Municipalities in December 2017.

A bylaw to repeal a loan authorization bylaw, such as Bylaw No. 2206, requires the Inspector of BC Municipalities' approval as well, after third reading, but before adoption. In addition, if the Inspector approves it (with or without terms and conditions), a loan authorization bylaw can be repealed without electoral approval.

ANALYSIS

At the time Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206, No. 2275 was adopted (July 2017), \$6M in external long term debt was a planned funding source for the parkade construction, along with other funding sources. Since then, a number of development projects proceeded through various stages of approval. As of September 2018, sufficient CACs were received to meet all 2018 budgeted commitments, including fully replacing this long term debt as a funding source for this project. This was reflected as an option in Financial Plan Bylaw (2018 to 2022), 2018, No. 2239, Amendment No. 1, 2018, No. 2256 if sufficient CACs were received.

Because this debt was not required and the money was not borrowed, there was a need to repeal Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206. If not repealed, \$6M of the City's borrowing power would continue to be committed.

Repealing this loan authorization bylaw was the objective of White Rock Repealing Bylaw No. 2275 (attached as Appendix B). Council adopted Repealing Bylaw No. 2275 in October 2018. Due to a miscommunication with the City solicitors, staff were of the understanding that the statutory process required Council to adopt the repealing bylaw and once adopted, a copy was to be forwarded to the Inspector of BC Municipalities. When this was done, the Province advised that there was a step missing in the process: the Inspector of BC Municipalities was to have approved the repealing Bylaw after it was given third reading but before it was adopted. Staff have since confirmed with the City's solicitors that this is the correct procedure.

There is now a two-step process required to complete the repealing of Loan Authorization Bylaw 2206. The first is to repeal the original repealing bylaw (No. 2275). This will be achieved with the adoption of Repealing Bylaw No. 2303. The second is to give three readings to a new repealing bylaw and then forward it to the Inspector of BC Municipalities for approval, with a request to waive electoral approval, prior to adopting it. Bylaw No. 2304 is the new repealing bylaw.

CONCLUSION

It is recommended that:

- White Rock Repealing Bylaw for Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206, No. 2303 proceed for first, second and third readings; and
- White Rock Repealing Bylaw for Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206, No. 2304, proceed for first, second and third readings and then be forwarded to the Inspector of BC Municipalities for approval, and that the Inspector be requested to waive electoral approval, prior to the Bylaw being adopted.

Respectfully submitted,



Sandra Kurylo
Director of Financial Services

Comments from the Chief Administrative Officer:

I concur with the recommendation to repeal the loan authorization bylaw through a repealing bylaw as outlined in this corporate report.

A handwritten signature in black ink, appearing to read "Dan Bottrill", is centered on the page. The signature is fluid and cursive.

Dan Bottrill
Chief Administrative Officer

Appendix A: Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206

Appendix B: White Rock Repealing Bylaw for Waterfront Parking Facility Design and Construction Loan Authorization Bylaw , 2017, No. 2206, No. 2275

THE CORPORATION OF THE
CITY OF WHITE ROCK
BYLAW 2206



A Bylaw to authorize borrowing for the design and construction
of a waterfront parking facility

The CITY COUNCIL of the Corporation of the City of White Rock, in an open meeting
assembled, ENACTS as follows:

1. The Council is hereby empowered and authorized to:
 - a. undertake and carry out or cause to be carried out the design and construction of a waterfront parking facility; and
 - b. borrow upon the credit of the Municipality a sum not exceeding \$6,000,000.
2. The maximum term for which debentures may be issued to secure the debt created by this bylaw is 30 years.
3. This Bylaw may be cited for all purposes as the "*Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206*".

RECEIVED FIRST READING on the 15th day of May, 2017
 RECEIVED SECOND READING on the 15th day of May, 2017
 RECEIVED THIRD READING on the 15th day of May, 2017
 RECEIVED the approval of the Inspector of Municipalities 18th day of July, 2017
 ADOPTED on the 24th day of July, 2017

W. B. Bell

MAYOR

[Signature]

CITY CLERK

I hereby certify that this is a true and correct copy of Bylaw No. 2206, which has not been altered in any way.

Certified this 15 day of Nov, 2017

[Signature]
Deputy Corporate Officer, City of White Rock

THE CORPORATION OF THE
CITY OF WHITE ROCK
BYLAW 2275



A Bylaw to repeal the Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206

The CITY COUNCIL of the Corporation of the City of White Rock, in open meeting assembled, ENACTS as follows:

1. The "Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206" is hereby repealed in its entirety, including all amendments, effective the date of adoption of this bylaw.
2. This bylaw may be cited for all purposes as the "*White Rock Repealing Bylaw for Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206, No. 2275*".

RECEIVED FIRST READING on the	24 th day of	September, 2018
RECEIVED SECOND READING on the	24 th day of	September, 2018
RECEIVED THIRD READING on the	24 th day of	September, 2018
ADOPTED on the	1 st day of	October, 2018

I hereby certify that this is a true and correct copy of Bylaw No. 2275 which has not been altered in any way.

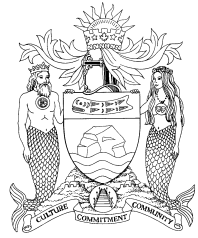
Certified this 1 day of Oct, 2018

Shlam
Deputy Corporate Officer, City of White Rock

[Signature]
DEPUTY MAYOR

[Signature]
DIRECTOR OF CORPORATE ADMINISTRATION

THE CORPORATION OF THE
CITY OF WHITE ROCK
CORPORATE REPORT



DATE: July 22, 2019

TO: Mayor and Council

FROM: Rosaline Choy, P.Eng., MBA
Acting Director of Engineering and Municipal Operations

SUBJECT: White Rock Pier Update

RECOMMENDATION

THAT Council receive for information the corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations titled “White Rock Pier Update”.

INTRODUCTION

On December 20, 2018, a 91 km/h windstorm combined with heavy rain and a high tide destroyed two (2) sections of the historic White Rock Pier and the western wharf. The event identified the Pier’s vulnerability to storm surges that could potentially occur more frequently due to climate change.

Although the Pier was reconstructed more than 40 years ago in 1977, it was not designed for sea level rise, current seismic requirements or the current building code. In order to ensure safety for the thousands of users annually, the City retained Westmar Advisors to provide a design that meets the following criteria:

- be designed to the current building code;
- meet environmental standards;
- be protected against earthquakes;
- be hardened against debris laden storm surges; and
- be able to support an ambulance in the event of a medical emergency.

The City posted a Request for Proposal (WR019-010) on March 1, 2019 for a marine construction contractor to demolish damaged timber components, salvage timber planks, reconstruct the failed section of the Pier with steel piles and precast concrete substructure, install timber decking and hand rails, and replace damaged timber piles in select locations. On April 8, 2019, Council approved the award of the White Rock Pier Reconstruction Marine Construction Contract to PPM Civil Constructors, ULC. (PPMCC) in the amount of \$3,079,740.00 (excluding GST).

The purpose of this report is to provide an update to Council on the status of the White Rock Pier repairs.

DISCUSSION

Pier Structure

The project has 6 approved and 4 pending change orders. The value of approved change orders is \$56,579.53. The pending change orders are currently being priced by PPMCC. The scope of the change orders include additional rebar, the addition of a concrete additive to increase longevity of concrete, additional timber repairs, pressure washing the Pier, and temporary infrastructure to protect the conduits under the north end of the Pier. These change orders add days to the contract.

The new section of the Pier includes custom sized planks (343mm x 140mm x 4876mm) to support ambulance loads. The supply and delivery of these timber planks has longer lead times than anticipated. Although PPMCC is expected to complete the Pier's superstructure and demobilize at the end of July, the Pier's timber planks will not be transported to site until mid-August. Timber plank installation is expected to be one (1) week. Therefore, the anticipated Total Performance date is August 30, 2019.

Pier Arches and Electrical

A Request for Proposal (WR019-018) for White Rock Pier Lighting Arch Supply and Installation Contract was posted in BC Bid on May 2, 2019. The RFP closed on May 24, 2019 and the City received zero bids.

Staff reviewed and revised the scope of the project. The revised project has been awarded to Crescent Electric in the amount of \$230,624.45. Delays in procuring the electrical contractor has affected the schedule for the Pier arches. Because the arch and light fixtures have a minimum 12-week production lead time, the replacement arch and the replacement light fixtures will be installed in late-October.

The Pier is expected to reopen on August 31, 2019; the replacement arch and light fixtures will be installed after the Pier is open.

CONCLUSION

This corporate report is provided as information regarding the status of the pier reconstruction. PPMCC will begin timber plank installation in mid-August. The Pier is still expected to reopen on August 31, 2019.

Respectfully submitted,



Rosaline Choy, P.Eng., MBA
Acting Director, Engineering and Municipal Operations

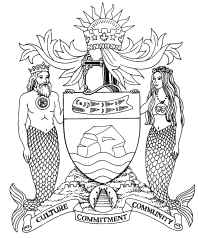
Comments from the Chief Administrative Officer:

This corporate report is provided for information.



Dan Bottrill
Chief Administrative Officer

THE CORPORATION OF THE
CITY OF WHITE ROCK
CORPORATE REPORT



DATE: July 22, 2019

TO: Mayor and Council

FROM: Rosaline Choy, P.Eng., MBA
Acting Director, Engineering & Municipal Operations Department

SUBJECT: 2019 Sanitary and Storm Sewer Rehabilitation Contract Award

RECOMMENDATION

THAT Council

1. Receive for information the corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations Department titled "2019 Sanitary and Storm Sewer Rehabilitation Contract Award;" and
2. Approve the award of a contract for the trenchless storm and sanitary sewer rehabilitation to PW Trenchless Construction Inc. for \$594,150.18 (including GST).

INTRODUCTION

The City has an ongoing preventative maintenance program, which identifies defects and deficiencies in the existing sewer collection system. These defects and deficiencies are then scheduled to be repaired. Depending on the urgency, these repairs may need to be fixed or can be scheduled with other works to gain efficiencies.

The goal of the storm and sanitary sewer rehabilitation program is to proactively identify problems in the sewer collection system and prevent sewer backups or over-flows. These repairs can be expensive, but the cost must be weighed against the value of the collection system and the cost of replacing a larger quantity of sewer if the asset is allowed to deteriorate. Ongoing maintenance and rehabilitation add value to the sewer system by maintaining the infrastructure and extending its life. The purpose of this report is to seek Council's approval for the award of a contract for the trenchless storm and sanitary sewer rehabilitation to PW Trenchless Construction Inc.

PAST PRACTICE / POLICY / LEGISLATION

The award of contracts is governed by Council Policy #301. This policy is being adhered to in the tendering and proposed award of this project. Policy #301 requires Council approval for contracts with a value exceeding \$250,000.

ANALYSIS

Each year a portion of the City's storm and sanitary sewer system is flushed, cleaned and videoed to identify and locate any defects or deficiencies. These locations were prioritized and a request for tender was issued.

The 2019 Sanitary and Storm Sewer Rehabilitation: Trenchless project was tendered on the BC Bid website and the City of White Rock website. The City is removing Item 2: Martin Street, Royal Lane to Victoria Avenue, manhole 1478-1641 from the tender. The adjusted tender submissions are listed below:

	2019 Sanitary and Storm Sewer Rehabilitation: Trenchless	Amount (including GST)
1	PW Trenchless Construction Inc.	\$594,150.18
2	Mar-Tech Underground Services Ltd.	\$618,013.24

The consulting engineer and City staff evaluated the tenders for arithmetic errors, account rates, contractor qualifications, schedule and review of bid schedule and recommend that the contract be awarded to PW Trenchless Construction Inc. for the 2019 Sanitary and Storm Sewer Rehabilitation: Trenchless project.

BUDGET IMPLICATIONS

The 2019 Financial Plan identifies City funding for sewer repairs. The value of this contract, excluding GST, is \$566,000. The recommended funding sources are as follows:

Sanitary I & I Reduction Program budget	\$339,000
Drainage Renew and Replacement Program budget	\$227,000
Total (excluding GST)	\$566,000

The Director of Financial Services has reviewed this corporate report and concurs that these funding sources are available and appropriate for these purposes.

CONCLUSION

It is recommended that the contract for the 2019 Sanitary and Storm Sewer Rehabilitation: Trenchless project be awarded to PW Trenchless Construction Inc. for \$594,150.18 (including GST).

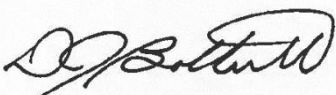
Respectfully submitted,



Rosaline Choy, P.Eng., MBA
Acting Director, Engineering and Municipal Operations Department

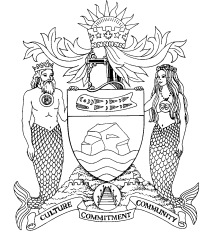
Comments from the Chief Administrative Officer:

I concur with the recommendations of this corporate report.



Dan Bottrill
Chief Administrative Officer

THE CORPORATION OF THE
CITY OF WHITE ROCK
CORPORATE REPORT



DATE: July 22, 2019

TO: Mayor and Council

FROM: Rosaline Choy, P.Eng., MBA
Acting Director of Engineering and Municipal Operations

SUBJECT: Fencing for the Water System at 1444 Oxford Street

RECOMMENDATION

THAT Council receive for information the corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations titled “Fencing of the Water System at 1444 Oxford Street”.

INTRODUCTION

The White Rock City Council approved the award of the contract to Streamline Fencing Ltd. to construct the fence for water system located at 1444 Oxford Street. Staff were required to provide further information about the fencing and public consultation.

ANALYSIS

Since the tragic terrorist attack on September 11, 2001, water operators responsible for their water systems initiated immediate steps to ensure the safety of drinking water supply to the public. The following steps are considered the core of establishing security for the water systems:

- Increase the system security by denying access to unauthorized personnel. Verify the identification of individuals who require access to water supply infrastructures for maintenance and repair of equipment
- Lock and consider alarming all points of entry: doors, windows, hatches, vents and gates.
- Install security fences around facilities. Lock all access points to finished water including a locked or staffed building.
- Perform a visual examination of the exterior of your water treatment plant ensuring adequate exterior lighting around critical components.
- Remove objects that could be used to aid an intruder, such as ladders, overgrown shrubs and large rocks near windows and other points of entry.
- Consider further safety measures for the purpose of preventing unauthorized individuals from accessing critical water infrastructure such as a reservoir or well pump house - periodically, take a walk around your reservoir or well area to ensure no one has inadvertently left chemical containers or hazardous materials in the immediate area.
- Water taken from a source that has a chance of becoming contaminated, should be fenced.

- All pump houses should be locked at all times.
- When checking the security of underground reservoirs, make sure the entry hatches fit properly and are equipped with a solid hasp and a lock. Check the vents on underground reservoirs for proper screening.
- Water towers and elevated storage tanks need to be kept secure. All access hatches and doors should fit properly and should be safely locked. All vents are to be screened. Unauthorized access onto the tower should be prevented by fencing off the tower and consider the use of security cameras (CCTV).

RISK MANAGEMENT

The physical destruction or tampering of water infrastructure can disrupt water service to communities; specifically key facilities such as hospitals, power stations and military installations. Similarly, contamination with deadly agents could result in large numbers of illnesses and fatalities. The City of White Rock has provided fencing to most of the water facilities to prevent potential vandalism that could lead to contamination of the drinking water supply and put public health in risk. The fencing also serves to reduce negative interactions between city staff and trespassing on the properties. The distributed physical layout of drinking water systems makes them inherently vulnerable to a variety of incidents, such as trespassing, vandalism, terrorist attacks and accidents. To date, the Merklin Reservoir and Pumping Station, the Roper Reservoir, and Well #4 have been fenced. The request to install the same fencing structure around the Oxford Water facility that includes the Water Treatment Plant, pump station, reservoir and the Wells, 1,2, 3, and 8 was approved at the July 8, 2019 Council Meeting.

COMMUNITY ENGAGEMENT

Staff had several formal and informal meetings or communication with residents about the site's fencing. A list of the meeting dates is below. A summary of the discussion during the meetings is provided in Appendix A.

- June 14, 2019
- June 20, 2019
- July 5, 2019
- July 15, 2019

At the July 15, 2019 meeting, the meeting attendees included residents from neighbouring properties: Strata Chair for the Royce Building and Ms. Dorothy Bower. The following work at the Oxford Water Treatment Plant site was discussed.

- Boulevard on Everall Street
 - Remove poor soil and replace with minimum 6" of top soil
 - Grade area and plant trees and install benches, and install irrigation
 - Turf area
- Natural areas east and south of water plant
 - Hand grub out all invasive species (blackberry and ivy)
 - Remove rocks and poor soil as best as possible
 - Bring in top soil (may blow it in)
 - Plant native and non-native plants amongst the treed areas
 - Bark mulch the whole area

- Lawn areas
 - To be reviewed
 - Either top dress and reseed if the lawn areas are not too bad
 - If lawn areas are in poor shape, remove and replace with 6” of top soil and turf
- West side of plant
 - Remove poor/rocky soil replace with 12’ of top soil
 - Plant trees along the west property line
- East of Oxford
 - This is existing landscaping
 - Repair and replant and re-turf as required
- North of water plant
 - Work can only be conducted with the property line.
 - Weed and clean the area and replace with bark mulch.
 - More work will be done once the City receives the land to the north.

NEXT STEPS

Staff will host additional meetings with residents to discuss the final landscaping after the fence is installed. An Arborist will be supervising the construction of the fence to minimize disturbances to tree roots.

CONCLUSION

City Staff will work to make sure that the fence and landscape will provide security and a pleasant image to the water system at 1444 Oxford Street and the neighbourhood. Care will be taken to maximize open space for the enjoyment of nearby residents while still adhering to the primary objective of ensuring water security.

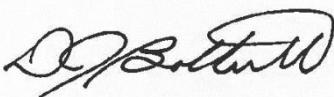
Respectfully submitted,



Rosaline Choy, P.Eng. MBA
Acting Director of Engineering and Municipal Operations

Comments from the Chief Administrative Officer:

This corporate report is provided for information.



Dan Bottrill
Chief Administrative Officer

Appendix A – Summary of Meetings with Residents

Appendix A: Summary of Meetings with Residents

On June 24, 2019, the Honourable François-Philippe Champagne, Minister of Infrastructure and Communities and Mr. Gordon Hogg, MP, White Rock-South Surrey visited and toured the Water Treatment Plant. Subsequent to this meeting, Councillor Kristjanson met with three local residents outside the plant on Everall Street. Dan Bottrill, CAO, Jim Gordon, Director, Engineering and Municipal Operations and Dr. Saad Jasim, Manager, Utilities were also in attendance. The residents expressed a desire to discuss the potential of having an area with landscaping and a bench outside the fenced area on Everall Street in order to provide an opportunity to sit and enjoy the area. It was explained to them that final landscaping discussions will be arranged after the construction of the fence is concluded.

A communication between one of the residents and Jim Gordon, took place on June 20, 2019 regarding the need for the fence, shape of the fence and changing the layout of the fence. On Friday July 5, 2019, this resident had a discussion about the fence with Dr. Saad Jasim at the Water Treatment Plant.

On July 15, 2019 a meeting was organized by the City of White Rock Water Department with residents on Everall Street and Goggs Avenue to have additional discussions related to the fencing and the area located outside the fence on Everall Street.

Staff provided a background on the security requirements for water systems with the current new risks and challenges. Diagrams were provided to illustrate the fencing.

A resident provided a history of the development parcel at 1454 Oxford Street regarding previous agreements with the previous owner that should be upheld which includes contribution to the cost of fence construction along the north side of the Oxford Site.

Staff indicated that the process of the construction of the fence would need to proceed now as opposed to waiting for the construction of that development as the City cannot afford to take the risk of leaving the water system (which include 4 Wells, a Reservoir, and a Water Treatment Plant) in a vulnerable condition.

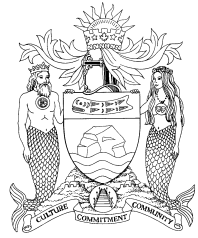
Staff explained the rationale of the fence alignment is to meet requirements for Hydro transformer clearance, Telus kiosk clearance, protect existing trees, and placement away from adjoining features that could be used to assist in breaking into the property by getting over the fence.

Staff discussed the detailed work that will be carried out at this site as outlined in the corporate report. It was noted that additional meetings will be organized to discuss the final landscaping after the fence is installed. An Arborist will be supervising the construction of the fence to minimize disturbances to tree roots.

There was discussion on the common fenced area next to a residential building. A resident advised they would approach their Strata Council to reduce the dual fencing along this side. The City could remove the cedar fence and position the ornamental fence to cover this area. The life span of the ornamental fence is much longer than the Cedar fence.

The group walked the perimeter of the Oxford Water System property to see where the fence will be installed.

THE CORPORATION OF THE
CITY OF WHITE ROCK
CORPORATE REPORT



DATE: July 22, 2019

TO: Mayor and Council

FROM: Rosaline Choy, P.Eng., MBA
Acting Director of Engineering and Municipal Operations

SUBJECT: Update on City Owned Property (15463 Buena Vista)

RECOMMENDATION

THAT Council receive for information the corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations titled “Update on City Own Property (15463 Buena Vista)”

INTRODUCTION

At the Regular Council meeting on July 8, 2019, a delegation expressed interest in participating in public engagement about the future of the City owned property at 15464 Buena Vista Avenue. Council directed staff to provide an update on the status of the demolition of the property.

LEGISLATION

Bylaw #1928 governs the demolition of a building. A permit is required for demolishing a building or structure.

DISCUSSION

The demolition permit requires the following reports as outlined in the table below as well as the status of those reports:

Task	Status
Legal survey	Complete
Arborist report	In progress
Hazardous materials testing	In progress
Vector control report	In progress
Abatement	Subject to results of the hazardous materials testing

After abatement is complete, staff will request quotes to demolish the building. Demolition is expected to begin in late-August. Following demolition, staff will arrange for capping of water, sanitary and storm services, grading and grass seeding.

BUDGET

There is \$100,000 allocated towards demolition. Additional funding would be necessary in the 2020 capital plan for public engagement and concept design development.

CONCLUSION

Staff recommends Council receive for information the corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations titled "Update on City Own Property (15463 Buena Vista)."

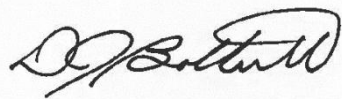
Respectfully submitted,



Rosaline Choy, P.Eng. MBA
Acting Director of Engineering and Municipal Services

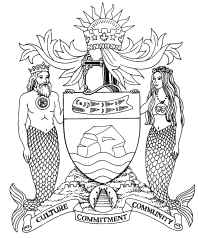
Comments from the Chief Administrative Officer:

This corporate report is provided for information.



Dan Bottrill
Chief Administrative Officer

THE CORPORATION OF THE
CITY OF WHITE ROCK
CORPORATE REPORT



DATE: July 22, 2019

TO: Mayor and Council

FROM: Rosaline Choy, P.Eng., MBA
Acting Director, Engineering and Municipal Operations

SUBJECT: Marine Drive “Hump” Vegetation Management Plan

RECOMMENDATIONS

THAT Council

1. Receive for information the corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations titled “Marine Drive “Hump” Vegetation Management Plan”; and
 2. Endorse the Marine Drive “Hump” Vegetation Management Plan as outlined in this corporate report.
-

INTRODUCTION

At the regular Council meeting on July 8, 2019, Council directed staff to prepare a maintenance plan for the vegetation on the Marine Drive “Hump” that preserves views, slope stability, and greenery. The maintenance plan shall include cost estimates, schedule, and BNSF requirements for working within BNSF’s property.

PAST PRACTICE

Past practice for Marine Drive “Hump” maintenance includes mowing the top of the Hump from the Marine Drive. The work was conducted from City property without staff or contractors venturing onto BNSF property. The frequency of the mowing was once per year. This year (2019) is the first year that clearance mowing has not been completed.

ANALYSIS

Staff reviewed the existing conditions and past practices. The view corridors enjoyed by residents and visitors are now blocked by Himalayan Blackberries and tree re-growth from the stumps (sucker growth). In previous years, the mid-summer mowing program maintained the view corridors.

A summary of the maintenance considerations are as follows:

- The brambles and suckers of the tree stumps along Marine Drive will continue to grow and obstruct views if not pruned.
- There will be a desire to cut back the vegetation if the brambles and suckers are allowed to grow to incredible heights and obstruct views.

- If suckers are allowed to grow to a large size before it is pruned, it will leave large scars that are not aesthetically pleasing.

Schedule

The Himalayan Blackberry is an invasive species that grows quickly compared to other plant species. It is recommended that blackberry maintenance should be completed three (3) times per year: once after the first flush of growth in the spring, once in the summer (late July), and once at the end of the season in October. Dead stumps will biodegrade; this creates a void and could undermine the slope overtime. The suckers from the tree stumps are necessary for keeping the stumps alive but will slowly block views. It is recommended these suckers are pruned once every three (3) to five (5) years. This will allow the stumps and their roots to stay alive but still not block the views. The following table summarizes the proposed type and frequency of maintenance work.

Table 1 – Proposed Maintenance Plan

Task	Frequency
Mowing of view corridors	Spring / Summer / Autumn
Pruning of new tree growth from stumps	Once every 3 years

This approach will provide a tidy appearance throughout the year, maintain the vegetation, allow for multiple viewing corridors, and maintain slope stability.

BNSF requirements to work on BNSF property are as follows:

- Work with machinery north of the Marine Drive fence is permitted;
- Work with manual labour south of the Marine Drive fence requires a signed form that indemnify BNSF and a site meeting with BNSF’s representative; and
- Work with manual labour within BNSF’s fenced track area requires permits and BNSF flag personnel

BUDGET IMPLICATIONS

Blackberry mowing is anticipated to cost \$2,600 per session. For 3 sessions, the estimated annual cost is \$7,800. The pruning and removal of stems from tree stumps require work to be performed on BNSF property; the anticipated cost is \$3,600. Table 2 summarizes the costs for Marine Drive “Hump” maintenance in 2019.

Table 2 – 2019 Marine Drive “Hump” Maintenance Costs

Task	Cost
Three mowing sessions of view corridors per year	\$7,800
Removal of tree growth (suckers)	\$3,600
Total	\$11,400

Although there are no funds specifically dedicated to the maintenance of the “Hump”, funds are available from the Contract Maintenance – Parks operating budget to complete this work.

CONCLUSION

The "Hump" is situated on the waterfront between East Beach and West Beach. This area is known for its viewing potential and would need regular maintenance in order to preserve views. At an annual cost of \$7,800 per year and \$3,600 every 3 years, the hump vegetation can be managed to support views, slope stability, and vegetation. Staff recommends Council support the maintenance plan as outlined in this corporate report.

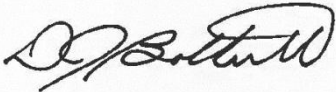
Respectfully submitted,



Rosaline Choy, P.Eng., MBA
Acting Director, Engineering and Municipal Operations

Comments from the Chief Administrative Officer:

I concur with the recommendations of this corporate report.



Dan Bottrill
Chief Administrative Officer

THE CORPORATION OF THE
CITY OF WHITE ROCK
CORPORATE REPORT



DATE: July 22, 2019
TO: Mayor and Council
FROM: Tracey Arthur, Director of Corporate Administration
SUBJECT: Freedom of Information Update

RECOMMENDATION

THAT Council receives for information the corporate report dated July 22, 2019 from the Director of Corporate Administration titled "Freedom of Information Update".

INTRODUCTION

This corporate report provides an update of the City's Freedom of Information and Protection of Privacy (FOI) practices.

LEGISLATION AND PAST PRACTICE

The *Freedom of Information and Protection of Privacy Act* (the Act) establishes a process by which any person may request access to records held by a public body. The Act establishes a legislated set of rules for governing public bodies with regards to providing access to records in their custody or under their control. It also provides rules for protecting privacy and a means for resolving complaints. The general principle is that all recorded information is available to the public, except for information that is subject to the specific and limited exceptions to disclosure set out in the Act. Some of the exceptions are mandatory while others can be cited at the discretion of the public body.

ANALYSIS

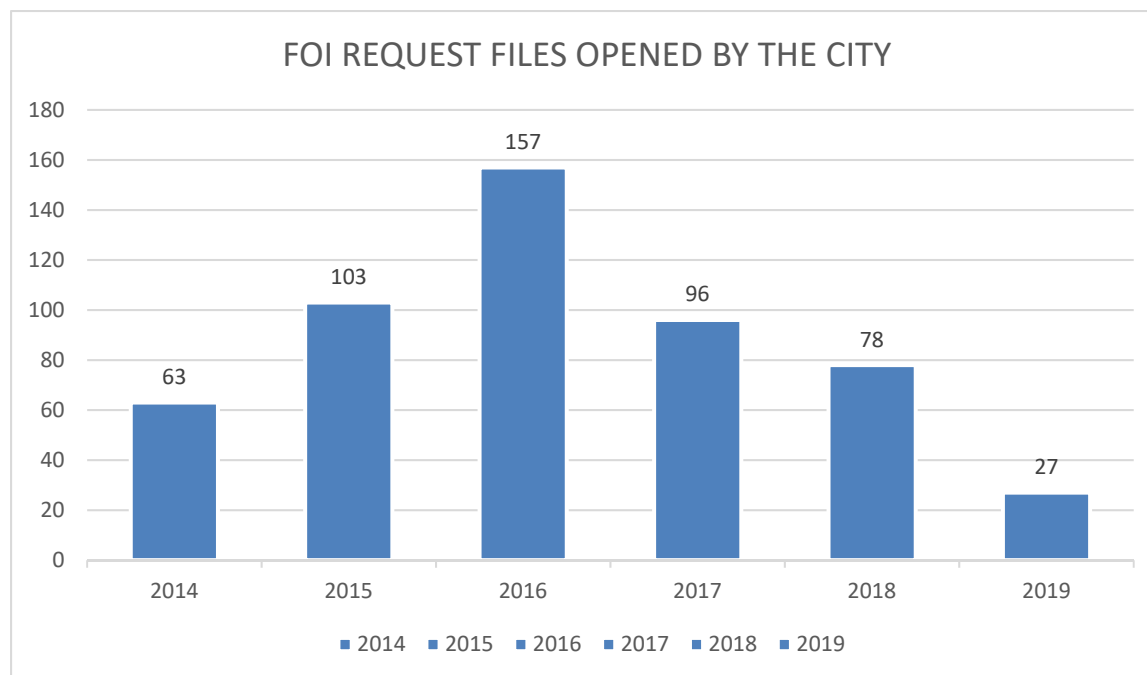
Since the current Council took office, the following steps have been undertaken to address concerns with the City's FOI practices:

- Creation of a FOI request log/table for the City website that provides the public an opportunity to see the status of FOI applications received by the City and includes the responses to each request as they are completed
(see: <http://www.whiterockcity.ca/741/2019-FOI-Requests>)
- The Deputy Corporate Officer has been assigned training and is working with the Manager of FOI to act as an additional resource for the FOI process
- The City continues to work on implementing transparent practices with respect to information sharing by making further considerations as to what can be included on the City's website

- Creation and implementation of an FOI checklist to better ensure thorough searching and location of records
- FOI staff provided a presentation regarding FOI practices and legislation awareness at the Chief Administrative Officer's Quarterly Presentations to internal staff, providing all city-wide employees an opportunity to learn and ask questions about the topic
- Corporate Training has been conducted to give staff insight and learn techniques on how to better approach and coordinate information when conducting City business and the importance and necessity of the City adhering to the Act. The skills obtained in this session are to work in tandem with the FOI checklist and give a better understanding of necessary timelines

Where possible, Council has waived the City's discretionary privacy rights over closed and/or privileged information being requested. The City will continue to seek Council's input for the release of closed or privileged information.

As illustrated in the following chart, the City's FOI requests are significantly down from previous years at 27 as of July 12, 2019.



Currently there are two (2) outstanding FOI request files in progress and they are targeted to be completed within the legislated timeline.

The Office of the Information and Privacy Commissioner (OIPC) oversees the provisions of the Act. If a requestor believes that the City has been unreasonable in its handling of an FOI request, they may ask the OIPC to review the City's response. Although the City has not received notice of any requests for review from the OIPC since August 2018, there are some longstanding OIPC review files still in process.

The following summarizes the City's OIPC review files still in process:

- 1) File #: 2017-10
Request: "Copies of all records of the Mayor, Council, City Staff and Agents and/or Service Providers to the City of White Rock related to the City's water utility purchase negotiations with EPCOR and/or EPCOR's Agents and Service Providers, and/or other third parties, subsequent to the Asset Purchase Agreement dated August 28, 2015."
Date: 2017/02/02
Response Date: 2017/02/22
Under Review: Redaction/Withholding (requestor complaint)
Status: An OIPC inquiry proceeding has been completed. The inquiry decision is expected at any time.
- 2) File #: 2017-52
Request: "Copies of all records of Mayor, Staff and Council related to the City of White Rock's involvement with the 2017 summer series of free concerts."
Date: 2017/10/18
Response Date: 2017/11/14 *30-day extension taken*
Under Review: 30-day extension. The City requested additional time due to the number of expected documents to retrieve and process.
Status: The OIPC has assigned an Investigator to the file, but there has been little substantive activity to date. It is unclear what relief might be available if the complaint is found to be warranted.
- 3) File #: 2017-62
Request: A copy of the "glyphosate email" as it was originally posted on the City's "Rumours and Misperceptions" web page and related records.
Date: 2017/09/18
Response Date: 2017/11/09
Under Review: Redaction/Withholding
Status: The OIPC has assigned an Investigator to the file, but there has been little activity that the City is aware of to date. The Complainant is seeking the disclosure of a third-party name and email address contained in the record requested. The City does not believe it is permitted to disclose this information under the Act, but will comply with any direction from the OIPC.

4/5) File #: 2018-03 & 2018-43
Request: Copies of severance agreements between the City and a number of former employees
Date: 2018/01/15 & 2018/06/07
Response Date: 2018/02/28 & 2018/07/20
Under Review: Redaction/Withholding
Status: The OIPC completed an investigation on File 2018-03 and the Investigator sided with the City, citing that both s. 22 of the Act and common law settlement privilege apply to the withheld information. The City understands the Complainant has insisted that the matter proceed to inquiry. Section 22 is a mandatory exception to the disclosure requirements of the Act. The inquiry scheduling is still pending. File 2018-43 deals with similar records and will be treated similarly to 2018-03.

CONCLUSION

This corporate report provides an update of the City's FOI practices. The City has committed the time and resources to help streamline its FOI processes. Including formal training to inform staff within City departments that are to supply information about the importance of the FOI task so the City is able to adhere to legislation. This corporate report gives a summary of outstanding files so there is a good understanding of where the City is in relation to the task of FOI.

Respectfully submitted,



Tracey Arthur
Director of Corporate Administration

Comments from the Chief Administrative Officer:

This corporate report is provided for information.



Dan Bottrill
Chief Administrative Officer

PRESENT: Councillor Fathers, Chairperson
Mayor Walker
Councillor Chesney
Councillor Kristjanson
Councillor Manning
Councillor Trevelyan

ABSENT: Councillor Johanson

STAFF: D. Bottrill, Chief Administrative Officer
T. Arthur, Director of Corporate Administration
C. Johannsen, Director of Planning and Development Services
S. Kurylo, Director of Financial Services
E. Stepura, Director of Recreation and Culture

Press: 0

Public: 1

1. CALL MEETING TO ORDER
The meeting was called to order at 4:00 p.m.

2. ADOPTION OF AGENDA

2019-G/L-093

It was MOVED and SECONDED

THAT the Governance and Legislation Committee adopts the agenda for July 8, 2019 as amended to add as Item 4.0 Committee Functions and the rest of the agenda to be renumbered accordingly.

CARRIED

3. ADOPTION OF MINUTES

a) June 24, 2019

2019-G/L-094

It was MOVED and SECONDED

THAT the Governance and Legislation Committee adopts the following meeting minutes as circulated:

a) June 24, 2019.

CARRIED

In accordance with motion 2019-G/L-093 a new Item 4 titled Committee Functions was added to the agenda:

4. COMMITTEE FUNCTIONS

The Chairperson noted the following information, copies of the information was distributed "On Table" so the Committee could follow what was being noted for discussion. Attached to the notation was also Council Policy 120 – Code of Conduct for Committee Members.

Committees function solely as advisory bodies that provide recommendations to Council.

The Appointed Chairperson plays a leadership role for the Committee.

The Council Liaison to the committees are there to offer information from the Council perspective, what has been discussed at the Council meetings, what Council have experienced and how the discussion fits within the City's practices and Councils Strategic Priorities.

The Council Liaison do not vote at the Committee as members of Council are not there to drive a Committee as Council have the freedom to make motions and have discussion at the Council table.

The Committee members are volunteers of their time and offer their expertise or passion for a topic. The Committee meeting is the opportunity to hear from that group of individuals.

When the minutes of the Committee come back to Council with a recommendation, the Council Liaison may speak to the recommendation and if needed answer questions in regard to the recommendation.

The Committee members themselves are appointed by the Council as a whole. When Council consideration the appointments, from those who have put their names forward, they consider who will bring the most to the conversation through their knowledge, background or interest.

Committee members sign a code of conduct in accordance with Council Policy 120. As a Committee member they are representing the City they are representing the City. During the consideration process Council Policy 120 is also considered.

Discussion ensued and the following points were noted:

- It was clarified that the Councillor Liaison is encouraged to be active on the Committee. Although the Councillor Liaison do not vote or make motions they are not there to just to observe they are expected/encouraged to participate in discussion at the meetings.
- It was noted that this should be included as part of a policy so there is clarity around the role.

2019-G/L-095

It was MOVED and SECONDED

THAT the Governance and Legislative Committee directs the role of a Council Liaison be formalized through a City policy and it be brought back to the Committee for review.

CARRIED

5. **SPECIAL EVENT PROTOCOL GUIDELINES**

Corporate report dated June 24, 2019 from the Director of Recreation and Culture titled “Special Event Protocol Guidelines”.

The following discussion points were noted:

- Concern there is no mention of the Crown - Lieutenant Governor
- First Nation acknowledgement, it was requested that staff confirm this
- The parade line-up order, would like to see the arrows be inverted or be noted sideways as how they are currently placed is confusing

2019-G/L-096

It was MOVED and SECONDED

THAT the Governance and Legislation Committee

1. Receives for information the corporate report dated June 24, 2019 from the Director of Recreation and Culture titled “Special Event Protocol Guidelines”; and
2. Endorses the Special Event Protocol Guidelines as outlined in Appendix A of this corporate report with the noted changes.

CARRIED

6. **UPCOMING COMMUNITY FORUMS**

Discussion regarding timing for future forums, further topics and format.

It was noted that this is a successful way to reach the public. There should be Community Forums booked in July, September, October and November and some noted topics were:

- *Affordable Housing – will be its own topic - may be a few forums on this topic (a few months apart) – (first one July 29, 2019 at 5:30 p.m. White Rock Community Center)*
- *TransLink – will be its own topic - September*
- *Smart Cities, maybe more of an educational process (2 hours) demonstration and opportunity for the public to ask questions and comment*

The forum format will be considered with the topic as to what works best with the information to be provided, there must always be consideration / time given to hear from the public. It was noted that information needs to be put forward in regard to a scorecard against each of Council’s Strategic Priorities.

7. **COUNCIL POLICY NO. 106 – COUNCIL REMUNERATION AND EXPENSES**

Councillors Chesney and Fathers have requested that Council Policy No. 106 (Council Remuneration and Expenses) be placed on the agenda for discussion.

Council Policy 106 recommends that following the swearing in of a new Council the Director of Financial Services shall revise the annual remuneration for Mayor and Council using the average of the remuneration for the previous year for the following three noted municipalities: City of Pitt Meadows, City of Port Moody and City of Langley.

Up until December 31, 2018 there was also a one third of the annual remuneration considered an allowance for expenditures (tax free) permitted. Effective January 1, 2019 the *Income Tax Act* no longer permitted this tax free item and staff brought forward the Council Policy 106 so Council remuneration could be discussed with consideration of the amendment to the legislation (tax free portion of their indemnification).

The Governance and Legislation Committee recommended the following in regard to their identification:

RECOMMENDATION #1:

THAT the Governance and Legislation Committee recommends that Council increase the Mayor and Council remuneration by 15%, enough to bring up the Council remuneration from what was lost with the new income tax act amendment that eliminated the nontaxable status of the non-accountable allowance for elected officials.

RECOMMENDATION #2:

THAT the Governance and Legislation Committee recommends that Council include in addition for 2019, the Canadian Price Index (CPI) rate to be added to the Mayor and Council Remuneration.

RECOMMENDATION #3:

THAT the Governance and Legislation Committee recommends that Council endorse Council Policy No. 106 – Council Remuneration and Expenses.

It was noted that the item had been asked to be discussed again because two (2) previous members of Council are impacted by the change to the *Income Tax Act*. They now receive less funds than they had in the previous term(s) for carrying out their duties.

The Director of Financial Services noted the following gross amount of indemnification based on the recommendations noted above made by the Committee previously: with the two additional increase amounts of 18.3% total:

- Mayor annual indemnification currently: \$86,080 with the proposed increase of 18.3% the indemnification will increase to \$101,860
- Council annual indemnification currently: \$34,430 with the proposed increase of 18.3% the indemnification will increase to \$40,740
- In addition the Deputy Mayor monthly indemnification currently \$1,430 per month and with the proposed increase of 18.3% the indemnification will increase to \$1,700

The item was not on the agenda for a vote at this time. The recommendations as noted in this agenda are included on the regular agenda for later in the evening for Council consideration.

8. **CITY OF WHITE ROCK: TREE MATTERS**

Councillor Fathers requested that the following items/documents pertaining to city trees be placed on the agenda for discussion:

The following items were placed on the agenda for reference during discussion:

- White Rock Tree Management Bylaw, 2008, No. 1831
- Engineering & Municipal Operations Policy No. 611: Tree Management on City Lands
- Arborist Report dated June 13, 2019 regarding 1235 Oxford Street, White Rock

The Chief Administrative Officer (CAO) gave a general overview of Policy 611 – Tree Management on City Lands.

The CAO inquired with Council as a check in with the principles of the policy, if this would remain as the direction of this Council.

The following questions / comments were noted:

- When the City removes trees on City lands what is the replanting program?
The City is accountable as anyone else when trees are removed and additional trees are planted to make up for what was removed (tree size is important, it is usually 2 to 1)
- Trees are removed but the City does not appear to have the diversity that we once had, when a significant tree is removed a tree of similar standard should be the replacement (like species for like species)
- The City typically would only remove hazardous trees
- Item 7d) is something that was noted, if the tree was there and had obscured a view previously then this section should not apply (even if it takes time for the tree to grow)
- It was noted the two (2) recent trees removed from Oxford, that they should be replaced in close proximity
- Would like to see a policy that trees of a certain size would need to come to Council prior to being removed (these decisions need to come before Council with the exception of an emergency)

2019-G/L-096

It was MOVED and SECONDED

THAT the Governance and Legislation Committee refers the following to the City's Environmental Advisory Committee:

- White Rock Tree Management Bylaw, 2008, No. 1831; and
- Engineering and Municipal Operations Policy No. 611: Tree Management on City Lands for review from an environmental perspective / protecting our environment for recommendations to come back to this committee in the Fall 2019.

CARRIED

Discussion continued on the matter and the following points were noted:

- Matrix used to estimate the likelihood of a tree failure impacting a specified target and the risk rating matrix was noted: with the exception of Very Likely and Extreme that falls under what would be an emergency (extreme danger) but other than that Council should have oversight
- Communication is a big part of this, earlier when trees are known they need to come down this needs to be done with Council (not last minute)
- Would like Council to be able to review the Arborist report ahead of time and be able to ask questions of the information

2019-G/L-096

It was MOVED and SECONDED

THAT the Governance and Legislation Committee refers the following to the City's Environmental Advisory Committee:

- White Rock Tree Management Bylaw, 2008, No. 1831; and
- Engineering and Municipal Operations Policy No. 611: Tree Management on City Lands for review and make recommendation(s) as to how they should change in regard to Council oversight of trees before they are taken down.

CARRIED

9.

WATER QUALITY TASK FORCE

It was inquired where this Task Force was in regard to being established.


Staff clarified that the resolution on this matter was to defer the decision and allow the Water Community Advisory Panel to deal with the issues in regard to water quality as per their Terms of Reference that include water quality for both source and distribution.

It was staff's recollection that a Water Quality Task Force at the time of being discussed was considered premature. The City's water treatment plant was not completed / operational at the point. Since that time there was a subsequent motion on this topic and staff were directed to provide an updated business case with regard to whether or not the City should continue to use the current water supply or they should be using Metro Vancouver's water supply. This report is expected that includes a business case will be brought forward in September 2019.

**10. CONCLUSION OF THE JULY 8, 2019 GOVERNANCE AND LEGISLATION
COMMITTEE MEETING**

The Chairperson concluded the meeting at 5:53 p.m.

Mayor Walker



Tracey Arthur, Director of
Corporate Administration

Unapproved

PRESENT: Councillor Trevelyan (Chairperson)
Mayor Walker
Councillor Chesney
Councillor Fathers
Councillor Kristjanson
Councillor Manning

ABSENT: Councillor Johanson

STAFF: D. Bottrill, Chief Administrative Officer
T. Arthur, Director of Corporate Administration
C. Johannsen, Director of Planning and Development Services
C. Isaak, Manager of Planning

Press: 0
Public: 10

1. **CALL MEETING TO ORDER**
The chairperson called the meeting to order at 6:15 p.m.

2. **ADOPTION OF AGENDA**

2019-LU/P-020 **It was MOVED and SECONDED**
THAT the Land Use and Planning Committee adopts the agenda for
July 8, 2019 as circulated.

CARRIED

3. **ADOPTION OF MINUTES**
a) June 10, 2019

2019-LU/P-021 **It was MOVED and SECONDED**
THAT the Land Use and Planning Committee adopts the following meeting
minutes as circulated:

a) June 10, 2019.

CARRIED

4. **INITIAL OCP AMENDMENT APPLICATION REPORT – 1485 FIR STREET
(19-009 OCP/ZON/MJP)**
Corporate report dated July 8, 2019 from the Director of Planning and
Development Services titled “Initial OCP Amendment Application Report –
1485 Fir Street (19-009 OCP/ZON/MJP)”.

The Director of Planning and Development Services and the Manager of Planning introduced the application through a Power Point presentation.

Mahdi Heidari, the applicant: was given the opportunity to speak at this time and the following points were noted:

- See a need for full rental buildings (84 units being offered), could have done some condominiums on the site but recognised there is a need for more rental units (in White Rock and throughout the Lower Mainland)
- New building with new amenities, but it will have less expenses than a condo building where some rentals are permitted
- Increase in the size (approximately 100 sq. ft per unit) has been requested so the suites are not too small, the increase will enable them to be included for washer/dryer and storage room
- A lot of people want to remain in White Rock but need to downsize this allows for this, the bit of a larger unit will be helpful for those making that transition
- Relocation during construction of the tenants is important, would like to ensure they are in buildings not far from where they are residing currently

Discussion ensued and the following comments by Council were noted:

- What will the rental charges be for these units? This is something the market will determine.
- How many units on the site currently? There are 24 units now on the site (60 additional units).
- A rental only building is appreciated
- A number of things that do not work with this proposal:
the area noted as amenity green space is currently the parking lot (facing the church) why not have this at the front of the building?
It was noted by the Architect that the Courtyard was at the lane so the living units were not adjacent to the lane, parking lot of the church, the building loading area and underground parking access. While it would look better from the street it would not be ideal for someone living in the building.
- The building design is considered large for the site, would like to see a further setback so it is not so close to the street (looks a bit bleak)
- What is the plan to re-house existing tenants while under construction and following completion? If there is partnership with a Non-Profit (has not been explored by the Applicant but was suggested this evening by Council) will the tenants be able to move back and pay the same rent as they were? The current tenants will be offered rental of 10% less than the market value, working on plans to relocate in nearby areas
- Concerned in regard to the impact to the current residents – would like for them to be accommodated during construction and when they move back would like for them to only have to pay the same rental rate as they did prior.

The Applicant noted that more details in regard to tenant relocation, rental information for previous tenants and general rental rates will be included in the next report.

- Unit size: 1 bedroom: 500 sq. ft, 2 bedroom: 750/800 sq. ft., 3 bedroom: 1,100/1,200 sq. ft.
- A traffic study has been completed including information on parking access from the lane rather than from Russell or Fir Street. Parking provided will be 115 spaces, noted this is short by 12 stalls which is anticipated to be offset by promoting a pedestrian and cycling network. The site is also close to bus routes and walking to retail uptown.

2019-LU/P-022

It was MOVED and SECONDED

THAT the Land Use and Planning Committee:

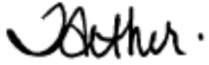
1. Receives for information the corporate report dated July 8, 2019 from the Director of Planning and Development Services, titled “Initial OCP Amendment Application Report – 1485 Fir Street (19-009 OCP/ZON/MJP);” and
2. Recommends that Council refuse the OCP amendment application, and direct staff to work with the applicant on a revised rezoning and Major Development Permit application, for a secured rental housing development that includes a reduced FAR (2.8 gross floor area ratio consistent with the OCP), and amended building and site design.

CARRIED

5. CONCLUSION OF THE JULY 8, 2019 LAND USE AND PLANNING COMMITTEE MEETING

The Chairperson declared the meeting concluded at 6:52 p.m.

Councillor Trevelyan
Chairperson



Tracey Arthur, Director of
Corporate Administration

PRESENT: B. Kish, Chairperson
J. Ahmad, Vice-chairperson
R. Kaptyn, Community member
H. Martin, Community member
M. Pederson, Community member
P. Patrala, Community member
G. Scott, Community member
M. Barbone, Community member

COUNCIL: Councillor Johanson
Councillor Manning (alternate)

ABSENT: E. Harrington, Community member
R. Haynes, Community member
K. McIntyre, Community member

STAFF: E. Stepura, Director of Recreation and Culture
S. Yee, Manager, Community Recreation
E. Tuson, Committee Clerk

Public: 0
Press: 0

1. CALL MEETING TO ORDER
The Chairperson called the meeting to order at 4:01 p.m.

2. ADOPTION OF AGENDA

2019-SAC-004 **It was MOVED and SECONDED**
THAT the Senior Advisory Committee adopts the agenda for July 2, 2019 as
circulated.

CARRIED

3. ADOPTION OF MINUTES

a) June 4, 2019.

2019-SAC-005 **It was MOVED and SECONDED**
THAT the Seniors Advisory Committee adopts the June 4, 2019 minutes as
circulated.

CARRIED

4. INVENTORY OF EXISTING COMMUNITY PROGRAMS AND SERVICES FOR SENIORS

Staff presented a scope of the various programs and services that are currently provided in South Surrey/ White Rock. It was noted that reviewing the Peace Arch Hospital Foundation Fetch (For Everything That's Community Health) website would be beneficial for this Committee to see what could be added to their inventory of programs and services.

ACTION: Staff to send "Fetch" website link and an inventory of their programs to Committee for information.

Staff presented the White Rock Recreation and Culture Excursions Guide to the Committee for information. Programs and services listed in the guide were discussed and the following points were noted:

- The Kent Street activities centre has sixteen (16) activity groups from social dancing to card games.
- South Surrey Parks and Recreation has a large range of seniors programs and events based out of the South Surrey Recreation Centre.

The following programs and services that serve local seniors were noted:

- The Semiahmoo Planning Table lunch and learn program.
- Local churches put together senior's picnics (e.g. the Peace Portal Alliance Church B.B.Q.)
- Semiahmoo Seniors Planning Table has a pop-up on July 9, 2019 presented by Fraser Health. Canada's Minister for Senior's will be in attendance and the topic will be advanced care planning.
- CARP recently put together a senior's event for education on medical cannabis. Approximately 220 people attended.
- CARP and the City of White Rock's Salute to Seniors event.
- The National Association of Federal Retirees has various events being promoted across the country about various topics, the most recent being pharma-care.
- All City of White Rock events are posted on bulletin boards in the Centre for Active Living (CAL), White Rock Arena, Community Centre, and Kent Street Activity Centre.
- Peace Arch Hospice Society offers a grief and bereavement support service at no charge.
- The City of White Rock co-sponsored with Seniors Come Share offers a program called "Fresh and Lively", which focuses on identifying isolated seniors and invites them to luncheon on the first three Fridays of every month at the Kent Street Activity Centre. It is eight (8) dollars for food, entertainment and transportation if required.

The Committee noted that it can be challenging to find information about City programs and services for seniors.

2019-SAC-006 **It was MOVE and SECONDED**

THAT the Senior's Advisory Committee requests that Council consider raising the CARP flag outside City Hall before the scheduled Senior's Advisory Committee Meeting on October 1, 2019 in honor of National Senior's Day.

CARRIED

5. **S.W.O.T. ANALYSIS OF SENIORS PROGRAMS AND SERVICES IN WHITE ROCK AND SOUTH SURREY**

Staff provided a definition of S.W.O.T (Strengths, Weakness, Opportunities, and Threats) analysis to the Committee for information.

Staff noted the following:

- Making services age-friendly is one of the goals of the Seniors Advisory Committee. An age-friendly city adapts its structures and services to be accessible to and inclusive of elderly people with varying needs and capacities.
- A blue zone is a community or city in the world that has been identified as a place where people live longer. There are a number of items that can be improved to increase the overall health and wellness of a community.
- Currently, White Rock has several characteristics of a blue zone, but it can also strive to add to and improve on them.

ACTION: Staff to send out the 2012 White Rock Age-Friendly Community Award document to Committee for information.

The Committee began discussing their S.W.O.T analysis of seniors programs and services in White Rock and South Surrey. The following was noted:

Strengths:

- There is wide variety and a large number of programs.
- Senior's involvement in the administration and implementation of programs and services.
- Established senior's networks (e.g. organizations like CARP and the Semiahmoo Seniors Planning Table).
- Community volunteers have proven to be a good resource.
- Good communication between organizations and seniors about programs and services they offer.
- The City and other levels of government are supportive of seniors and programs and services for them. There is an awareness of the necessity for resources to be dedicated to seniors in the community.
- White Rock's psychological and physical environment is good for seniors (e.g. air quality, libraries, green spaces, the beach).
- White Rock has a hospital in its community (Peace Arch Hospital)
- Several non-governmental organizations (NGO's) who provide programs and services to seniors are located in the community (e.g. White Rock Hospice Society and Alzheimer's Association).

- White Rock attracts seniors as it is a desirable place to live.
- White Rock has a higher income per household which allows the community to do more in terms of programs and activities.

Weaknesses:

- Volunteer Succession planning.
- There is a communication gap between seniors and program/service providers in the community.
- Many of the stores that previously catered to seniors have closed down. (E.g. Buy Low).
- Rise in the cost of living.
- Transportation challenges and a lack of access for seniors to get to events in the community.
- Depletion of taxi services in White Rock.
- Lack of education for seniors about transportation breaks they can access.
- Increased demand for seniors care facilities.
- Long wait-time at the hospital emergency room.
- Lack of communication about the implemented hospital discharge transportation services.
- Pay parking at the hospital.
- Lack of at home support for seniors with illnesses such as Alzheimer's and dementia.
- Lack of household services (e.g. gardening, animal care, meal preparation)
- Elder abuse (e.g. isolation and family neglect)
- Increased isolation/ helplessness causing depression.

ACTION: Staff to send out Social Isolations and Loneliness Among Seniors document to the Committee for information.

Threats:

- The expectation to financially support children and grandchildren.
- Rising cost of pharmaceuticals.
- Ecommerce is causing local stores to close down which is impacting seniors who don't have access to computers.
- Economic impact (e.g. cost of taxes, decreased quality of life).
- People retiring without pensions.
- Methods of communication (e.g. technology and social media).
- Aging baby boomers will create a greater demand for aging services.
- Lack of job opportunities for seniors that want to work longer than normal retirement age.
- Ageism.
- The privatization of services is causing the cost of services such as clinics and care homes to increase.
- Government downloading to the local government level is causing a lack of services and poor quality of services.

- The threat of losing your driver’s license at 80 years old creates a fear of losing your independence.

Opportunities:

- Ride share programs (e.g. Evo, Car2go, Uber).
- Find more innovative communication methods to inform seniors about programs and services they can access.
- Outreach vehicles to engage isolated seniors and transport them to events.
- Capitalizing on the City’s committees and liaising with other committees.
- Targeting the different demographics of seniors and understanding how they communicate.
- White Rock’s Official Community Plan (OCP) is in the process of being revitalized which gives this committee an opportunity to provide input to make the community more senior friendly.
- Bring all the programs and organizations together to have one (1) forum that seniors can access for programs and services.
- Collaboration between all the various organizations that offer seniors programs and services in the community.

6. INVOLVEMENT IN SENIORS EVENTS

The Committee suggested that setting up a booth at the White Rock Farmers’ Market could be a good tool for communication and advertisement of senior’s events, programs, and services.

National Senior’s Day

It was noted that the Committee will wait to hear from Council regarding their recommendation about raising the CARP flag.

For the Health of It

The Semiahmoo Senior’s Planning Table organizes “For the Health of It”. It is a full day event that incorporates both physical activity and health monitoring. This year’s event will take place on September 21, 2019 and the topic will be nutrition.

The Committee suggested that reserving a table at this event for the Committee members to attend would be good exposure. As well, it was suggested that a survey conducted by the Committee at this event could help with obtaining feedback about what White Rock seniors want out of their programs and services.

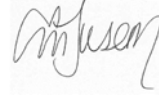
7. SENIOR ADVISORY COMMITTEE MEETINGS

The following schedule has been established for 2019 and is noted for information purposes:

- September 3rd
- October 1st; and
- November 5th

8. **CONCLUSION OF THE JULY 2, 2019 SENIOR ADVISORY COMMITTEE MEETING**

The Chairperson declared the meeting concluded at 6:00 p.m.



B. Kish, Chairperson

E. Tuson
Committee Clerk

UNAPPROVED

PRESENT: K. Wuschke, Chairperson
Chief H. Chappell, Semiahmoo First Nations, Vice-Chairperson
M. Pedersen, Community member
K. Peplow, Community member
T. Saunders, Community member

COUNCIL: Councillor Chesney (non-voting)
Councillor Manning (alternate) (departed at 4:59 p.m.)

NON-VOTING: H. Ellenwood, White Rock Museum and Archives

ABSENT: C. Garvey, White Rock Museum and Archives Board of Directors

STAFF: E. Stepura, Director of Recreation and Culture
E. Keurvorst, Manager, Cultural Development
E. Tuson, Committee Clerk

Public: 1
Press: 0

1. **CALL MEETING TO ORDER**
The Committee Clerk called the meeting to order at 4:02 p.m.

2. **ADOPTION OF AGENDA**

2019-HHAC-001 **It was MOVED and SECONDED**

THAT the History and Heritage Advisory Committee (the Committee) adopts the agenda for July 3, 2019 as circulated.

CARRIED

2. **INTRODUCTIONS**
The Committee began with member introductions.

3. **COMMITTEE ORIENTATION**
The Committee Clerk provided an orientation Power Point presentation for information. Committee meeting procedures were discussed.

4. **SELECTION OF CHAIRPERSON AND VICE-CHAIRPERSON**
Members of the Committee discussed the appointment of a Chairperson and Vice-Chairperson for the 2019 Committee year.

2019-HHAC-002 **It was MOVED and SECONDED**

THAT the History and Heritage Committee (the Committee) appoints the following members as Chairperson and Vice-chairperson for the 2019 Committee year:

- Chairperson: K. Wuschke.
- Vice-Chairperson: Chief H. Chappell.

CARRIED

Note: K. Wuschke assumed the role of Chairperson.

5. **TERMS OF REFERENCE**

The Chairperson introduced the Committee's Terms of Reference. The Committee mandate was discussed.

Staff reported that the City of White Rock lost several heritage markers on the pier due to the storm last year. Other heritage stones located throughout the City could be updated.

Staff noted that discussion surrounding land use and planning matters would need to be kept within the City limits; however, when it comes to events, the Committee is encouraged to collaborate with neighboring communities such as Semiahmoo First Nation and South Surrey.

ACTION: Staff to distribute the White Rock Museum and Archives Heritage Inventory List to the Committee for information.

H. Ellenwood, Committee member, noted that he will compile what the White Rock Museum and Archives puts together in terms of 2019 heritage events and report back to the Committee at the next scheduled meeting.

The Committee noted that incorporating and encouraging more recognition of Semiahmoo First Nation heritage within the Terms of Reference is important.

2019-HHAC-003 **IT was MOVED and SECONDED**

THAT the History and Heritage Advisory Committee (the Committee) recommends Council consider amending the Committees Terms of Reference to add the following as a new item b) under policy:

- Recommend opportunities to support the preservation and sharing of the Semiahmoo First Nation language, culture, and history.

CARRIED

2019-HHAC-004 **It was MOVED and SECONDED**

THAT the History and Heritage Advisory Committee (the Committee) recommends Council consider amending the Committees Terms of Reference existing item b) under policy as follows:

- Reviews and submits recommendations to Council on land use and planning matters which have heritage implications, and may impact culturally sensitive and archaeological areas.

CARRIED

2019-HHAC-005 **It was MOVED and SECONDED**

THAT the History and Heritage Advisory Committee (the Committee) recommends Council consider amending the Committees Terms of Reference existing item d) under policy as follows:

- Supports heritage education, tourism, and public awareness through programs such as Heritage week displays, newsletters, etc.

CARRIED

6. **HERITAGE GRANT FUNDING OPPURTUNITIES**

Staff presented the Heritage Canada Funding Opportunities list to the Committee for information. Funding opportunities and heritage grants were discussed.

ACTION: Staff to send out Heritage Canada Funding Opportunities list of funding sources to the Committee for information.

Canada Day

Other Special Events

7. **HERITAGE DAYS PARTICIPATION**

The Committee noted that it may be helpful for staff to come to the next scheduled meeting with ideas they have for Heritage Days and other project ideas in order to provide guidance to the Committee.

ACTION: Staff to send out the City of White Rock’s calendar of events to the Committee for information.

Staff suggested the following as other ways the Committee can begin brainstorming ideas for Heritage Days and heritage projects:

- The Pop-Up Gallery.
- Historical photographs.
- Connect with neighboring Communities.

The Committee suggested working with the City of Surrey for Heritage Week, as it could be beneficial to coordinate events.

8. **COMMUNITY HERITAGE PROJECTS IDEAS**

Various community heritage project ideas and areas lacking in heritage recognition were suggested and discussed.

9. **HISTORY AND HERITAGE ADVISORY COMMITTEE MEETINGS**

The following dates were reviewed as the schedule for 2019 Committee meetings:

- September 4th
- October 2nd
- November 6th

2019-HHAC-006 **It was MOVED and SECONDED**

THAT the History and Heritage Advisory Committee (the Committee) approves the 2019 meeting schedule as presented.

CARRIED

10. CONCLUSION OF THE JULY 3, 2019 HISTORY AND HERITAGE ADVISORY COMMITTEE MEETING

The Chairperson concluded the meeting at 5:59 p.m.

K Wuschke, Chairperson



E. Tuson, Committee Clerk

UNAPPROVED

PRESENT: D. Campbell, Chairperson
B. Sullivan, Vice-Chairperson
H. Crawford (arrived at 5:24 p.m.)
F. Kubacki (arrived at 4:04 p.m.)
A. Nielsen
C. Poppy
A. Shah
P. Zheng
K. Huang

COUNCIL: Councillor H. Fathers (non-voting) (left at 5:25 p.m.)

ABSENT: S. Sullivan
I. Filonova

STAFF: E. Stepura, Director of Recreation and Culture
E. Keurvorst, Manager of Culture
C. Westwood, Special Events Coordinator
E. Tuson, Committee Clerk

Public: 1
Press: 0

1. **CALL TO ORDER**
The Chairperson called the meeting to order at 4:00 p.m.

2. **ADOPTION OF AGENDA**

It was MOVED and SECONDED

THAT the White Rock Sea Festival Committee (the Committee) adopts the agenda for the July 4, 2019 meeting as circulated.

CARRIED

3. **APPROVAL OF MINUTES**
a) June 6, 2019

It was MOVED and SECONDED

THAT the White Rock Sea Festival Committee (the Committee) adopts the minutes of the June 6, 2019 meeting as circulated.

CARRIED

4. PROGRAM OF EVENTS

Follow-up on ideas for the 70th platinum year

No update at this time.

Entertainment group update

No update at this time.

70th Anniversary brand/logo

Staff distributed a draft schedule of events brochure to the Committee for information.

Discussion ensued and the following was noted:

- All City facilities and Semiahmoo First Nation will have the brochures for distribution.
- Brochures can also be distributed at other City events (e.g. Tour de White Rock, TD Concert Series, White Rock Farmers Market).
- A centre fold ad will be placed in the Peace Arch News prior to the Sea Festival.
- The brochure will also be posted on the City website.

Staff noted that when the Waiter's Race takes place on the plaza volunteers will need to clear audience chairs from 3:30 p.m. – 4:30 p.m. to make room.

Staff distributed a draft White Rock Sea Festival poster to the Committee for information.

Discussion ensued regarding the draft poster and the following points were mentioned:

- The posters will be printed on eleven (11) by seventeen (17) inch paper.
- Once the draft is approved it will be posted throughout the community.
- Last year the City had a list of poster locations for volunteers and Committee members to place them. The Committee can use the same list this year to ensure posters are properly distributed throughout the community (e.g. business along the waterfront, City facilities, etc.).

Amendments to the draft schedule of events brochure and draft poster were discussed and the Committee noted that they will review the drafts and contact staff with any additions or changes.

Staff reported that the City is also working on drafting lawn signs for additional marketing purposes.

ACTION: Staff to send out a final copy of the schedule of events brochure and poster to the Committee for information and approval before it goes to print.

Follow-up - previous parade princesses and/or parade marshals

The Committee is working with staff to reach out to past parade volunteers and White Rock princesses to participate in the Sea Festival. A media release will be drafted for the Peace Arch News and other media outlets for recruitment.

The Committee has also contacted other municipalities past princesses. Several have responded and will be participating in the Sea Festival this year.

ACTION: C. Poppy, Committee member to send the list of princesses that will be participating in the Sea Festival to staff to distribute to the Committee for information.

5. MARKETING AND COMMUNICATIONS

Invitation for Sea Festival to Sister-City La Connor Washington

Staff noted that an invitation has been extended to the Mayor's office in La-Connor, Washington.

ACTION: Staff to send an invitation to the Mayor of Blaine, Washington.

6. PARADE

Staff presented the City of White Rock's draft event protocol to the Committee for information. Parade organization was discussed.

The Committee suggested logistical changes to the draft event protocol.

Staff noted that a White Rock police vehicle will be closing the parade this year.

Staff discussed the following regarding the draft event protocol:

- Political representative and party location placement in the parade.
- Political signage and marketing promotion during an election.

The Committee noted the following regarding parade logistics:

- Once the event protocol has been approved by Council, it will be beneficial to send the document to all parade participants to notify them of the rules.
- The parade marshal for this year will be riding in a model train.
- Any live animal in the parade will need to be contained at all times. It may be necessary to set parameters for any floats with animals to prevent any issues from arising.

ACTION: Staff to look into City bylaws regarding dangerous animals and report back to the Committee with additional information.

Discussion ensued regarding transportation and the following points were mentioned:

- Once the number of cars for the parade is finalized, the Committee will organize how the cars will be transported to and from the parade.
- Any cars borrowed for the parade could be locked between the buildings at Centennial arena overnight and then staff can take them back to the dealership the next day.
- The City has reached out to a shuttle service company to provide drivers that will transport parade participations to and from the event.
- A shuttle route has been mapped out to transport parade participants.

The Committee noted that a senior's area for watching the parade will be a beneficial way to engage White Rock seniors in the Sea Festival. The following was suggested about a possible senior's area:

- The viewing area could be on the corner of Oxford Street at Hugh's Park.
- Sign up locations to participate in this event include local senior's homes and the Kent Street Activities Centre.

7. **SPONSORSHIP UPDATES**

Staff reported that Coast Capital Savings has agreed to be the main stage sponsor for the 70th Anniversary White Rock Sea Festival.

Discussion ensued regarding Coast Capital Savings sponsorship, and the following was noted by staff:

- Providing \$10,000 in sponsorship.
- Posters and logos will be drafted once Coast Capital sends them to staff.
- Will be assisting with programming, setting up tents at East Beach, and providing interactive activities (e.g. graffiti art, sunglasses decorating).
- Providing tents for Memorial Park plaza that will be used as sound tents.
- A representative from Coast Capital will be speaking at the opening ceremony of the Sea Festival.

Staff noted that White Rock Beach Beer will be the beer sponsor for the Volunteer Reception on August 1st at the Community Centre.

8. VENDORS

Staff noted the following vendor updates:

- The sand sculpture artist Greg Munch is enthusiastic about participating in the event this year. He will be set up next to the White Rock Museum.
- The City has licensed five (5) different food carts to be set up along Marine Drive. The food selection includes:
 - Polish sausage.
 - Thai gelato.
 - Mini donuts.
 - Japa Dog.
 - Ice cream.
- Two (2) paddle board rental companies will be offering free paddle board and skim boarding lessons.
- The White Rock Museum will also recruit their own vendors to set up during the event.

9. TRANSPORTATION

Staff are currently working on acquiring a traffic management plan for the torch light parade to manage road closures.

Discussion ensued regarding parking accessibility for the event and the following was noted:

- There is handicapped parking in the new parkade and along the waterfront.
- More pick up and drop off space may be needed in order to make the event more accessible.
- Staff will look into where more pick up and drop off space could be located.
- Easily accessible drop off and parking will be important for seniors.

10. LOGISTICS UPDATE

Staff noted that they are finalizing East Beach set up with Coast Capital Savings.

Staff distributed a draft wayfinding scrim to the Committee for information. The scrim will be posted along fence lines to direct people to activities during the Sea Festival. The following locations were suggested by staff for placement:

- At the corner of Semiahmoo Park to direct attendees to Semiahmoo Days and Sea Festival.
- East Beach near the Spirit Bear.
- Train Crossings.
- West Beach at the bottom of the grand staircase.

Staff will issuing a media release with the following outlets to help with marketing and promotion:

- Pulse FM.
- South Rock Buzz.
- Social media (Facebook, Instagram, Twitter).

11. VOLUNTEER

The Committee noted the following regarding Sea Festival Volunteers:

- A list has been compiled of all the volunteers that have applied so far.
- Land and sea instructors have also been acquired for Saturday. If needed they can be acquired for Sunday as well.
- Staff will be helping guide the volunteers with their duties.
- A list has been drafted of all volunteer duties required for the Sea Festival. Appointing team captains to be in charge of a cluster of volunteers could be beneficial to ensure that a specific task gets completed.

Discussion ensued regarding Pirates in the Park volunteers and the following was mentioned:

- It has been requested that all Pirates in the Park volunteers wear Semiahmoo Days t-shirts
- Volunteers that are helping with a City of White Rock events are covered under the City's insurance. However, if the volunteer is working with Semiahmoo Days they won't be covered under the City's insurance and won't report to City staff. It will be important to distinguish this difference to the volunteers.
- Semiahmoo First Nations will direct the cook out and the car show. All other volunteers will take direction from the Sea Festival.
- Putting both the Semiahmoo Day's and Sea Festival logo on the volunteer t-shirts could be a possible solution.
- Volunteers for Pirates in the Park could also wear a different color t-shirt than the Sea Festival volunteers to help distinguish.

Staff noted that separate polo shirts will be printed for the Committee members to wear. They will also be provided to Mayor and Council.

12. BUDGET

No update at this time.

13. 2019 MEETING SCHEDULE

Review the following schedule of 2019 Committee meetings:

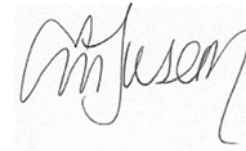
- July 25
- August 1 – (Volunteer Orientation 6:00 p.m.-8:00 p.m. following the Committee Meeting)
- August 22 – Debrief Meeting

Staff noted that the previous recommendations made by the Committee regarding post Sea Festival surveys were presented to Council at the June 24th regular Council meeting. Council approved both recommendations.

Staff noted that the City will be hiring a professional photographer for both the Sea Festival and Pirates in the Park. All festival photographers will have a City of White Rock lanyard on with a Media tag.

14. CONCLUSION OF THE JULY 4, 2019 MEETING

The Chairperson concluded the meeting at 6:15 p.m.



D. Campbell, Chairperson

E. Tuson
Committee Clerk

- PRESENT:** D. Stonoga (Chairperson)
D. Bower
S. Doerksen
S. Johnson
K. Jones
J. Yu
- COUNCIL:** Councillor Trevelyan (left the meeting at 4:52 p.m.)
- ABSENT:** I. Lessner (Vice-Chairperson)
B. Sivia, Fraser Health Representative
- STAFF:** D. Bottrill, Chief Administrative Officer
S. Jassim, Manager, Water Utility
D. Johnstone, Committee Clerk
- Public: 2
Press: 0
-

1. **CALL MEETING TO ORDER**
The meeting was called to order at 4:00 p.m.

2. **ADOPTION OF AGENDA**

2019-WCAP-006 **IT WAS MOVED AND SECONDED**
THAT the Water Community Advisory Panel (WCAP) adopts the agenda for the
July 9, 2019 meeting as presented.

CARRIED

3. **ADOPTION OF MINUTES**

2019-WCAP-007 **IT WAS MOVED AND SECONDED**
THAT the Water Community Advisory Panel (WCAP) amends the minutes of
June 11, 2019 as follows:

- Under Item 6 the last point read “White Rock has reached out to work with the City of Surrey and emergency water connections are in process”; and,

THAT the minutes be adopted as amended.

CARRIED

4. **WATER DISTRIBUTION**

- **Introduction**
- **Emergency Preparedness**

Staff provided a PowerPoint presentation introducing the water distribution system in White Rock, and an overview regarding emergency preparedness.

In response to questions from the Panel, staff provided the following information:

- Approximately 95% of all water pipes throughout the City are iron. The City is currently replacing two (2) to three (3) water mains per year with PBC piping.
- There is a correlation in water consumption and weather/a large driver for water consumption increases can be attributed to irrigation.
- Fire underwriters conducted an independent assessment of the White Rock water system in 2018, assessing sprinkler systems, reservoirs and wells. Through this study White Rock was determined to be in the top three (3) cities in their rating for fire preparedness for a city of our size and population.
- Fire hydrants are tested and replaced on a yearly basis. Hydrants are also tested through the flushing process.
- A Water Main Asset Management Study has been performed by the City, and submitted to the Provincial government for their review and comment.

With respect to the projected population and estimated water demand numbers, an interest was expressed to further evaluate the projected numbers. Factors such as potential population growth, vacant residential units and residents not currently living in White Rock full time were noted as important considerations when looking at potential water demand. The Panel agreed that this could be further evaluated by testing the quality of assumptions with normalized values across other municipalities in the region.

Development related concerns were noted regarding an increase in demand on the water system.

Staff clarified that currently water rates are not primarily consumption based. It was noted that it could be beneficial for the Panel to have an understanding on water usage and how this could impact the City in the future.

2019-WCAP-008

IT WAS MOVED AND SECONDED

THAT the Water Community Advisory Panel (WCAP) continues the discussion surrounding the Emergency Fire System at their October 8, 2019 meeting.

CARRIED

The Panel noted that a discussion surrounding all types of emergency preparedness, and the City's emergency plan could also be addressed at the October meeting.

The Panel discussed previous situations with developers accessing water lines, and noted that this could create issues for all White Rock water users. It was suggested that a protocol be developed to properly address these types of situations (i.e. methods to communicate issues to the public, follow-up on fines etc.). The Panel noted this could be discussed further at the November meeting.

Staff reported that the Water Services Bylaw contains a penalty provision for unauthorized use into the System. It was further noted that information is distributed to the public through the City website, social media, and the Peace Arch News.

The Panel noted that in the 2017 Water System Master Plan Update consultants suggested a Cast Iron Pipe Condition Assessment be executed by the City. Inquiries were made on the status of this assessment. It was suggested that this could be a more cost efficient approach when looking into replacing older pipes in the City. While the water treatment plant is working well, concerns were noted that water quality was still being effected by current pipe conditions.

Staff reported the following information:

- The City is focusing on the replacement of iron with PBC piping in the future.
- A plan has been developed which targets older pipes for replacement. Funding for this initiative is determined through the Capital Plan as part of the Five (5) Year Financial Plan.

2019-WCAP-009

IT WAS MOVED AND SECONDED

THAT the Water Community Advisory Panel (WCAP) requested that Council consider in addition to water rates, Financial Services provides information to the Panel regarding current projects and their associated costs in the Capital Plan and to determine the total costs for upgrades not already included in the budget.

CARRIED

5.

FIVE (5) YEAR WATER MASTER PLAN

This item to be included in all future agendas as a reference item, for information.

6.

WATER COMMUNITY ADVISORY PANEL MEETINGS

The following meeting schedule was noted for information purposes.

- September 10;
- October 8; and,
- November 12.

7. **CONCLUSION OF THE JULY 9, 2019 WATER COMMUNITY ADVISORY
PANEL MEETING**

The Chairperson declared the meeting concluded at 6:05 p.m.

D. Stonoga, Chairperson



D. Johnstone
Committee Clerk

UNAPPROVED

PRESENT: B. Hagerman (Chairperson)
G. Wolgemuth (Vice-Chairperson)
G. Cameron
S. Crozier
G. Gumley
A. Gupta
E. Klassen
C. Latzen
W. McKinnon
G. Schoberg
L. Van Oene

NON-VOTING ADVISORS: C. James, Executive Director, Tourism White Rock
R. Khanna, Executive Director, South Surrey/ White Rock Chamber of Commerce
A. Nixon, Executive Director, White Rock Business Improvement Association

COUNCIL: Councillor Manning

ABSENT: T. Blume
J. Lawrence

STAFF: D. Bottrill, Chief Administrative Officer
C. Johannsen, Director of Planning and Development Services
D. Johnstone, Committee Clerk

Public: 1
Press: 0

1. CALL MEETING TO ORDER
The meeting was called to order at 4:02 p.m.

2. ADOPTION OF AGENDA

2019-EDACC-011 **IT WAS MOVED AND SECONDED**
THAT the Economic Development Advisory Committee (EDAC) amends the
July 10, 2019 agenda to include:
• Item 9 – Other Business (and that this be a standing item moving forward); and
THAT the agenda be adopted as amended.

CARRIED

3. **ADOPTION OF MINUTES**
a) June 12, 2019

2019-EDAC-012 **IT WAS MOVED AND SECONDED**

THAT the Economic Development Advisory Committee (EDAC) adopts the minutes of June 12, 2019 as presented.

CARRIED

4. **PRESENTATION FROM A. NIXON, EXECUTIVE DIRECTOR, WHITE ROCK BUSINESS IMPROVEMENT ASSOCIATION**

A. Nixon, White Rock Business Improvement Association (BIA), provided a PowerPoint presentation regarding the role of the BIA and how they assist with economic development in the City. The White Rock BIA 2019 Annual Report was also provided to the Committee, for their information.

The following discussion points were noted:

- The BIA, along with Tourism White Rock and the South Surrey/ White Rock Chamber of Commerce, focus on marketing and attracting attention to White Rock.
- It was suggested that the Committee could be more effective targeting larger issues, such as working to make White Rock a more business friendly community and researching best practices from other municipalities. Recommendations on bylaw amendments could also be considered to help businesses thrive in the area.
- Affordability has been identified as a concern for businesses in White Rock and throughout the Lower Mainland (lease rates, employee's rents and customers having less money to spend on businesses).
- The small business tool kit, as suggested in the White Rock Economic Strategic Plan, is currently being developed by the BIA, the City and the South Surrey/ White Rock Chamber of Commerce.
- The White Rock BIA, in partnership with the City, have been working with a member of the public on an economic development strategy. Letters have been distributed to registered owners of vacant businesses to attempt to attract interest in leasing opportunities. In addition, a leasing brochure has been created and distributed at retail conventions in an effort to attract business to White Rock.
- Busking was noted as a way to attract vibrancy to the area. Inquiries were made if the current policy on busking allows for enough locations, if the locations could be evaluated and the number of licensed buskers currently working in the City.

2019-EDAC-013 **IT WAS MOVED AND SECONDED**

THAT the Economic Development Advisory Committee recommends that Council consider having staff provide a corporate report to review what busking locations are working well, and whether the number of busking locations can be expanded.

CARRIED

5. **ECONOMIC DEVELOPMENT STRATEGIC PLAN**

The Director of Planning and Development Services provided a review of the previous Economic Development Strategic Plan.

In response to questions from the Committee, staff provided the following information:

- The City is working with the BIA to update the list of business locations around the City that could be utilized to attract the filming industry.
- Changes in zoning around the Peace Arch Hospital (PAH) is being considered as part of the Official Community Plan (OCP).
- An update on the Sign Bylaw has been noted as an item for Council's Strategic Priorities.
- With respect to the waterfront, it was noted that the Marine Drive Task Force would be reviewing and providing recommendations to Council on the Sign Bylaw, and patio enclosures.
- Changes in zoning on the waterfront is being considered through the OCP review to allow for additional activities along the Promenade.
- It was clarified that the Foreshore belongs to the Province, and any activities on this land would require permission from the Province.

Discussion ensued, with the Committee noting the following:

- The decrease in patio fees for businesses is now in line with Surrey's, which has been helpful for local businesses.
- Researching other waterfront communities, such as White Rock's Sister City La Connor, was encouraged to obtain ideas for business development.
- It was debated if densification in the town centre would attribute to economic development, and what type of measurement could be used to determine this.
- It was suggested that the City work with neighbouring municipalities to establish a vision and leverage resources for the entire peninsula.
- The White Rock tax rate was discussed.

ACTION: Staff to provide a report to the Committee at their September meeting regarding the White Rock mill rate, and how it compares with other municipalities throughout the Lower Mainland.

2019-EDAC-014 **IT WAS MOVED AND SECONDED**

THAT the Economic Development Advisory Committee works to support Council and staff to update the Economic Development Strategy.

CARRIED

6. **CITY OF WHITE ROCK DEVELOPMENT UPDATE**

The Director of Planning and Development Services provided a PowerPoint presentation regarding commercial (office/retail) space in the City.

The Committee discussed their mandate, and how they could improve economic growth in the City. The City's report quantified new office/retail floor space that is under construction/to be constructed over the next 5 years, The Committee noted an interest in focusing on attracting businesses and customers to White Rock to ensure viability.

It was noted that many business areas in White Rock are thriving, whereas others are not. A block by block assessment to better understand what works in the City, and where improvements could be made was suggested by the Committee.

2019-EDAC-015 **IT WAS MOVED AND SECONDED**

THAT the Economic Development Advisory Committee establishes a work plan for 2019/2020 at their September meeting.

CARRIED

2019-EDAC-016 **IT WAS MOVED AND SECONDED**

THAT the Economic Development Advisory Committee recommends that Council endorse in principal a joint Economic Development Advisory and Marine Drive Task Force sub-committee to focus on a business retention and expansion strategy.

CARRIED

7. **PUBLIC TOWN HALL MEETING/ BUSINESS FORUM, FALL, 2019**
Staff noted that Council, at their June 24th meeting, endorsed the Committee recommendation for consideration of a joint public town hall meeting and a business forum for fall, 2019.

8. **MARINE DRIVE TASK FORCE UPDATE**
This item was deferred to the September meeting, due to time constraints.

9. **OTHER BUSINESS**
G. Wolgemuth, Vice-Chairperson, noted that a consultant working with the City has established a draft White Rock Waterfront Enhancement Strategy Resource Book and encouraged members to review the document, for their information. The document can be accessed at the following link: <https://www.talkwhiterock.ca/7801/documents/17291>

10. **ECONOMIC INVESTMENT COMMITTEE MEETINGS**
The following schedule of meetings was provided to the committee for their information.

- September 11;
- October 9; and,
- November 13.

11. **CONCLUSION OF THE JUNE 12, 2019 ECONOMIC INVESTMENT COMMITTEE MEETING**

The Chairperson declared the meeting concluded at 6:05 p.m.

B. Hagerman
Chairperson



D. Johnstone
Committee Clerk

WHITE ROCK

City by the Sea!

SPECIAL EVENT PROTOCOL GUIDELINES



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INTRODUCTION

The Special Event Protocol Guidelines were developed by the Office of the Mayor, Communications and Government Relations, and Recreation and Culture to help event organizers ensure that correct protocols are followed when coordinating events held at City of White Rock facilities or public spaces. By using this guide, City staff, community event organizers, masters of ceremonies, and event volunteers will be prepared to deal with a variety of situations including inviting and welcoming elected officials and other dignitaries, arranging correct flag placement, designing seating plans, use of the City's logo, etc.

Once an event is approved by the City of White Rock, organizers can expect a complete package of information to help them plan, implement and celebrate successfully, including:

- Welcome letter outlining the details of the event requirements and expectations
- A copy of the Special Events Policy 710
- A copy of this Special Event Protocol Guidelines
- An Event Communication Kit
- Any other relevant policies, guidelines, contact information, maps, etc.

SPECIAL EVENTS CATEGORIES

As detailed in the City of White Rock Special Events Policy 710, special events fall into three distinct categories. It is important to be aware of which category your event is, and therefore what support the City will provide.

CATEGORY A - CITY-PRODUCED EVENTS

City produced events are events where all details and activities are organized and/or coordinated by City staff (usually working with a community committee to ensure the highest level of community engagement). Examples include Canada Day by the Bay, the White Rock Sea Festival and Tour de White Rock.

CATEGORY B – CITY as a PRODUCING PARTNER

When the City is a **Producing Partner**, a high level of City staff support is required to work with the producing partner's event organizers ensuring that the program content optimizes civic engagement, planning, and production details; and that the marketing needs are sufficient to achieve strategic objectives. Examples includes the TD Concerts at the Pier as a producing partner with the White Rock BIA; and Culture Days as a producing partner with Peninsula Arts and Culture Alliance (PACA).

CATEGORY C – CITY as a SUPPORTER

When the City is a **Supporter**, the role of staff is to provide advice and assistance with basic logistical planning such as public safety considerations, coordinating the use of civic facilities and City resources such as barricades, parking lots, community centres, road use, etc. Examples include Remembrance Day supporting the Royal Canadian Legion; the Polar Bear Swim supporting the White Rock and South Surrey Rotary Clubs; Christmas on the Peninsula supporting the Christmas on the Peninsula Society; and Picnic on the Pier supporting the Peace Arch Hospital Foundation.

COMMUNICATIONS GUIDELINES

CITY LOGO USE:

For internal users contact the Communications and Government Relations Department for the most up-to-date usage guidelines.

For external groups City logo approval is required from the City prior to printing, publishing and distributing event information and/or collateral.

All A, B and C level events must have the City logo included in all marketing materials as agreed upon.

Refer to the Event Communication Kit for submission deadlines and format.

CHANNELS FOR PUBLICITY AND INFORMATION SHARING:

CATEGORY A EVENT – City Produced Events

Only the City of White Rock will prepare and send media communications for these City produced events.

City event staff will liaise with the Communication Office to follow proper protocols including arranging interviews with media, advertisements and social media postings. Event staff will provide an event description/ backgrounder, timeline of the event, parking information, road closures, etc. The Communication Office will follow up with the City event staff regarding other publicity opportunities and follow-up required.

CATEGORY B EVENT – City as a Producing Partner

The City of White Rock will prepare and send joint media communications for these events, in partnership with the event co-producer or committee.

City event staff will liaise with the event partner and the Communication Office to follow proper protocols including arranging interviews with media, advertisements and social media postings. City event staff and/or the event organizer will provide an event description/ backgrounder, itinerary, parking information, road closures, etc. The Communication Office will follow up with the City event staff regarding other publicity opportunities and follow-up required.

CATEGORY C EVENT – City as a Supporter

Event organizers must be clear when promoting their event that it is not an event created, hosted or managed by the City of White Rock.

The City's Special Event Coordinator will work with the event organizer and the Communication Office to utilize the City of White Rock's publicity channels (see list below) as appropriate and to ensure the messaging is clear about who is responsible for the creation and management of the event.

Channels for publicity managed by the City include:

- City Website Event Calendar
- Social Media – Twitter, Facebook, Instagram
- Recreation & Culture E-newsletter and/or City E-newsletter
- Centennial Park & Leisure Centre Electronic Reader Board
- City Kiosks (space permitting)
- City of White Rock facility bulletin boards – White Rock Community Centre, Kent Street Activity Centre, Centennial Park Leisure Centre, Centre for Active Living

Explore White Rock is the City of White Rock’s tourism site and a great resource for visitors who are looking for information on best places to eat in White Rock, things to do, and what events are happening and when. To advertise in the Explore White Rock Event Calendar, event organizers may submit information to the Explore White Rock website directly: <http://explorewhiterock.com/events/>

MUNICIPAL, FEDERAL, PROVINCIAL, and FIRST NATION REPRESENTATIVES

INVITING GOVERNMENT OFFICIALS/DIGNITARIES TO AN EVENT

CATEGORY A EVENT – City Produced Events

Only the Office of the Mayor will prepare and send letters of invitation for these events.

City event staff will liaise with the Mayor’s Office to follow proper protocols including arranging for Mayor and Council attendance and to extend invitations to Government Officials and other Dignitaries. As soon as details are known, and preferably a minimum of six (6) weeks prior to the event date, City event staff will provide an event description/ backgrounder, itinerary, speaking agenda with timelines and VIP parking information. The Mayor’s office will follow up with the City event staff regarding RSVPs and expectations about the event, (e.g. speeches, ribbon cutting, photo opportunities, etc.).

CATEGORY B EVENT – City as a Producing Partner

The Office of the Mayor will prepare and send joint letters of invitation for these events, in partnership with the event producer or committee.

City event staff will liaise with the event partner and the Mayor’s Office to coordinate and follow the proper protocols including arranging for Mayor and Council attendance and to arrange for joint invitations to Government Officials and other Dignitaries. As soon as details are known, and preferably a minimum of six (6) weeks prior to the event date, City event staff and/or the event partner will provide an event description/ backgrounder, itinerary, speaking agenda with timelines and VIP parking information. The Mayor’s office will follow up with the City event staff regarding RSVPs and expectations about the event, (e.g. speeches, ribbon cutting, photo opportunities, etc.).

CATEGORY C EVENT – City as a Supporter

Event organizers must be clear when extending invitations on their own behalf that it is not an event created, hosted or managed by the City of White Rock.

The City's Special Event Coordinator will work with the community event organizer(s) to invite the Mayor and City Council, and to determine the Mayor and Council's role at the event (i.e. speaker or guest). The City's event staff will work directly with the Mayor's office to coordinate the attendance and participation of Mayor and Council. As soon as details from the community event organizer are known, and preferably a minimum of six (6) weeks prior to the event date, City event staff will provide the Mayor's Office with an event description/background, itinerary, speaking agenda with timelines and VIP parking information.

Typically, for most events of this category, other government officials are not invited to participate. However, if the organizers choose to invite other elected officials (such as MP's, MLA's, and First Nation Leaders etc.) they must contact their offices directly, and provide the following event information (see the template in the resource section on page sixteen (16) of this document):

- The purpose of the event
- Event name, date, time and location
- Information about your group (history, key organizers, mandate, etc.)
- Clarify that the event is not a City managed event: *The City of White Rock supports (name of event) held on (date) at (location) however, the vision, creation and management is the responsibility of (Name of the Organization).*
- Time frame they are requested at the event
- Are you inviting them to speak at your event or to attend as a guest only?
- Any special messaging they need to be aware of and make reference to in his/her speech if speaking
- Where VIP parking is located
- Draft agenda/speaking list
- Event purpose and program highlights/schedule
- Contact name and number

ADDRESSING OFFICIALS/DIGNITARIES

There are standard protocols in place when addressing, writing or introducing elected officials/dignitaries. It is important to show respect for the office of the person being addressed, no matter how personally familiar you may be with the individual. The City of White Rock adheres to these protocols and expects all Category A, B, and C event organizers to do the same.

Mayor

Address: His/Her Worship, Mayor 'First and Last Name' or Mayor 'First and Last Name'

Salutation: Dear Mayor 'Last Name'

Introduction: His/Her Worship (first name, last name)

Conversation: Your Worship (formal); Mayor 'Last Name' (less formal); Mr./Ms. Mayor

Mayor and Councillors as a group

Address: His/Her Worship, Mayor 'First and Last Name' and Councillors **or** Mayor 'First and Last Name' and Councillors

Salutation: Dear Mayor 'Last Name' and Councillors

Councillors

Address: Councillor 'First and Last Name'

Salutation: Dear Councillor 'Last Name'

Introduction: Councillor 'First and Last Name'

Conversation: Councillor 'Last Name'

Acting Mayor (when Mayor is not present)

Introduction: Representing the City of White Rock, Acting Mayor 'First and Last Name'

Conversation: Acting Mayor 'Last Name'

Prime Minister of Canada

Address: The Right Honourable 'First and Last Name', Prime Minister of Canada

Salutation: Dear Prime Minister **or** Prime Minister

Introduction: The Right Honourable 'First and Last Name'

Conversation: Mr./Ms. Prime Minister **or** Sir/Madam

Members of Parliament (MP) - With a Cabinet Post

Address: The Honourable 'First and Last Name', Minister of 'Cabinet Post'

Salutation: Dear Minister 'Last Name'

Introduction: The Honourable 'First and Last Name', MP

Conversation: Minister 'Last Name'

Members of Parliament (MP) - Without a Cabinet Post

Address: Mr./Ms. 'First and Last Name', MP

Salutation: Dear Mr./Ms. 'Last Name'

Introduction: Mr./Ms. 'First and Last Name'

Conversation: Mr./Ms. 'Last Name'

Premier of British Columbia

Address: The Honourable 'First and Last Name', Premier of British Columbia

Salutation: Dear Premier 'Last Name'

Introduction: The Honourable 'First and Last Name', Premier of British Columbia

Conversation: Premier 'Last Name'

Members of Legislative Assembly (MLA) With a Cabinet Post

Address: The Honourable 'First and Last Name', Minister of 'Cabinet Post'

Salutation: Dear Minister 'Last Name'

Introduction: The Honourable 'First and Last Name', Minister of 'Cabinet Post'

Conversation: Minister 'Last Name'

Members of Legislative Assembly (MLA) Without a Cabinet Post

Address: Mr./Ms. 'First and Last Name', MLA

Salutation: Dear Mr./Ms. 'Last Name'

Introduction: Mr./Ms. 'First and Last Name'

Conversation: Mr./Ms. 'Last Name'

First Nation Chiefs

Address: Chief 'Full Name'

Salutation: Dear Chief 'Name'

Introduction: Chief 'Full Name'

Conversation: Chief 'Last Name'

First Nation Band Councillors

Address: Councillor 'First and Last Name'

Salutation: Dear Councillor 'Last Name'

Introduction: Councillor 'First and Last Name'

Conversation: Councillor 'Last Name'

SPEAKING ORDER PRIORITY

Organizers are advised to request only one speaker per level of government and then only when it is relevant to the occasion (e.g. government funding provided, special historical or cultural significance).

Speaking order priority should be as follows (as applicable to the event):

1. Master of Ceremonies
2. Mayor or Mayor Designate
3. Chief of Local First Nation(s) or Designate
4. Most Senior Federal Government Representative
5. Most Senior Provincial Government Representative
6. Local School Trustee, if applicable to the event
7. President of Association/Society/Organization producing the event, if applicable to the event
8. Presenting Sponsor of the event, if applicable to the event

Note: Elected officials and dignitaries present are typically acknowledged by the Mayor. Please provide the City’s Special Events Coordinator, in advance of the event, a list of elected officials and dignitaries who have confirmed attendance.

COLOUR PARTY

A Colour Party is a ceremony to lead in the small group of dignitaries to the ceremonial site (e.g. cenotaph, stage, head table) often preceded by flag bearers, pipers, etc. The order of the Colour Party should be the same as the speaking order priority (see above).

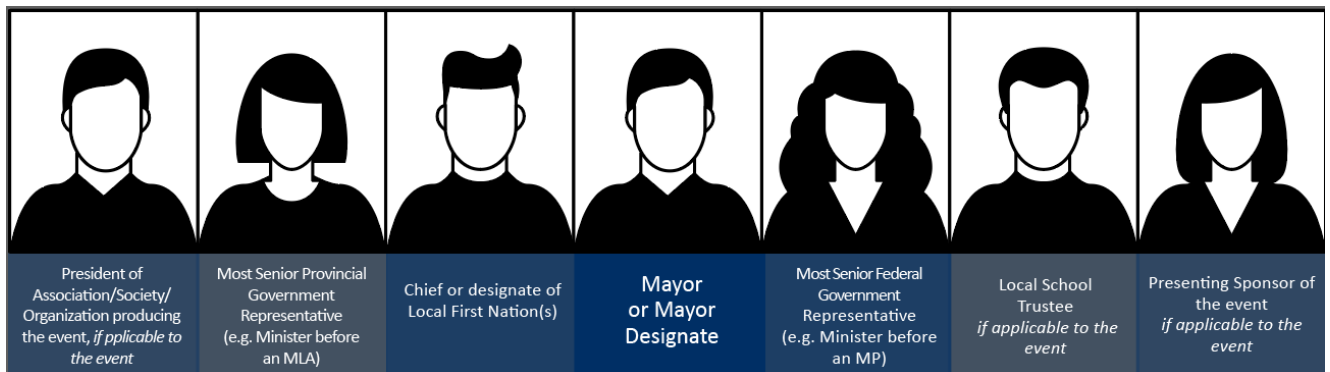
REPRESENTATIVES OF HER MAJESTY, THE QUEEN

If the event includes representatives of Her Majesty the Queen, (E.G. members of the Royal Family, the Lieutenant Governor of British Columbia, or the Governor General of Canada) organizers must refer to the specific protocol documents and consult experts to ensure the proper protocol is followed. Community event organizers are not permitted to reach out to the representatives of Her Majesty without consultation with the City of White Rock’s Manager of Government Relations.

SEATING ARRANGEMENTS

Speakers and Emcee on a Stage or at a Head Table

The order as seen from the audience perspective:



Other dignitaries, who are not speaking, to be seated in a designated VIP seating area or in the general audience area. The Master of Ceremonies (MC) should always be seated at the corner of the podium, close to the microphone. The MC should not cross in front of the guests to get to the microphone.

FORMAL REMARKS

FIRST NATION LAND ACKNOWLEDGMENT

For events that the City produces or is a producing partner (Category A and B events) it is the City’s

expectation the First Nation land be acknowledged at the beginning of the event by a City official (typically the Mayor or designate). An example of a First Nation Land Acknowledgement statement is:

I would (We would) like to recognize that we are standing (working, meeting) on the traditional unceded territory of the Semiahmoo First Nation.

For events that the City supports (Category C events), the City of White Rock encourages organizers to include the First Nation Land Acknowledgement above.

BLESSINGS AT EVENTS AND/OR GRACE AT MEALS

For events that the City produces or is a producing partner (Category A and B events), it is the City's practice to include a blessing on the occasion led by a First Nation representative and the City may consider also inviting a local religious leader to provide a blessing particularly when meals are served.

For Category C events, we encourage organizers to follow the City's practice as stated above in order to foster a relationship based on mutual respect and trust. We advise organizers if they are hoping to include participation by First Nation representatives, to reach out to the First Nation Council well in advance.

FLAGS

USE OF FLAG POLES AT CITY HALL

The City receives a number of requests annually to fly flags outside City Hall. This policy establishes the types of organizations that the City would consider having their flag flown in front of the City Hall facility. As per Council Policy 146:

- Requests must be made in writing to the Mayor and Council (whiterockcouncil@whiterockcity.ca) for Council's consideration of a flag to be flown outside City Hall on the single flag pole in front of the City Hall facility.
- The organization making the request must be not for profit with a noted affiliation with the City of White Rock.
- The request must clearly indicate the affiliation in order for Council to make a fully informed decision at a Regular Council Meeting.

FLAG PLACEMENT

The national, provincial, and local government flags are important symbols that show our pride for our country, province, and city. The manner in which flags are to be displayed is established by the Federal and Provincial Protocol Secretariats.

- Each flag must have its own pole
- Flags flown together must be the same size and dimension

There are also protocols around how flags are to be placed as they are ranked in order of the position of honour. Below is the Flag Placement Protocol as set by the Government of Canada and the Government of British Columbia.

Two Flags

When two flags are displayed, to an observer facing the flags, the position of honour is on the left. In the example below, the Canadian flag must be in the position of honour.



Position of Honour



Second-Ranking Flag

Three Flags

In Canada, when three flags are displayed, the position of honour is in the centre. To an observer facing the display, the second-ranking flag (in order of precedence) is placed to the left of center and the other to the right.

Example One:



Second-Ranking Flag

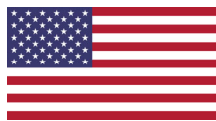


Position of Honour



Third-Ranking Flag

Example Two:



Second-Ranking Flag



Position of Honour



Third-Ranking Flag

Multiple Flags

When there are more than three flags that need to be flown, the position of honour is furthest to the left, following by other flags in order of precedence:

- 1) National Flag of Canada
- 2) Flag of other sovereign nations in alphabetical order (if applicable)
- 3) The flags of the provinces of Canada (in the order in which they joined Confederation)
- 4) The flags of the territories of Canada (in the order in which they joined Confederation)
- 5) The flags of municipalities/cities

- 6) Banners of organizations
- 7) Historical Flags



PARADES

PARADE ENTRIES

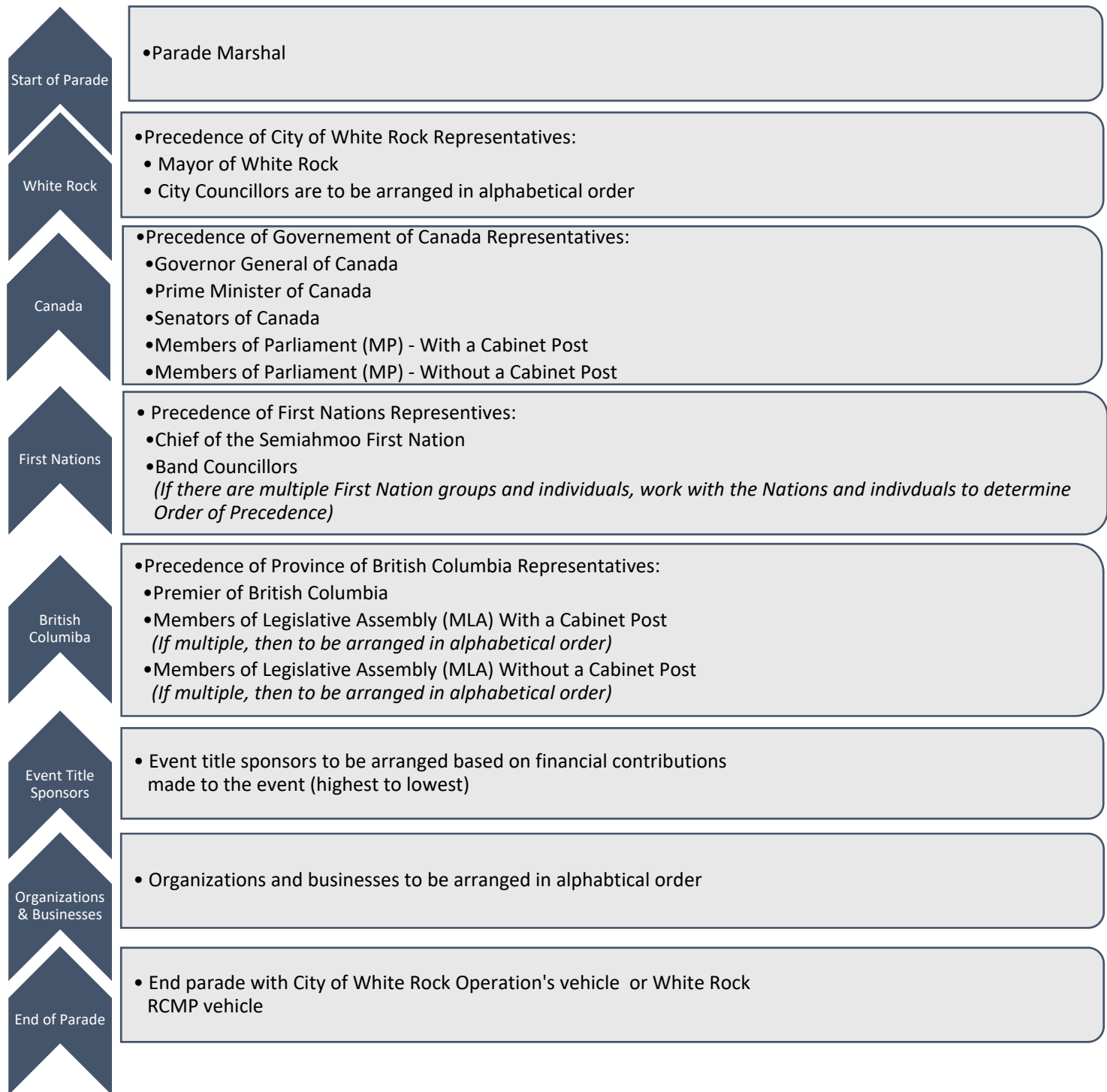
All parade entries must be arranged for the enjoyment of the spectators and to fit with the context of the event.

Category A and B events entries must be reviewed by the parade organizers and the City's Special Event Coordinator to ensure it complies with the purpose of the celebration, and the central theme of the event.

Please see Parade Line-Up diagram on next page.

PARADE LINE-UP ORDER

When planning the line up for a parade for any Civic or Civic-Related Event, please refer to the Government of Canada's [Table of Precedence](#) and the parade line up as outlined below.



POLITICAL CANDIDATE ENTRIES

Political candidates running, or in the process of running, for political office will not be permitted to participate on their own behalf in a parade held in White Rock (**City By-Law #1923**). Sponsored political signs, slogans or other promotional material during a campaign are not permitted on any entries. Sitting elected officials are to represent the level of Government they serve (for example the MP represents the Government of Canada, the MLA represents the Province of BC), not a distinct political party.

The City's Sign Bylaw refers to "Election Signs" as:

"Political Sign" means a Sign erected to support the election of a particular candidate or the support for a particular cause at a municipal, provincial or federal election. Any sign on a vehicle is prohibited under Part 4 2.10. Political Signs are regulated in Part 6 Section 10, of interest is the time during which a political sign can be displayed. Any sign not directly mentioned in the Bylaw is prohibited in Part 4.

LIVE ANIMAL ENTRIES

The use of domestic or exotic animals in parades must be approved by the City's Special Events Coordinator and comply with applicable laws or conditions imposed by the City's By-Law Department or other authorities. Animal trainers may be required. Unless otherwise permitted, live animals must be placed at the end of the parade, along with people to pick up animal droppings and dispose appropriately.

REFERENCES

[Office of Protocol of Canada – Government of Canada](#)

The Office of Protocol, within Global Affairs Canada, contributes to shaping the international agenda to Canada's benefit and advantage, in accordance with Canadian interests and values, at home and abroad through the management and oversight of:

- Official/state visits (both in Canada and abroad)
- Official events, summits management and international events
- Diplomatic corps services and outreach programs

[Office of Protocol - Province of British Columbia](#)

The Government of British Columbia's Office of Protocol, within the Intergovernmental Relations Secretariat, leads and coordinates ceremonial, protocol and diplomatic activities for the B.C. Government. These services are vital to the well-being and positive perceptions of B.C., in Canada and internationally. The Office of Protocol provides the following services:

- Advises on all matters of protocol and [precedence](#), [provincial symbols](#) and the [use of the name of the province for a company or organization](#)
- Plans and conducts official ceremonies such as the Opening of the Legislature and Cabinet swearing-in ceremonies
- Plans and conducts [official visits](#) to B.C. for members of the Royal Family, the Governor General, heads of state and government, foreign ministers, heads of diplomatic missions and other distinguished visitors
- Acts as the principal government contact for [the Consular Corps of B.C.](#)
- Coordinates [birthday and wedding anniversary congratulatory messages](#) from The Queen, the Premier and others
- Manages the [Order of British Columbia](#) and the [British Columbia Medal of Good Citizenship](#)
- Provides information and advice on [flag protocol](#) and [flying flags at half-mast \(PDF\)](#)

EXAMPLE TEMPLATE – SPEAKING INVITATION TO OTHER ELECTED OFFICIALS

Date

[Appropriate way to address the Official(s)]:

[Address]

[City, Province, Postal Code]

Dear [Appropriate way to address the Official(s)]:

Re: _____

The [Name of Organization] cordially invites you to [Event Name] taking place at [Event Location], on [Month, Day, Year].

(Name of Organization) is (describe your history and mandate).

The City of White Rock supports (name of event) held on (date) at (location) however, the vision, creation and management is the responsibility of (Name of the Organization).

Write a brief description of the event any information about the event partners, donors, or entertainers.

Make sure to also include:

- Date, time, location, and purpose of the event
- Timeline/Agenda for the ceremony
- When/If the Official is required to speak and how much time is allotted to his/her speech
- VIP Parking (with map)

We hope you can come out to enjoy this [Informal/Formal] event. Please RSVP by [Month, Day, Year] to [First & Last Name], [Title] at XXX-XXX-XXXX or [Email].

Sincerely,

[First & Last Name]

[Title]

[Organization]



POLICY TITLE: TERMS OF REFERENCE: HOUSING TASK FORCE

POLICY NUMBER: COUNCIL – 164

<i>Date of Council Adoption:</i>	<i>Date of Last Amendment: N/A</i>
<i>Council Resolution Number: 2019-xxx</i>	
<i>Originating Department: Planning and Development Services</i>	<i>Date last reviewed by the Governance and Legislation Committee:</i>

Policy:

The White Rock Housing Task Force will provide advice to Council regarding potential housing and affordable housing policies, tools, incentives and partnerships that support a range of housing options and affordability levels in the City of White Rock. The Task Force will also assist the Planning and Development Services Department in completing the Official Community Plan Review, Zoning Bylaw Update and preparing a Housing Needs Report. The work of the Task Force will include these items:

- Reviewing background research on the City’s housing needs, particularly the standardized data provided by Metro Vancouver Regional District regarding factors that impact housing affordability (current and projected population, household income, significant economic sectors and currently available and anticipated housing units);
- Conducting a SWOT analysis to determine the strengths, weaknesses, opportunities and threats that impact the affordability of housing in White Rock;
- Reviewing municipal policies, tools and incentives for creating a range of affordable and rental housing options, including density bonuses and transfers, and the use of City land and/or Community Amenity Contributions (CACs) as City contributions to partnership-based affordable housing projects;
- Providing input into the Official Community Plan affordable housing policy review;
- Reviewing existing rental housing policies related to tenant relocation and protections;
- Providing recommendations on using ‘residential rental tenure zoning’ in White Rock, permitting multiple secondary suites in a single building, and eliminating the minimum size of secondary suites as currently proposed under the BC Building Code; and
- Consulting with community stakeholders, government and non-profit agencies, potential partners and the public to develop strategic goals and actions to protect, maintain, improve existing rental housing and create new affordable housing (ownership/rental).

Committee General Terms

Term

The Task Force appointments will be made by City Council for a one (1) year term, with the initial appointments expiring September 22, 2020 or until the activities are complete, whichever is sooner.

Membership

- a) The Task Force will consist of up to seven (7) voting members appointed by Council from the community at large, two (2) non-voting members of Council, and City staff as required.

Representatives from the following groups, organizations or businesses will be invited to participate on the Task Force:

- City Council (2 members)
- Peninsula Homeless to Housing Task Force
- Semiahmoo Seniors' Planning Table
- White Rock Economic Development Advisory Committee
- The Public

Staff liaisons are:

- Director of Planning and Development Services
- Manager of Planning
- Planner (as required)
- Committee and FOI Clerk

- b) Members shall serve without remuneration or gifts.

Chairperson / Vice-Chairperson

Council will appoint the Chairperson and a Vice-Chairperson of the Task Force.

Meetings

- a) The members shall mutually agree to a meeting schedule at their inaugural meeting. The meeting schedule will then be published and updated as needed by the Committee Clerk.
- b) The Chairperson may call a meeting of the Task Force, with at a minimum of staff being able to give twenty-four (24) hours notice to the members, in addition to the scheduled meetings or may cancel a meeting.
- c) Quorum for meetings shall mean a majority of all of the Task Force voting members.

- d) If there is no quorum present within 15 minutes of the scheduled start time the Committee Clerk will:
 - i) record the names of the members present, and those absent; and
 - ii) conclude the meeting until the next scheduled meeting.
- e) All Task Force meetings are open to the public unless designated as closed to the public (in accordance with the *Community Charter*) by the Task Force. The public would attend the meeting to observe only. When deemed relevant to the discussion of a particular item of business under consideration, the Chairperson may, with majority consent of those members in attendance, give permission to a member of the public in attendance to speak to the item in question.
- f) Meetings shall last no longer than two (2) hours, except under extraordinary circumstances as agreed to by the members present.
- g) If a member:
 - i) fails to attend three (3) consecutively held meetings; or
 - ii) fails to attend a meeting in any sixty (60) day period, providing a meeting is held in that sixty (60) day period (whichever is the longer period of time) and
 - iii) unless the absence is because of illness; or
 - iv) unless the absence is with the express leave of the Chairperson, the appointment of the member shall be revoked.

The Committee Clerk will keep an attendance log and notify the Chairperson and City Clerk where there have been two consecutive absences without consent. The City Clerk will make contact with the Task Force member.

- h) Any person with particular expertise, including municipal staff may be invited by the Chairperson or staff member to attend a meeting in order to provide information or advice, but only members appointed by City Council may vote on matters coming before the Task Force.
- i) The office of the City Clerk will be responsible for preparing agendas, minutes, updating Terms of Reference policy, meeting schedule, and administrative support to the Task Force. Agendas and approved minutes will be posted on the City's website.
- j) Meeting minutes, with recommendations noted, will be forwarded to Council for information and action as required.
- k) The Task Force may hear and consider representations by any individual, group or organization on matters referred to the Task Force by Council.
- l) Where a member of the Task Force, their family, employer or business associates have any interest in any matter being considered by the Task Force, that member will absent themselves from all aspects of consideration of that matter by declaring a Conflict of Interest.

- m) The Chairperson and staff liaisons will prepare a concluding report to be submitted to the Chief Administrative Officer for review and to be forwarded to City Council.
- n) The Task Force cannot direct staff to take any action.
 - i) any such action must be referred to Council for consideration and adoption;
 - ii) the staff member assigned to the Task Force or the Chief Administrative Officer may advise the Task Force of existing policies or directives and the needs to refer the matter to Council prior to taking any action.
- o) The Task Force does not have the authority to commit funds, enter into contracts or commit the City to a particular course of action.
- p) On broader matters such as organizing or setting up major or unusual events or projects which do not have budget implications, the Task Force must receive prior approval from the Director of Planning and Development Services.
- q) The Chairperson may appoint members to a subcommittee to consider, inquire into, report and make recommendations to the Task Force for a specific purpose.
- r) Members of the Task Force are not permitted to speak directly with the media on behalf of the Task Force.

Procedures

Unless otherwise provided for in these terms of reference, the procedures of the Task Force will be governed by the City's Council and Committee Procedure Bylaw.

Code of Conduct

Appointees will be required to sign a statement agreeing that they have read, understood, and will conform to the City's code of conduct as defined in the Council policy regarding Code of Conduct for Committee Members. This will be required immediately upon appointment. The statement / agreement for signature is attached to, and forming, part of this policy.

Rationale:

The purpose of the Housing Task Force is to provide advice to Council regarding potential housing and affordable housing policies, tools, incentives and partnerships and provide assistance to Planning and Development Services in completing the Official Community Plan Review and preparing a Housing Needs Report.

**CITY OF WHITE ROCK
COMMITTEE CODE OF CONDUCT
STATEMENT / AGREEMENT**

This will confirm that as of _____, I have read Council
(DATE)
Policy 120, “Code of Conduct for Committee Members” and Council Policy _____,
Committee Terms of Reference and I understood and will conform to the City’s Code of
Conduct as outlined in these policies.

(PRINT NAME)

(SIGNATURE)

THE CORPORATION OF THE
CITY OF WHITE ROCK
 15322 BUENA VISTA AVENUE, WHITE ROCK, B.C. V4B 1Y6



**POLICY TITLE: TERMS OF REFERENCE:
HISTORY AND HERITAGE ADVISORY COMMITTEE**
POLICY NUMBER: COUNCIL-159

<i>Date of Council Adoption: February 25, 2019</i>	<i>Date of Last Amendment: July 8April 29, 2019</i>
<i>Council Resolution Number: 2019-091, 2019-158</i>	<i>Historical Changes (Amends, Repeals or Replaces):</i>
<i>Originating Department: Recreation and Culture</i>	<i>Date last reviewed by the Governance and Legislation Committee: April 8, 2019</i>

Policy:

The History and Heritage Advisory Committee shall act as an advisory body to Council on matters relating to White Rock's built, natural, and cultural heritage resources.

The History and Heritage Advisory Committee:

- a) advises Council on heritage conservation programs and policies, including:
 - i. identify sites of historical significance relating to White Rock's built, natural, and cultural heritage; and
 - ii. inspect and make maintenance recommendations of existing heritage markers such as heritage stones, storyboards, and memorial plaques.
- b) recommends opportunities to support the preservation and sharing of the Semiahmoo First Nations language, culture, and history;
- b)c) _____ reviews and submits recommendations to Council on land use and planning matters which have heritage implications and may impact culturally sensitive and archaeological areas;
- e)d) _____ supports activities and programs undertaken by the City or community organizations in the areas of built, environmental and cultural heritage that seek to benefit and advance awareness, preservation, and interpretation of heritage in the City;
- d)e) _____ supports heritage education, tourism, and public awareness through programs such as Heritage Week displays, newsletters, etc.;
- e)f) promotes and enhances the City's owned heritage resources;
- f)g) requests expenditures for heritage purposes; and,
- g)h) _____ The Committee will endeavor to engage with the Semiahmoo First Nation and other indigenous groups in order to celebrate White Rock and the history of the Semiahmoo First Nation/ other indigenous groups.

The Committee will endeavor to engage with the Semiahmoo First Nation and other indigenous groups on matters regarding the natural and cultural heritage of this region.

Committee General Terms

Term

The committee appointments will be made by City Council for a two (2) year term, with the initial appointments expiring December 31, 2020 or until the activities are complete, whichever is sooner.

Membership

- a) The History and Heritage Advisory Committee will consist of up to five (5) voting members appointed by City Council from the community at large, with an interest and knowledge in local heritage conservation and history, architecture, planning and design, and environmental and cultural preservation and interpretation;
- b) One (1) voting member from the White Rock Museum and Archives Board of Directors;
- c) One (1) voting representative from the Semiahmoo First Nations;
- d) One (1) non-voting staff member from the White Rock Museum and Archives;
- e) In addition, one (1) member of Council, the Director of Recreation and Culture and city staff as required will serve as non-voting members;
- f) The majority of members will be White Rock Residents or representatives of local organizations; and,
- g) Committee members shall serve without remuneration or gifts.

Chairperson / Vice-Chairperson

The committee will appoint a Chairperson and a Vice-Chairperson from among its voting members at the committee's inaugural meeting.

Meetings

- a) The committee shall mutually agree to a meeting schedule at their inaugural meeting. The meeting schedule will then be published and updated as needed by the Committee Clerk.
- b) The Chairperson of the committee may call a meeting of the committee, with at a minimum of staff being able to give twenty-four (24) hours' notice to the committee members, in addition to the scheduled meetings or may cancel a meeting.
- c) Quorum for meetings shall be one half of the voting membership plus one (1) or a member majority if the membership is of an even number (if the membership is ten members, quorum = six members).

- d) If there is no quorum of the committee present within 15 minutes of the scheduled start time the Committee Clerk will:
 - i) record the names of the members present, and those absent; and
 - ii) conclude the meeting until the next scheduled meeting.
- e) All committee meetings are open to the public unless designated as closed to the public (in accordance with the *Community Charter*) by the Committee. The public would attend the meeting to observe only. When deemed relevant to the discussion of a particular item of business under consideration by the Committee, the Chairperson may, with majority consent of those Committee members in attendance, give permission to a member of the public in attendance to speak to the item in question.
- f) Meetings shall last no longer than two (2) hours, except under extraordinary circumstances as agreed to by the committee members present.
- g) If a member:
 - i fails to attend three (3) consecutively held meetings of the committee, or
 - ii fails to attend a committee meeting in any sixty (60) day period, providing a meeting of the committee is held in that sixty (60) day period (whichever is the longer period of time) and
 - iii unless the absence is because of illness; or
 - iv unless the absence is with the express leave of the Chairperson, the appointment of the member shall be revoked.

The Committee Clerk will keep an attendance log and notify the Chairperson and Corporate Officer where there have been two consecutive absences without consent. The Corporate Officer will make contact with the Committee member.
- h) Any person with particular expertise, including municipal staff may be invited by the Chairperson or staff member of the committee to attend a committee meeting in order to provide information or advice, but only members appointed by City Council may vote on matters coming before the committee.
- i) The Corporate Administration Department will be responsible for preparing committee agendas, minutes, updating Terms of Reference policy, meeting schedule, and administrative support to committees. Agendas and approved minutes will be posted on the City's website.
- j) Committee minutes, with recommendations noted, will be forwarded to Council for information and action as required.
- k) A committee meeting or a portion thereof may be closed to the public pursuant to Sections 90 and 93 of the *Community Charter*.
- l) Committees may hear and consider representations by any individual, group or organization on matters referred to the Committee by Council.

- m) Where a member of a committee, their family, employer or business associates have any interest in any matter being considered by the committee, that member will absent themselves from all aspects of consideration of that matter by declaring a Conflict of Interest.
- n) Committee chairpersons and staff liaisons will prepare an annual report to be submitted to the Chief Administrative Officer for review and to be forwarded to City Council.
- o) A committee cannot direct staff to take action without endorsement of City Council.
- p) A committee cannot direct staff to take any action which is contrary to existing policies or directives or establish policies for the City.
 - i. any such action must be referred to Council for consideration and adoption;
 - ii. the staff member assigned to the committee or the Chief Administrative Officer may advise the committee of existing policies or directives and the needs to refer the matter to Council prior to taking any action.
- q) Committees do not have the authority to commit funds, enter into contracts or commit the City to a particular course of action.
- r) On routine matters such as organizing or setting up yearly or ongoing events or projects which do not have budget implications or have received prior budget approval, the committee may make decisions without the approval of Council, provided that the committee works with the staff member assigned to that committee on those matters.
- s) On broader matters such as organizing or setting up major or unusual events or projects which do not have budget implications, the committee must receive prior approval from Council.
- t) The committee Chairperson may appoint members to a subcommittee to consider, inquire into, report and make recommendations to the committee for a specific purpose.
- u) Members of the committee are not permitted to speak directly with the media on behalf of the committee.

Procedures

Unless otherwise provided for in these terms of reference, the procedures of the Committee will be governed by the City's Council and Committee Procedure Bylaw.

Code of Conduct

Appointees will be required to sign a statement agreeing that they have read, understood, and will conform to the City's code of conduct as defined in the Council policy regarding Code of Conduct for Committee Members. This will be required immediately upon appointment. The statement / agreement for signature is attached to, and forming, part of this policy.

Rationale:

The purpose of the History and Heritage Advisory Committee is to act as an advisory body to Council on matters relating to White Rock's built, natural and cultural heritage resources.

**CITY OF WHITE ROCK
COMMITTEE CODE OF CONDUCT
STATEMENT / AGREEMENT**

This will confirm that as of _____, I have read Council
(DATE)
Policy 120, “Code of Conduct for Committee Members” and Council Policy _____,
Committee Terms of Reference, and I understood and will conform to the City’s Code of
Conduct as outlined in these policies.

(PRINT NAME)

(SIGNATURE)

THE CORPORATION OF THE
CITY OF WHITE ROCK
 15322 BUENA VISTA AVENUE, WHITE ROCK, B.C. V4B 1Y6



POLICY TITLE: PROCUREMENT POLICY

POLICY NUMBER: FINANCE - 301

<i>Date of Council Adoption: September 28, 2015</i>	<i>Date of Last Amendment: November 4, 2013</i>
<i>Council Resolution Number: 2015-336; 2013-346</i>	<i>Historical Changes (Amends, Repeals or Replaces): amends contract award and contract changes section</i>
<i>Originating Department: Finance</i>	<i>Date last reviewed by Finance and Audit Committee: September 14, 2015</i>

Policy:

It is Council’s expectation that the City obtain the best value for its expenditures while ensuring that all acquisition and procurement processes are compliant with legislation and legal requirements, as required, and are characterized by the highest level of corporate and personal integrity.

Council expects the procurement process to be open, transparent and fair, and that all qualified vendors be given an opportunity to compete for the City’s business.

Guiding Principles:

1. The purchasing function is decentralized and administered by individual departments.
2. It is the responsibility of Department Directors to ensure their department’s purchasing practices serve the best interests of the City and are in compliance with City policy and related provincial/federal legislation, eg. TILMA.
3. An approved source of funding (i.e. budget) must be available prior to any procurement activity for goods and services, including construction.
4. In determining a successful bidder, the City will consider factors such as: cost, experience of bidder, references, capacity and any other valuation criteria stated in the contract or otherwise determined necessary.

5. The award of a contract resulting from a Request for Proposals will be made to the bidder whose proposal is found to be the most advantageous to the City based upon the evaluation criteria in the Request for Proposal.
6. The City of White Rock may enter into cooperative procurement agreements with other public sector entities for the purpose of combining requirements to increase efficiency or reduce administrative expenses in the procurement process.

Responsibilities

1. The Chief Administrative Officer (CAO) is responsible to prepare and distribute procedures providing clear instruction to staff for implementation of this policy.
2. Department Directors are responsible for ensuring budget funds are available in duly authorized accounts before making commitments for goods and services, including construction.
3. Department Directors are responsible for delegating acquisition authority to the appropriate levels.
4. Department Directors and managers are responsible to ensure they and their staff understand and comply with the Procurement Policy and associated procedures.

Contract Award

Provided funds exist in the appropriate accounts within Council's approved budget, the authority to award quotations, tenders, proposals and contracts for the provision of goods and services, including construction, is as follows:

1. For contracts up to \$30,000 – Department Director, or designate
2. For contracts up to \$100,000 – Director, Engineering & Municipal Operations, and the Director, Financial Services, or designate for either position
3. For contracts up to \$250,000 – the Chief Administrative Officer, or designate
4. For contracts over \$250,000 – Council, unless prior authorization to do otherwise has been granted by Council
5. Notwithstanding (4) above, annually during the month of August when Council is in recess, contracts greater than \$250,000 may be awarded by a committee of Council.

The amounts noted above are contract values exclusive of GST.

Sole/Single Source Procurement

1. **Sole Source** – refers to a procurement of goods and services, including construction from one supplier due to the lack of competitors in the market, or where only one supplier can provide that particular good or service. It is important to remember that a sole source can only be supported where alternatives cannot be considered, or where alternatives could present higher total costs to the City. Sole source purchases must be approved in writing by the CAO.
2. **Single Source** – refers to a procurement of goods and services, including construction, from one supplier despite there being competitors in the market. Single source procurement is discouraged unless a valid business case can be made, such that entering into a competitive bid process would be detrimental to City operations or where the value of the goods is low and the administrative costs would exceed any benefit derived from competitive bids. Single source purchases must be based on a written business case and approved in writing by the CAO. Council must be advised of single source purchases over \$30,000 (excluding GST) for information.

Contract Changes

A purchasing contract may include provisions for modification of the contract during performance, but no contract may be increased more than 15% of the original contract value without advance approval from the appropriate level of approval authority. (subject to the note below regarding construction contracts). Further, an approved funding source is required for all contract changes. The total cost of the contract, including contract changes, and excluding GST, is used in determining the approval level required.

For construction projects, the appropriate level of approval authority may authorize changes, including changes to the scope of the project, to a contract up to a 15% cumulative amount over the original contract value if budget funds are available for the project.

Ethical Practice

Employees will familiarize themselves, and comply with the City Council Policy (Human Resources) No. 404, “Employee Code of Conduct”. This policy covers appropriate employee conduct including, but not limited to, conflict of interest and acceptance of gifts.

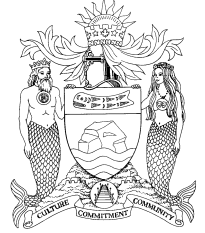
Division of one contract into two or more contracts to avoid the requirements of this policy is strictly prohibited.

Rationale:

Acquisition of a variety of goods and services, including construction, is an important part of the work carried out by the City. Written standards, authorizations and dollar value limits must be in place to ensure consistency in administering the procurement processes.

Council requires that the procurement processes be legal, transparent and undertaken with the highest level of personal and corporate integrity.

**THE CORPORATION OF THE
CITY OF WHITE ROCK
BYLAW NO. 2302**



A Bylaw to amend the Water Services Bylaw, 2015, No. 2117

The CITY COUNCIL of the Corporation of the City of White Rock, in an open meeting assembled, ENACTS as follows:

1. Replace SCHEDULE A, Section 1 titled “Water Service User Fees” of Water Services Bylaw, 2015, No. 2117 with a new SCHEDULE A, Section 1.
2. This Bylaw may be cited for all purposes as the “*Water Services Bylaw, 2015, No. 2117, Amendment No.6, Bylaw, 2019, No. 2302*”.

RECEIVED FIRST READING on the	8 th day of	July, 2019
RECEIVED SECOND READING on the	8 th day of	July, 2019
RECEIVED THIRD READING on the	8 th day of	July, 2019
ADOPTED on the	day of	

MAYOR

DIRECTOR, CORPORATE ADMINISTRATION

**SCHEDULE A
WATER SERVICE FEES**

1. Water Service User Fees

Residential Fees

Single Family (including duplex, triplex or fourplex dwellings, and bulk water supply)

Single Family Minimum by meter size	Includes consumption up to	Effective Jan 1, 2018 Per Quarter	Effective Jan 1, 2019 Per Quarter
Single Family Minimum (5/8" meter)	1,500 cubic feet	\$ 124.20	\$ 127.90
Single Family Minimum (1" meter)	3,900 cubic feet	249.60	257.10
Single Family Minimum (1 1/2" meter)	7,500 cubic feet	499.20	514.20
Single Family Minimum (2" meter) *	12,000 cubic feet	798.80	822.80
Single Family Minimum (3" meter)	22,500 cubic feet	1,497.90	1,542.80
Single Family Minimum (4" meter)	37,500 cubic feet	2,496.50	2,571.40
Single Family Minimum (6" meter)	75,000 cubic feet	4,933.20	5,081.20
Excess consumption above consumption included in minimum, per 100 cubic feet:		3.77	3.88

* Except for the triplex located at 14968, 14972 & 14976 Beachview Ave. This water service account will be charged the equivalent of three (3) Single Family 5/8" meter rates.

Multi Family

Multi Family Minimum	Includes consumption up to	Effective Jan 1, 2018 Per Quarter	Effective Jan 1, 2019 Per Quarter
Multi Family Minimum per unit	750 cubic feet per unit	\$ 44.30	\$ 45.60
Excess consumption above consumption included in minimum, per 100 cubic feet:		3.77	3.88

Non Residential Fees

All other account types

Non Residential Minimum by meter size	Includes consumption up to	Effective Jan 1, 2018 Per Quarter	Effective Jan 1, 2019 Per Quarter
Non Residential Minimum (5/8" meter)	1,500 cubic feet	\$ 99.80	\$ 102.80
Non Residential Minimum (1" meter)	3,900 cubic feet	249.60	257.10
Non Residential Minimum (1 1/2" meter)	7,500 cubic feet	499.20	514.20
Non Residential Minimum (2" meter)	12,000 cubic feet	798.80	822.80
Non Residential Minimum (3" meter)	22,500 cubic feet	1,497.90	1,542.80
Non Residential Minimum (4" meter)	37,500 cubic feet	2,496.50	2,571.40
Non Residential Minimum (6" meter)	75,000 cubic feet	4,933.20	5,081.20
Excess consumption above consumption included in minimum, per 100 cubic feet:		3.77	3.88

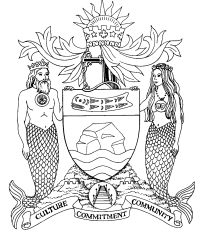
Pro-rating of Fees

The City reads meters and bills on a quarterly basis. The minimum charges and reading consumption charges will be pro-rated based on the number of days the water service is connected during the billing cycle.

Multi Family consumption per unit

Per unit consumption is calculated by taking the total consumption divided by the number of units.

**THE CORPORATION OF THE
CITY OF WHITE ROCK
BYLAW 2303**



A Bylaw to repeal the White Rock Repealing Bylaw for Waterfront
Parking Facility Design and Construction Loan Authorization
Bylaw, 2017, No. 2206, No. 2275

The CITY COUNCIL of the Corporation of the City of White Rock, in open meeting assembled,
ENACTS as follows:

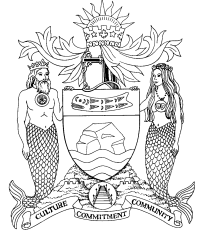
1. The “White Rock Repealing Bylaw for Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206, No. 2275” is hereby repealed in its entirety, including all amendments, effective the date of adoption of this bylaw.
2. This bylaw may be cited for all purposes as the “*White Rock Repealing Bylaw for Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206, No. 2303*”.

RECEIVED FIRST READING on the	day of
RECEIVED SECOND READING on the	day of
RECEIVED THIRD READING on the	day of
ADOPTED on the	day of

MAYOR

DIRECTOR OF CORPORATE ADMINISTRATION

**THE CORPORATION OF THE
CITY OF WHITE ROCK
BYLAW 2304**



A Bylaw to repeal the Waterfront Parking Facility Design and
Construction Loan Authorization Bylaw, 2017, No. 2206

The CITY COUNCIL of the Corporation of the City of White Rock, in open meeting assembled, ENACTS as follows:

1. The “Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206” is hereby repealed in its entirety, including all amendments, effective the date of adoption of this bylaw.
2. This bylaw may be cited for all purposes as the “*White Rock Repealing Bylaw for Waterfront Parking Facility Design and Construction Loan Authorization Bylaw, 2017, No. 2206, No. 2304*”.

RECEIVED FIRST READING on the _____ day of

RECEIVED SECOND READING on the _____ day of

RECEIVED THIRD READING on the _____ day of

RECEIVED the approval of the Inspector of
Municipalities _____ day of

ADOPTED on the _____ day of

MAYOR

DIRECTOR OF CORPORATE ADMINISTRATION



July 11, 2019

383353

Darryl Walker, Mayor
City of White Rock
15322 Buena Vista Ave
White Rock BC V4B 1Y6
dwalker@whiterockcity.ca

Dear Mayor Walker:

When our government took office, we inherited a housing crisis that affected all British Columbians.

We implemented the speculation and vacancy tax (SVT) last year to turn empty homes into housing for people, and to target foreign owners and satellite families who live in our province but don't pay tax here. Ministry of Finance data confirms that over 99% of British Columbians are not paying the SVT.

Last fall I committed to meeting annually with mayors in the areas where the speculation tax applies to discuss its impact on your communities.

Today, I write to invite you to participate in the first annual consultation on September 12, 2019. There, I will share the early initial data and insights collected from the speculation and vacancy tax, and how your community may benefit from affordable housing investments from this initiative. In addition, this consultation will be an opportunity to hear directly from you on how the SVT has impacted your community.

Further details regarding the plenary meeting will follow in the coming weeks.

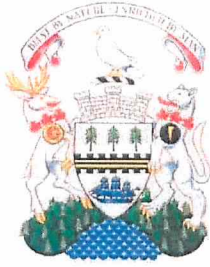
.../2

I look forward to meeting with you in September.

Sincerely,

A handwritten signature in blue ink that reads "Carole James". The signature is written in a cursive, flowing style.

Carole James
Minister and Deputy Premier



CITY OF PORT MOODY

OFFICE OF THE MAYOR

June 27, 2019

Selina Robinson, Minister of Municipal Affairs and Housing
PO Box 9056 Stn Prov Govt
Victoria, BC V8W 9E2

Dear Honourable Selina Robinson,

At the Regular Council Meeting of June 25, 2019, the City of Port Moody passed the following resolution:

THAT a letter to the Ministry of Municipal Affairs and Housing be sent by the Office of the Mayor expressing Support for Property Assessed Clean Energy Enabling Legislation for BC indicating our concerns and requesting that a study of PACE best practices be undertaken with expert stakeholders, including UBCM and FCM staff, in order to guide changes to legislation to allow for PACE programs in BC as recommended in the report dated June 4, 2019 from Councillor Amy Lubik regarding Support for Property Assessed Clean Energy Enabling Legislation for BC;

AND THAT the following resolution regarding Support for Property Assessed Clean Energy Enabling Legislation for BC be endorsed by the City of Port Moody and forwarded for consideration at the 2019 UBCM convention and forwarded to other UBCM members for support:

*WHEREAS climate change is the greatest threat to our municipalities;
AND WHEREAS the pillars of the Clean BC program include better buildings, incentivizing retrofits and upgrading BC's stock of public housing so residents, many of whom are low-income families or seniors, can live in a more energy-efficient, healthier, and comfortable home;*

AND WHEREAS the cost of clean energy infrastructure is a major barrier for low and middle income earners, as well as small businesses and municipalities;

AND WHEREAS Property Assessed Clean Energy (PACE) legislation has proven to be effective in financing retrofits in other jurisdictions;

THEREFORE BE IT RESOLVED THAT the Province of British Columbia work with expert stakeholders with knowledge of Property Assessed Clean Energy (PACE) best practices, including UBCM and FCM, to study the application of PACE in BC and develop PACE enabling legislation for BC Municipalities.

Property Assessed Clean Energy (PACE) is a proven, common-sense financing tool that will allow the British Columbia Government to address the need to create transition jobs and address climate change, all without adding to the provincial debt. PACE is a powerful tool which, with the right legislative framework, could create a new clean energy ecosystem, bring new capital into the province, and significantly bolster the existing sustainability marketplace. The world is grappling with the tension between the carbon-based energy industry and a consensus that emissions are directly contributing to climate change. Currently, buildings account for 40% of GHG's. Through the development of a robust and thriving PACE ecosystem, BC can dramatically reduce its emissions by radically improving the energy efficiency of both its existing building stock and new builds.

The Federation of Canadian Municipalities is currently developing programs/grants for PACE; however these are not available in BC. It has been suggested that using limited municipal or foundation type funding instead of accessing private capital limits resources available for Property Assessed Clean Energy (PACE) projects. PACE delivers market certainty and turns sustainability measures into solid business case initiatives.

The City of Port Moody is asking that British Columbia develop enabling legislation for a strong and vibrant PACE program. An optimum solution could involve maximizing both government and private investments. A strong PACE program will deliver reductions in BC's municipal and provincial GHG emissions and make a significant contribution towards governments' ability to deliver on its GHG reduction commitments, to support reducing energy poverty, and to create Green Jobs. Such an initiative, if ultimately implemented in BC, would become one of the most significant steps municipalities could take to tackle climate change.

Sincerely

A handwritten signature in black ink that reads "Meghan Lahti". The signature is written in a cursive, flowing style.

Meghan Lahti
Acting Mayor, City of Port Moody

CC: All UBCM Members

July 04, 2019

Ministry of Municipal Affairs and Housing
Po Box 9056 Stn Prov Govt.
Victoria, BC
V8W 9E2



KITIMAT

District of Kitimat
270 City Centre
Kitimat, British Columbia
Canada V8C 2H7

Phone 250.632.8900
Fax 250.632.4995

Via email: MAH.minister@gov.bc.ca

Re: Letter of Support for Proposed Vacancy Tax

At the District of Kitimat's Regular Council meeting held July 02, 2019, a motion was passed to provide a letter of support to the City of White Rocks requesting that UBCM work with the Province of BC to amend the authority given to Local Governments through the Community Charter permitting municipalities the authority to impose, by bylaw, an annual vacancy tax on taxable residential and commercial properties.

We believe that providing local government the authority to implement the vacancy tax is one step closer towards addressing BC's affordable housing crisis.

Sincerely,

Phil Germuth,
Mayor

Cc: City of White Rock

JUL 03 2019

Tracey Arthur, City Clerk
City of White Rock
15322 Buena Vista Avenue
White Rock, BC V4B 1Y6
VIA EMAIL: tarthur@whiterockcity.ca

Dear Ms. Tracey Arthur:

Re: Best Management Practices for Invasive Species: English Holly, English and Irish Ivies, Yellow Archangel, Himalayan Balsam, and Parrot's Feather

At its June 28, 2019 regular meeting, the Board of Directors of the Metro Vancouver Regional District (Metro Vancouver) adopted the following resolution:

That the MVRD Board:

- a) receive for information the report dated May 21, 2019, titled "Best Management Practices for Invasive Species: English Holly, English and Irish Ivies, Yellow Archangel, Himalayan Balsam, and Parrot's Feather"; and*
- b) direct staff to forward the report to member jurisdictions for information.*

Enclosed is a copy of the staff report for your information.

If you have any questions, please contact Laurie Bates-Frymel, Regional Planner II, Planning and Environment, by phone at 604-4536-6787 or by email at Laurie.Bates-Frymel@metrovancover.org.

Sincerely,



Chris Plagnol
Corporate Officer

CP/mp

30188625

- cc: Neal Carley, General Manager, Planning and Environment
Marcin Pachcinski, Division Manager, Electoral Area and Environment, Regional Planning and Electoral Area Services, Planning and Environment
Laurie Bates-Frymel, Regional Planner II, Regional Planning and Electoral Area Services, Planning and Environment
- Encl: Report dated May 21, 2019, titled "Best Management Practices for Invasive Species: English Holly, English and Irish Ivies, Yellow Archangel, Himalayan Balsam, and Parrot's Feather" (Doc# 29778726)

30188625

To: Climate Action Committee

From: Laurie Bates-Frymel, Senior Regional Planner
Planning and Environment Department

Date: May 21, 2019 Meeting Date: June 14, 2019

Subject: **Best Management Practices for Invasive Species: English Holly, English and Irish Ivies, Yellow Archangel, Himalayan Balsam, and Parrot’s Feather**

RECOMMENDATION

That the MVRD Board:

- a) receive for information the report dated May 21, 2019, titled “Best Management Practices for Invasive Species: English Holly, English and Irish Ivies, Yellow Archangel, Himalayan Balsam, and Parrot’s Feather”; and
 - b) direct staff to forward the report to member jurisdictions for information.
-

PURPOSE

To provide the Climate Action Committee and MVRD Board with five new invasive species best management practices documents for information and with an update on promotion efforts.

BACKGROUND

In 2018, the Climate Action Committee received reports regarding best management practices for knotweed species, giant hogweed, European fire ant, European chafer beetle, Himalayan blackberry, and Scotch broom. Those reports also identified the next set of species for which locally-tested best management practices would be most valuable, based on input from member jurisdictions on the Regional Planning Advisory Committee – Invasive Species Subcommittee: English holly, English and Irish ivies, yellow archangel, Himalayan balsam, and parrot’s feather. This report presents the best management practices for those five species and provides information about the process to develop additional best management practices.

These invasive species best management practices are a Climate Action Committee Work Plan item for the second quarter of 2019.

NEED FOR AND DEVELOPMENT OF REGIONAL BEST MANAGEMENT PRACTICES

Invasive species are non-native flora or fauna that out-compete native species and can be highly destructive and difficult to control. They can threaten property and recreational values, infrastructure, agriculture, public health and safety, as well as ecological health. Conservation biologists globally have ranked invasive species as the second most serious threat to biodiversity, after habitat loss.

At the request of member jurisdictions and other partners, the Regional Planning Advisory Committee created an Invasive Species Subcommittee in 2016 to assist with collaboration and coordination of invasive species management efforts within the region. This Subcommittee is

composed of environment and parks staff from member jurisdictions, as well as non-voting associates from the provincial and federal government, non-profit and stewardship groups, right-of-way land managers, businesses, and staff from Metro Vancouver Regional Planning, Regional Parks and Water Services.

The Invasive Species Subcommittee members raised concern about inconsistent invasive species management practices across the region and a long-standing need for locally-tested, practitioner-focussed guidance. They requested that Metro Vancouver develop regionally-appropriate best management practices for priority invasive species.

In October 2018, the MVRD Board adopted the *Ecological Health Framework*, which illustrates Metro Vancouver's role in protecting and enhancing ecological health as it relates to its services and functions, and supporting regional efforts. The *Framework* commits Metro Vancouver to “develop and employ best practices in the management of invasive species on Metro Vancouver lands and promote their use region-wide”.

Metro Vancouver retained the Invasive Species Council of Metro Vancouver (ISCMV), and sub-consultants Diamond Head Consulting, and the Invasive Species Council of British Columbia to create the best management practices documents. The target audiences are local government staff, crews, project managers, contractors, consultants, developers, stewardship groups, and others who have a role in invasive species management. The best management practices include guidance about identification, tracking, reporting, effective prevention and control strategies, disposal, monitoring and restoration, as well as references and additional resources. This guidance is based on the best available scientific expertise and local experience.

OVERVIEW OF LATEST FIVE BEST MANAGEMENT PRACTICES (ATTACHMENTS 1-5)

The best management practices for English holly (Attachment 1), English and Irish ivies (Attachment 2), yellow archangel (Attachment 3), Himalayan balsam (Attachment 4), and parrot's feather (Attachment 5) have been reviewed by members of the RPAC-Invasive Species Subcommittee and additional local experts. Collectively, member jurisdictions on the RPAC-Invasive Species Subcommittee have spent over \$660,000 annually on control and volunteer engagement related to these five invasive plants.

An overview of each best management practices document is provided below.

English Holly

Native to Europe, northern Africa and Asia, English holly spreads both by seed and roots. It creates deep shade, modifies soil conditions, and diverts water and nutrients from other vegetation, suppressing germination of native trees and shrubs. Experts suggest that these traits make English ivy a serious threat to forest health in the Pacific Northwest. English holly infestations are also a fire hazard as the leaves can easily ignite when heated. The berries are toxic to humans, causing nausea, vomiting, abdominal pain, and diarrhea if ingested.

As stated in the best management practices, manual removal by pulling or digging is recommended, while girdling, cutting, or herbicide should be used with caution, and done by professionals who are aware of all relevant laws, including municipal pesticide bylaws. Brush cutting/mowing and prescribed burning are not generally effective, and livestock grazing is not recommended since the berries are poisonous.

English and Irish Ivies

English ivy and Irish ivy are native to Europe and western Asia. These ivies form dense monocultures that grow along the ground, climbing trees and structures, smothering native vegetation, and reducing biodiversity. Especially detrimental to trees, the ivy can weigh down, break branches, and cause tree failure. It also can reduce a tree's ability to photosynthesize and spread harmful tree pathogens. The berries are toxic to humans and livestock. Ivy benefits from high carbon dioxide concentrations under warm conditions, suggesting that it will become more resilient as our climate changes.

Cutting or pulling are generally the most effective control methods for ivy. This manual control is often labour intensive and, hence, ivy 'pulls' are often a community stewardship opportunity. Ivy on trees should be cut at chest height around the entire trunk of the tree using pruners or a saw, being careful not to cut or damage the tree bark or surface. It can then be removed from the tree and the surrounding ground. Care should be taken to reduce disturbance in sensitive ecosystems, particularly in riparian areas. Ivy can also be repurposed by artists and collectives as a crafting fiber to make structural art, ropes, baskets, jewelry, ornaments, and clothing.

Yellow Archangel

Yellow archangel (also known as lamium or lamiastrum) originates in the temperate regions of Eurasia. A favourite garden ground cover plant, it quickly out-competes native vegetation, forming contiguous cover across the forest understory, preventing tree sapling germination, reducing food availability for local fauna, and impacting local pollinator communities.

Removal of yellow archangel plants by hand can be effective for small patches, but it is highly time consuming since the stems and entire root system must be completely removed to prevent any plant parts from being left behind. Soil grubbing (large scale mechanical removal of the forest organic layer and topsoil) is likely to effectively control yellow archangel, and plants can also be smothered using cover treatment or mulch. Foliar herbicide application can be effective, but all relevant laws must be followed, including municipal pesticide bylaws that may prohibit the use of certain herbicides. Biological control options are not available in British Columbia for yellow archangel.

Himalayan Balsam

Native to the western Himalayas, Himalayan balsam (also known as Policeman's helmet) can spread up to 32,000 seeds per square metre, catapulting them up to 7 metres. It quickly dominates a variety of areas, outcompeting native vegetation and forming homogeneous stands along creeks, riverbanks, sloughs and open ditches, grassy clearings and trail edges, and increasing soil erosion in these areas.

Pulling or cutting are generally the most effective methods for Himalayan balsam control, while mowing and brush cutting are best suited for large non-riparian infestations. Manual control should take place before ripened seeds are present (usually late May to early June) to avoid their spread. Complete site eradication should be the goal since missing even one flowering plant can lead to re-infestation. Controlling Himalayan balsam by livestock grazing is not recommended in urban settings, and biological control options are not yet available in British Columbia.

Parrot's Feather

Parrot's feather is a perennial aquatic plant native to South America. Most parrot's feather infestations in Metro Vancouver appear to be caused by the accidental or purposeful introduction by homeowners from garden ponds or aquariums. This plant rapidly reproduces by plant fragments and pieces as small as 4 millimetres are capable of establishing a new population. Parrot's feather can contribute to a loss of plant and aquatic species diversity by out-competing and replacing native plant communities. Infestations dramatically reduce the levels of dissolved oxygen in the water column, change invertebrate communities, trap sediment, and clog drainage ditches, causing water levels to rise and slowing water flow.

Mechanical control using an excavator can be effective for large infestations, but it is an expensive and time-consuming treatment option that will require dedication to frequent removals over numerous years. Manual control by hand pulling is labour intensive and should be carried out with extreme caution due to the likelihood of spread through root and stem fragments. Chemical control is not recommended, and biological control options for parrot's feather are not yet available in BC.

Prevention and Disposal

As with all invasive species, prevention (e.g., planting non-invasive plants, using invasive species-free soil, cleaning vehicles and equipment) is the most economical and effective way to reduce the risk of spread over the long term.

Each of these best management practices provides a link to a list of possible disposal facilities, but practitioners should always contact the disposal facilities beforehand to confirm the facility can properly handle the material. Invasive plants should not be placed in backyard composters as the temperature may not become hot enough to destroy the seeds and roots.

PROMOTION AND CURRENT UPTAKE

The previous set of best management practices have been posted on the Metro Vancouver website and staff have been promoting their use during various events throughout the region, including:

- Invasive Species Council of British Columbia's Annual Forum February 5-7, 2019 in Richmond;
- BC Recreation and Parks Association's Parks and Grounds Spring Training February 27-28, 2019 in Langley;
- ISCMV's Information Session for Contractors and Contract Managers March 6, 2019 in Vancouver;
- Metro Vancouver Sustainability Breakfast "Managing Invasive Species in the Region" April 17, 2019 at BCIT Vancouver; and
- ISCMV's Spring Forum May 1, 2018 in Langley.

Metro Vancouver has also developed postcards to distribute during events that direct practitioners to search metrovancover.org for “invasive species” to obtain the most recent guidance, as the documents will be updated from time to time as new information arises. Staff have shared over 300 hard copies, and the web view statistics as of May 21, 2019 are as follows:

Best Management Practice	Views on metrovancover.org
Knotweed species	1010
Giant hogweed	343
European fire ant	336
Himalayan blackberry	310
European chafer beetle	192
Scotch broom	191

Staff plan to post the new best management practices on the Metro Vancouver website and will continue to promote their use at upcoming events.

ALTERNATIVES

1. That the MVRD Board:
 - a) receive for information the report dated May 21, 2019, titled “Best Management Practices for Invasive Species: English Holly, English and Irish Ivies, Yellow Archangel, Himalayan Balsam, and Parrot’s Feather”; and
 - b) direct staff to forward the report to member jurisdictions for information.

2. That the Climate Action Committee receive for information the report dated May 21, 2019, titled “Best Management Practices for Invasive Species: English Holly, English and Irish Ivies, Yellow Archangel, Himalayan Balsam, and Parrot’s Feather”, and provide alternate direction to staff.

FINANCIAL IMPLICATIONS

The 2018 MVRD Board-approved Regional Planning budget included \$20,000 for the five best management practices presented in this report. The 2019 MVRD Board-approved Regional Planning budget includes \$20,000 for the creation of additional best management practices that will be determined with input from the RPAC-Invasive Species Subcommittee in June 2019.

Under both Alternative 1 and 2, best management practices documents have been prepared within approved budgets. Under Alternative 1, these documents will be shared with member jurisdictions.

SUMMARY / CONCLUSION

Invasive species best management practices are listed in the Climate Action Committee work plan for the second quarter of 2019. Staff retained the Invasive Species Council of Metro Vancouver to create a set of best management practices for key invasive species found within the region. Best management practices for English holly, English and Irish ivies, yellow archangel, Himalayan balsam, and parrot’s feather have been completed and are attached to this report.

Staff recommend Alternative 1, that the MVRD Board receive the best management practices documents for information and direct staff to forward the documents to member jurisdictions. After receipt by the Board, these documents will be posted on the Metro Vancouver website, and in addition to being shared with local governments, will also be distributed during upcoming events to crews, project managers, contractors, consultants, developers, stewardship groups, and others who have a role in invasive species management in this region.

Attachments (29907998)

1. Best Management Practices for English Holly in the Metro Vancouver Region
2. Best Management Practices for English and Irish Ivies in the Metro Vancouver Region
3. Best Management Practices for Yellow Archangel in the Metro Vancouver Region
4. Best Management Practices for Himalayan Balsam in the Metro Vancouver Region
5. Best Management Practices for Parrot's Feather in the Metro Vancouver Region

29778726

Note: These attachments can be reviewed in Corporate Administration, or in the online version of this agenda package for July 22, 2019



BRITISH
COLUMBIA

VIA E-MAIL

Ref: 244242

July 15, 2019

Dear Mayor:

Since Childcare BC launched in 2018, we have taken great strides towards our vision of universal child care: a system that will provide parents with access to affordable, high-quality child care whenever and wherever they need it.

One of the key pillars of Childcare BC is accessibility. Under this pillar, the Childcare BC New Spaces Fund offers funding to create new licensed child care spaces for British Columbian families.

Today, we have good news to share. Public sector organizations, Indigenous Governments, and non-profit societies can now access more money through the Childcare BC New Spaces Fund to create spaces. Based on feedback from communities throughout British Columbia, we have tripled the funding maximums up to:

- **\$3 million per facility** (previously \$1 million) **for up to 100% of project costs** for public sector organizations and Indigenous Governments,
- **\$1.5 million per facility** (previously \$500,000) **for up to 100% of project costs** for Indigenous non-profit societies, and
- **\$1.5 million per facility** (previously \$500,000) **for up to 90% of project costs** for non-profit societies and Child Development Centres.

We are making this change to recognize that in many communities, high capital costs can be a barrier to creating child care spaces. Increasing funding maximums means that more communities can access the Childcare BC New Spaces Fund, and more families will benefit from access to licensed child care.

For a breakdown of applicant type, new funding maximums and provincial contribution levels, see attached table.

Looking ahead, the ministry is also creating a multi-project funding stream so that public sector organizations and established non-profit societies can submit a single proposal for multiple projects, or for large-scale projects that require more than the funding maximums. More information on this stream will be available in coming weeks.

.../2

Ministry of
Children and Family
Development

Office of the
Minister

Mailing Address:
Parliament Buildings
Victoria BC V8V 1X4

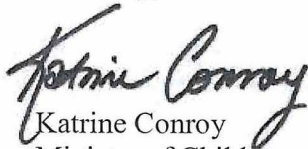
Location:
Parliament Buildings
Victoria

We hope you share this information with your colleagues, partners and clients, and apply for funding if you are an eligible organization. By working together, we can make life better for British Columbia's families by improving access to child care.

Childcare BC New Spaces Fund guidelines, application forms and FAQs are available at www.gov.bc.ca/childcare/newspacesfund. If you have any questions, you can contact the Childcare BC New Spaces Fund Program at MCF.CCCF@gov.bc.ca or 1 888 338-6622 (option 5).

Thank you.

Sincerely,



Katrine Conroy
Minister of Children and Family Development



Katrina Chen
Minister of State for Child Care

Appendix: Contribution Percentages and Funding Award Commitment by Applicant Type

Applicant Type	Required Organization Contribution	Provincial Contribution	Maximum Provincial Funding Amount*	Funding Award Commitment
Public sector organizations and Indigenous Governments	0%	100%	Up to \$3,000,000	Up to 15 years
Indigenous Non-Profit Societies	0%	100%	Up to \$1,500,000	Up to 15 years
Non-Profit Child Care Providers and Child Development Centres	10%	90%	Up to \$1,500,000	Up to 15 years
For-profit child care organizations (Businesses and Incorporated Companies).	25%	75%	Up to \$250,000	Up to 10 years

**The maximum provincial funding amount applies to a single physical location. Projects occurring within the same physical location are considered as a single project.*

NEWS RELEASE

For Immediate Release
2019CFD0082-001418
July 15, 2019

Ministry of Children and Family Development

Bringing child care closer to home for families through new incentives for publicly funded child care

VICTORIA – A significant increase in funding will help public sector and non-profit organizations create more publicly owned and operated child care spaces in their communities, bringing child care closer to home and making life more affordable for British Columbian families.

The maximum funding amount available from the Childcare BC New Spaces Fund to public sector organizations, such as local governments, school districts, tribal councils and First Nations governments, is increasing to \$3 million per project, up from \$1 million. Additionally, non-profit organizations – including Indigenous organizations – will be eligible for up to \$1.5 million per project, three times more than was previously available.

“Our government believes all families should have access to publicly supported child care just as they have access to public education – and the best way to make that happen is by working in partnership with public sector and non-profit organizations,” said Katrine Conroy, Minister of Children and Family Development. “By offering incentives to these sectors, we can strengthen communities and give families access to the services they need right on their doorstep, meaning they no longer have to give up valuable family time to get to their child care centre far from where they live – and we know that for families, that positive change can’t come soon enough.”

As well as the funding increase, the ministry is introducing a new process to allow experienced public-sector and non-profit organizations to apply for funding for multiple projects at once. More information on this process will be available in the coming weeks.

“Child care has the ability to be the common ground that brings families in communities together,” said Katrina Chen, Minister of State for Child Care. “We’ve seen the City of Vancouver and the School District of Victoria thinking outside the box to create hundreds of new licensed child care spaces, and we encourage other local governments and organizations, from large to small, to bring their ideas for solving the child care space shortage. Together, we will forge long-lasting partnerships to deliver publicly funded child care spaces that will be life-changing for families and communities for decades to come.”

Under the Childcare BC New Spaces Fund, child care providers can apply for funding to create new child care spaces at any time throughout the year under a continuous application process. It is part of the Province's Childcare BC plan, designed to give British Columbian families access to affordable, quality child care when they want or need it. Since July 2018, the Province has funded approximately 9,000 new licensed child care spaces throughout British Columbia. More new spaces will be announced as projects are approved.

Investing in child care and early childhood education is a shared priority between government and the BC Green Party caucus, and is part of the Confidence and Supply Agreement.

Learn More:

For more about Childcare BC, visit: www.gov.bc.ca/childcare

To learn more about the Childcare BC New Spaces Fund and to apply, visit: www.gov.bc.ca/childcare/newspacesfund

To find child care in a community, view the online child care map: <http://maps.gov.bc.ca/ess/hm/ccf/>

Child care factsheet: <https://news.gov.bc.ca/18430>

Contact:

Ministry of Children and Family Development
Government Communications and Public Engagement
(250) 356-2028

Connect with the Province of British Columbia at: news.gov.bc.ca/connect



OFFICE OF THE MAYOR

1100 Patricia Blvd. | Prince George, BC, Canada V2L 3V9
p: 250.561.7600 | www.princegeorge.ca

RECEIVED

JUL 08 2019

CITY OF WHITE ROCK
ADMINISTRATION

July 2, 2019

Mayor and Council
City of White Rock
15322 Buena Vista Avenue
White Rock, BC V4B 1Y6

Dear Mayor Walker and Members of Council,

At the City of Prince George regular Council meeting held June 24, 2019, Council gave consideration to proposed Union of British Columbia Municipalities (UBCM) resolutions regarding: Proceeds of Crime; and Clean-Up of Needles and Other Harm Reduction Paraphernalia. The following resolutions were approved for submission to the UBCM for consideration at the 2019 Convention.

1. Proceeds of Crime

WHEREAS the provision of police services places a significant financial burden on local government;

AND WHEREAS the Civil Forfeiture Crime Prevention and Crime Remediation Grant Program funds community crime reduction and crime prevention activities, but does not address local government policing costs, including expenditures related to investigations and police work that result in seizures of proceeds of crime;

THEREFORE BE IT RESOLVED that the Province share seizures of proceeds of crime with local governments to help address protective services costs.

2. Clean-Up of Needles and Other Harm Reduction Paraphernalia

WHEREAS the low barrier distribution of harm reduction supplies, including syringes and other safe injection supplies, in communities across BC poses a significant safety and cleanliness concern;

AND WHEREAS local governments, businesses and residents are bearing the escalating cost of cleaning up needles and drug paraphernalia in public spaces;

THEREFORE BE IT RESOLVED that UBCM request ongoing provincial funding to local governments to cover the cost of cleaning up needles and drug paraphernalia in their communities.

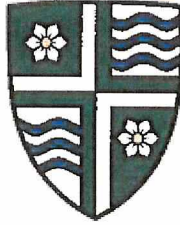
On behalf of Prince George City Council, your support of these resolutions at the 2019 UBCM Convention is appreciated.

If you have any questions or would like more information please feel free to contact my office at MayorAdmin@princegeorge.ca or 250-561-7691.

Sincerely,

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

Mayor Lyn Hall
City of Prince George



July 15, 2019

File No. 0400-60-001

Tracey Arthur
Director of Corporate Administration
City of White Rock

Via email

Dear Tracey:

Re: Local Government Casino Revenue Sharing

At its June 24, 2019 Regular Evening Meeting, the Township of Langley Council adopted a resolution regarding the distribution of casino and gaming revenue among Local Governments in British Columbia. In part, the resolution directed staff to:

- (c) contact the regional municipalities of District of North Vancouver, City of North Vancouver, District of West Vancouver, City of Port Coquitlam, City of Port Moody, City of White Rock, and the City of Pitt Meadows to determine interest and potentially coordinate a combined effort, in partnership with the Township of Langley, to collectively petition the Province of British Columbia for regional casino and gaming proceeds revenue fairness.*

The full agenda motion and discussion maybe viewed on our website at:

www.tol.ca/councilagendas

The reason for this letter is to determine your interest in collectively petitioning the Province of British Columbia for fairness with regional casino and gaming proceeds revenue.

Please respond prior to September 30, 2019. The information received will be communicated to Council for further deliberation. The response can be forwarded to the writer at the contact information below.

Respectfully,

A handwritten signature in black ink, appearing to read 'Wendy Bauer', is written over a light blue horizontal line.

Wendy Bauer, CMC
TOWNSHIP CLERK
604.533.6101
wbauer@tol.ca

reception.

Councillors Arnason and Richter reported that they attended the Livable Communities Conference.

K. METRO VANCOUVER REPRESENTATIVES REPORT

L. ITEMS BROUGHT FORWARD FOR PUBLIC INFORMATION FROM SPECIAL CLOSED MEETINGS

M. OTHER BUSINESS

M.1 Assessment Averaging and Phasing for Property Tax Increases

Moved by Councillor Woodward,
Seconded by Councillor Richter,
Be it resolved that staff be directed to include within the 2020 budget deliberations consideration of adopting assessment averaging and phasing for all eligible property classes as outlined within the Community Charter and Assessment Averaging and Phasing Regulation “to moderate the impact of sudden changes in the assessed value of land” (s198(2)).

REFERRAL

Moved by Councillor Davis,
Seconded by Councillor Whitmarsh,
That this motion be referred to staff for a report, in a timely manner.
CARRIED

M.2 Casino Proceeds Revenue Sharing Fairness within Greater Langley

Moved by Councillor Woodward,
Seconded by Councillor Ferguson,
Whereas in fiscal 2017-2018 municipalities within British Columbia received \$102M from casino and gaming revenue, with \$72.1M of that within the Lower Mainland, and \$7.69M just to the City of Langley alone, with a population of only 25,888 (c.2016);

Whereas in fiscal 2017-2018 the City of Richmond alone received \$17M in casino proceeds, with a population of only 198,309 (c.2016), as Langley City, Surrey, Abbotsford and Maple Ridge (and even Mission and Chilliwack) all continue to receive casino or gaming revenue each year, while the Township of Langley, the region’s 6th largest municipality, does not;

Whereas the Township of Langley, District of North Vancouver, City of North Vancouver, District of West Vancouver, City of Port Coquitlam, City of Port Moody, City of White Rock, and the City of Pitt Meadows all also

continue to not receive any annual casino or gaming revenue, even with combined populations of over 525,000 taxpaying residents (c.2016);

Whereas the elementary principle of basic fairness should apply to the distribution of regional casino and gaming proceeds inclusive of all regional municipalities and their respective populations and taxpayers;

Whereas gambling within the region as a whole imposes social and municipal costs upon all municipalities within reasonable proximity to casino and gaming locations; and

Whereas it is inherently unfair that only some municipalities receive (in some cases many) millions of dollars in casino and gaming proceeds obviously attributable to residents of adjacent (and often much larger) municipalities, while other regional municipalities (possibly even less than 1km away from a casino) and their taxpaying residents receive absolutely nothing at all;

Therefore be it resolved that staff be directed to:

(a) if deemed necessary and achievable, recommend a qualified consultant to study and provide estimates of the percentage of revenue being generated from Township of Langley residents and businesses frequenting the Cascades Casino within Langley City, and other gaming locations within an applicable distance; and

(b) outline a potential plan to petition the Province of British Columbia to review and revise the current disbursement of regionally-generated casino and gaming proceeds:

(i) such that a fair, reasonable, and substantial percentage of the annual casino proceeds from the Cascades Casino also flow to the Township of Langley because: (1) it is inherently unfair not to do so; (2) the Township of Langley is less than 1km from Cascades Casino; and (3) the Township of Langley has a substantially larger population contributing thereto; and

(ii) to be a more fair and equitable distribution to the benefit of all municipalities and their respective taxpayers potentially based on population metrics recognizing: (1) respective populations within reasonable proximity to one or more regional casino(s) or gaming location(s), and not merely the physical locations thereof; and (2) municipal costs related thereto, borne by neighbouring municipalities without any beneficial revenues therefrom; and

(iii) such that, if deemed necessary, commit that all funds received from

casino and/or gaming proceeds be used to improve infrastructure connections with the City of Langley, and/or towards the cost of protective services, road infrastructure, recreation facility maintenance, bylaw enforcement, and/or all other gambling-impacted municipal services provided adjacent thereto.

(c) contact the regional municipalities of District of North Vancouver, City of North Vancouver, District of West Vancouver, City of Port Coquitlam, City of Port Moody, City of White Rock, and the City of Pitt Meadows to determine interest and potentially coordinate a combined effort, in partnership with the Township of Langley, to collectively petition the Province of British Columbia for regional casino and gaming proceeds revenue fairness.

AMENDMENT

Moved by Councillor Woodward,

Seconded by Councillor Richter,

That the motion be referred to a future Council Priorities Committee with Item C proceeding.

CARRIED

Councillors Arnason and Davis opposed

MAIN MOTION, AS AMENDED

The question was called on the Main Motion, as amended, and it was CARRIED

Councillors Arnason and Long opposed

M.3

Dangerous Intersection

Moved by Councillor Richter,

Seconded by Councillor Ferguson,

That item 6 on the June 20, 2019 Distribution List regarding a dangerous intersection at 272 Street and 28 Avenue be referred to staff to contact the School District for comment regarding this intersection.

CARRIED

For Metro Vancouver meetings on Friday, June 28, 2019

Please note these are not the official minutes. Board in Brief is an informal summary. Material relating to any of the following items is available on request from Metro Vancouver. For more information, please contact Greg.Valou@metrovancouver.org or Kelly.Sinowski@metrovancouver.org

Metro Vancouver Regional District

E 1.1 Greater Vancouver Regional Fund Semi-Annual Report as of December 31, 2018

RECEIVED

The Board received for information TransLink's status report on active projects funded by federal gas tax funds through the Greater Vancouver Regional Fund.

As per TransLink's report, the regional transportation authority has been successful in delivering the majority of the projects on or ahead of schedule and incurring positive cost variances. Six projects are noted as experiencing delays exceeding three months: the Metrotown trolley overhead rectifier replacement, three conventional bus replacement projects, equipment for deferred bus retirement program, and the battery electric bus pilot.

Looking ahead over the next 9 years, TransLink expects to draw on \$1.5 billion in GVRF funds to pay for eligible capital expenditures associated with the 2018 Phase Two Investment Plan and subsequent investment plans. Assuming the renewal of the federal gas tax transfers in 2024, the forecasted balance in 2027 will be drawn down to a balance of approximately \$181 million.

E 1.2 Board Voting Technology

RECEIVED

The Board received for information an update on a technology solution to automate the Board's voting process.

In-house staff expertise was leveraged to develop a software solution to meet the unique voting requirements of the Metro Vancouver Board, notably the multiple jurisdictions and the weighting voting aspect. While the Board employs two voting methods – a rising vote and a recorded vote – the recorded vote is the one to benefit from the proposed voting technology solution and is also authorized by the Procedure Bylaw obviating the need for a bylaw amendment. Staff have concluded the development and testing of the voting software, which is ready for use and can be deployed at the next Board meeting where a recorded vote is requested.

E 1.3 Asset Management for Corporate Facilities and Equipment Policy

APPROVED

The Board approved the Asset Management for Corporate Facilities and Equipment Policy, which will establish asset management principles and a framework to balance asset performance, risk and cost to support the long-term provision of Regional Services not covered under a separate asset management policy.

The goal of the policy is to balance asset performance, risk and cost. This policy outlines Metro Vancouver's commitment and methodology to manage department assets in a manner that minimizes asset failure risks and impacts and optimizes the life cycle of assets.

The policy will guide Metro Vancouver to meet asset performance targets within a specified budget and enable evidence-based decision making to continuously provide reliable services in the region.

E 1. 4 2019 Rail~Volution Conference – Request for Sponsorship

APPROVED

Rail~Volution, a U.S.-based non-profit, is intended to serve as a catalyst for building livable communities with transit by inspiring people in communities and regions to make better transit and land use decisions. TransLink, as the local host agency, has submitted a sponsorship request to Metro Vancouver for the 2019 Rail~Volution conference to be held in this region September 9-11, 2019, which is the first time the conference will be held outside of the United States.

The Board approved \$10,000 of sponsorship funding in support of the Regional Day component of the Rail~Volution Conference to be held in Metro Vancouver on September 11, 2019.

E 2.1 Best Management Practices for Invasive Species: English Holly, English and Irish Ivies, Yellow Archangel, Himalayan Balsam, and Parrot's Feather

RECEIVED

Metro Vancouver retained the Invasive Species Council of Metro Vancouver to create a set of best management practices for key invasive species found within the region. The Board received for information a report with best management practices for English Holly, English and Irish Ivies, Yellow Archangel, Himalayan Balsam, and Parrot's Feather and directed staff to forward the report to member jurisdictions for information.

E 2.2 Board Appointment and Rescindments of Staff as Officers

APPROVED

Employment status and job function changes of Metro Vancouver environmental regulatory staff have resulted in a need to update staff appointments to ensure appropriate authority to advance air quality management goals. The Board:

- pursuant to the Greater Vancouver Regional District Air Quality Management Bylaw and the Environmental Management Act:
 - appointed the following Metro Vancouver employee as an officer: Permitting and Enforcement Officer, Brian Kerin; and
 - rescinded the appointments of the following persons as officers: Lynne Bosquet and Donna Hargreaves; and
- pursuant to section 28 of the Offence Act:
 - appointed the following Metro Vancouver employee for the purpose of serving summons for alleged violations under the Greater Vancouver Regional District Air Quality Management Bylaw: Permitting and Enforcement Officer, Brian Kerin; and
 - rescinded the appointments for the purpose of serving summons of the following persons: Lynne Bosquet and Donna Hargreaves.

E 3.1 By-election 2019 Results for the Office of Electoral Area A Director

RECEIVED

The Board received results of the June 15, 2019 by-election for the Office of Director, Electoral Area A, Metro Vancouver Regional District, wherein Jen McCutcheon was elected to the office.

E 3.2 Appointment of Metro Vancouver's 2019 Representative to the UBCM Indigenous Relations Committee

APPROVED

Following Tsawwassen First Nation's election for Chief and Council held on April 6, 2019, Tsawwassen First Nation nominated newly elected Chief Ken Baird as its representative to the MVRD Board. Board Chair Sav Dhaliwal has named Director Baird as Vice-Chair of MVRD's Indigenous Relations Committee. As a matter of UBCM policy, only the Chair or Vice-Chair of Metro Vancouver's Indigenous Relations Committee may be considered for appointment to the UBCM Indigenous Relations Committee.

The Board appointed Director Ken Baird, Vice-Chair of Metro Vancouver's Indigenous Relations Committee, to the Union of BC Municipalities' Indigenous Relations Committee for the remainder of 2019.

G 1.1 Proposed Amendments to the Remuneration Bylaw – Amending Bylaw 1286

APPROVED

At its May 24, 2019 meeting, the MVRD Board considered the findings of the Board Remuneration Independent Review Panel and endorsed its recommendations regarding board remuneration, and subsequently directed staff to prepare amendments to the Remuneration Bylaw. An amending bylaw was prepared in which two amendments are proposed: first, to adjust the base rate for the Electoral Area A Director by increasing it to 30% of the Board Chair salary; and second, to introduce a one-time adjustment to offset the elimination of non-taxable portion of remuneration introduced by the Canada Revenue Agency.

The Board gave first, second and third reading to Metro Vancouver Regional District Board and Committee Remuneration Amending Bylaw Number 1286, 2019; then passed and finally adopted the bylaw.

I 1 Committee Information Items and Delegation Summaries

RECEIVED

The Board received delegation summaries and information items from Standing Committees.

Climate Action Committee – June 14, 2019

Information Items:

- **5.2 Metro Vancouver's Carbon Price Policy Implementation Update**

Since its implementation in June 2017, the Carbon Price Policy has been functioning as designed where it has been applied, in particular for large infrastructure projects which require a formalized options analysis. Financial implications of the policy are being evaluated on a case-by-case basis in the early stages of project evaluation. This ensures that any additional costs associated with the carbon price are incorporated early on in decision making and project budgets, ensuring that any financial impacts are understood and accounted for.

- **5.4 Measuring Ecosystem Services – Metro Vancouver’s Carbon Storage Dataset**

The Metro Vancouver carbon storage dataset provides spatial estimates of carbon stored in biomass (e.g. trees, shrubs) and soil that can be used to support the incorporation of ecosystem services into decision-making. The project created several outputs including a parcel-based dataset that can easily be used by planners to explore the potential carbon implications of projects within a given area. Other potential applications for the dataset include as a change detection tool, and for predicting other ecosystem services. Sources of uncertainty within the dataset are outlined in this report and include a lack of detailed mapping and carbon estimates for intertidal and estuarine ecosystems.

- **5.5 Urban Forest Climate Adaptation Initiative Update**

This report contains an update on the Urban Forest Climate Adaptation Initiative. Three project deliverables have been completed as part of this initiative to date, including the Urban Forest Climate Adaptation Framework for Metro Vancouver, the Design Guidebook-Maximizing Climate Adaptation Benefits with Trees and the Tree Species Selection Database. In 2018, the Tree Species Selection Database was updated with species from western North American cities. These species are found in climate conditions that are either similar to the climate conditions we currently see in Metro Vancouver, or similar to the climate conditions the region might expect to see in the future. In 2019, the Urban Forest Climate Adaptation Initiative was presented to several different audiences, and the project earned a Canadian Institute of Planners Award for Planning Excellence under the Climate Change Planning category. As a next step, Regional Planning staff will host a workshop with urban forestry practitioners to determine how the work completed to date can be further refined into accessible and useable formats.

Regional Culture Committee – June 19, 2019

Information Items:

- **5.1 MAXguide.org and Survivor 101 Updates**

Launched February 25th, 2011, MAXguide.org, Metro Vancouver’s regional arts and culture calendar, is a collaboration of regional culture stakeholders, providing free listings of arts and culture events for arts organizations, individuals and selected art businesses.

The Survivor 101 workshop series continues to be well received by a wide range of region-wide arts and culture organizations, both staff members, volunteers, and board directors. A key factor is that the organizations are given the opportunity to network with peers and share knowledge, as well as identify capacity and sustainability issues. MAXguide.org and the Survivor 101 workshop series continue to be strong vehicles to inform and engage on cultural and artistic events and to build capacity across arts and culture organizations in the Metro Vancouver region.

- **5.2 Metro Vancouver Cultural Project Grants: Adjudication Process**

The allocation of the 2019 Metro Vancouver Cultural Project Grants will be adjudicated by the Regional Culture Committee and will consider the continued support of recipients who have made a long standing commitment to serving the region while fostering the new recipient organizations who are committed to expanding to a regional audience.

Staff will undertake the initial review of the applications and compile a shortlist of applications for review by the Committee. At the July 17, 2019 meeting of the Regional Culture Committee, members will discuss each shortlisted application and make a recommendation on the grant award

for each of the successful proponents. The cap for any single project is \$10,000 with the total grant allocation not to exceed \$130,000. A report outlining the Committee's recommendations will be presented to the July 26, 2019 meeting of the MVRD Board for approval.

Industrial Lands Strategy Task Force – June 20, 2019

Delegation Summaries:

- 3.1 Tegan Smith, NAIOP Intensive Use of Industrial Land Committee

Greater Vancouver Water District

E 1.1 Award of Contract Resulting from Tender No. 18-432: Sunnyside Reservoir Unit No. 1 Seismic Upgrade and Upgrades (Non-seismic) APPROVED

The Board approved the award of a contract in the amount of \$11,578,163 (exclusive of taxes) to PCL Constructors Westcoast Inc. resulting from Tender No. 18-432: Sunnyside Reservoir Unit No. 1 Seismic Upgrade and Upgrades (Non-seismic).

E 1.2 Award of Contract Resulting from Request for Proposal (RFP) No. 19-098: Supply and Delivery of Steel Pipe for Kennedy Newton Main 84th to 72nd Avenue APPROVED

The Board approved the award of a contract in the amount of up to \$4,844,407.50 (exclusive of taxes) to Northwest Pipe Company resulting from Request for Proposal No. 19-098: Supply and Delivery of Steel Pipe for Kennedy Newton Main 84th Avenue to 72nd Avenue.

I 1 Committee Information Items and Delegation Summaries RECEIVED

The Board received information items from the Water Committee.

Water Committee – June 13, 2019

Information Items:

- **5.3 2018 GVWD Dam Safety Program Annual Update**

As required for all dam owners in British Columbia, the Water Services Dam Safety Program follows the requirements outlined in the Provincial Dam Safety Regulation (BC Reg. 40/2016). The Water Services Operations and Maintenance dam safety team monitors and reviews the performance of the five GVWD water supply dams to ensure they remain safe and continue to provide reliable sources of drinking water. The dam safety team retains a dam surveillance consultant, currently Klohn Crippen Berger, to carry out third party review and reporting on dam monitoring and inspection activities.

The Water Services Dam Safety Program is compliant with all dam safety regulatory requirements and continues to meet or exceed requirements of the Provincial Dam Safety Regulation. No significant concerns were noted by the Metro Vancouver dam safety team or dam surveillance consultant from the 2018 routine surveillance, monitoring, or formal dam inspections.☐

Greater Vancouver Sewage and Drainage District

E 1.1 Board Appointments and Rescindments of Bylaw Enforcement Officers

APPROVED

Employment status changes for Metro Vancouver and City of Vancouver environmental regulatory staff have resulted in a need to update staff appointments to ensure appropriate authority to advance.

The Board:

- pursuant to the Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw and the Environmental Management Act:
 - appointed the following Metro Vancouver employees as municipal sewage control officers: Curtis Wan and Brian Kerin; and
 - rescinded the appointments of the following former Metro Vancouver employees as municipal sewage control officers: Alexander Clifford, Jeffrey Gogol, Lynne Bosquet, and Donna Hargreaves; and
 - appointed the following City of Vancouver employees as municipal sewage control officers: Shelley Heinricks, and Ana Nic Lochlainn; and
 - rescinded the appointment of James Smith, former City of Vancouver employee, as a deputy sewage control manager; and
 - rescinded the appointments of the following former City of Vancouver employees as municipal sewage control officers: Brian Kerin, David Robertson, Douglas Elford, and Vanessa Koo.
- pursuant to the Offence Act appointed the following staff for the purpose of serving summons under section 28 of the Offence Act for alleged violations under Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw:
 - Metro Vancouver employee Brian Kerin; and
 - City of Vancouver employees Shelley Heinricks and Ana Nic Lochlainn.
- Pursuant to the Offence Act rescinded the appointment of former Metro Vancouver employee Donna Hargreaves for the purpose of serving summons under section 28 of the Offence Act for alleged violations under Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw.

E 1.2 Biennial Report – Integrated Liquid Waste and Resource Management Plan

APPROVED

The Board approved the Biennial Report 2017-2018 and directed staff to submit it to the Ministry of Environment and Climate Change Strategy in accordance with the requirements of the Integrated Liquid Waste and Resource Management Plan; and to post the report on the Metro Vancouver website and arrange for the Liquid Waste Committee to receive comments and submissions on the Integrated Liquid Waste and Resource Management Plan progress.

E 1.4 Award of a Contract Resulting from Request for Proposal (RFP) No. 19-007: APPROVED
Northwest Langley Wastewater Treatment Plant – Design and Construction
Engineering Services

The Board approved the award of a contract for an amount of up to \$35,327,087 (exclusive of taxes) to CH2M Hill Canada Limited for Phase A, Indicative Design Revalidation and Phase B, Detailed Design resulting from Request for Proposal (RFP) No. 19-007 Northwest Langley Wastewater Treatment Plant – Design and Construction Engineering Services.

H 1 Wastewater Treatment Plants – Tertiary Treatment

NOTICE OF MOTION

Director Lois Jackson provided the following Notice of Motion on May 24, 2019 for consideration at the next regular board meeting:

Wastewater Treatment Plants – Tertiary Treatment

That the GVS&DD Board request staff to provide a presentation on the region’s wastewater treatment plants in terms of tertiary treatment and cost benefit considerations.

I 1 Committee Information Items and Delegation Summaries RECEIVED

The Board received a delegation summary and information items from Standing Committee meetings.

Liquid Waste Committee – June 13, 2019

Delegation Summaries:

- **3.1 Mayor John McEwen, Village of Anmore and Brandie Roberts, Anmore Green Estates**

Zero Waste Committee – June 14, 2019

Information Items:

- **5.1 Illegal Dumping Update**
This report provided information on illegal dumping trends and initiatives in the region. In 2018, member municipalities reported approximately 43,800 incidents of illegal dumping and collectively spent approximately \$3.2 million to clean up and properly dispose of the abandoned waste. In addition, municipalities report spending approximately \$2.5 million per year on bulky item pick-up in the region for a total of approximately \$5.7 million spent annually on removing illegally dumped material and managing bulky item pick-up programs.
- **5.2 Potential Regulatory Approaches for Priority Plastic Wastes**
This report described potential regulatory approaches for priority plastics, recently submitted by the National Zero Waste Council to the Canadian Council of Ministers of the Environment (CCME). The National Zero Waste Council formed a Plastics Advisory Panel that included representatives from local governments and affiliate organizations from across Canada. The Panel identified a list of priority plastics that adversely affect local governments (e.g. as litter or in wastewater), and/or

the environment (particularly as ocean plastics). The Panel then considered possible regulatory actions and recommended those they considered most effective and feasible to enact in the short to medium term. Those recommendations were forwarded to the CCME as the federal government develops its Zero Plastic Waste Strategy.

- **5.3 Waste-to-Energy Facility Environmental Monitoring and Reporting, 2018 Update**

The Waste-to-Energy Facility operates well within environmental standards and limits. A range of projects that continuously improve the facility's environmental performance have been completed or are underway. All air emission related parameters monitored during 2018 were in compliance with Operational Certificate 107051, except one 24-hour exceedance of carbon monoxide on January 29, 2018. Continuous emissions monitoring data and all compliance reports are available on the Metro Vancouver website.

- **5.4 2018 Waste Composition Monitoring Program Results**

Metro Vancouver monitors the composition of the region's municipal solid waste stream on a regular basis. The 2018 waste composition monitoring program analyzed the composition of the waste stream across all sectors in 161 material categories.

The most common materials in the waste were compostable organics (26%), paper (18%), plastic (16%) and non-compostable organics (16%). While the amount of compostable organics disposed has remained stable since 2016, disposal of non-compostable organics, such as treated and finished wood, has increased, likely due to the challenges processing construction and demolition waste at private facilities in the region. There have been slight decreases in the total tonnages of paper and plastic disposed since 2016. Common single-use items such as disposal cups, retail bags and disposable foodware represent about 2.4% of the overall waste stream, and approximately 1.1 billion single-use items are disposed of each year. More detailed information on single-use items and construction and demolition waste composition data will be provided to the Zero Waste Committee later this year as the data becomes available.

- **5.5 2019 Regional "Think Thrice About Your Clothes" Campaign Results**

The "Think Thrice About your Clothes" campaign supports the waste reduction objectives in the Integrated Solid Waste and Resource Management Plan. 2019 was the first year of the "Think Thrice" campaign, which was in market from February 18, 2019 to April 28, 2019. The campaign objectives were to: raise awareness about clothing waste in the region; provide tips and information to help residents make more informed decisions when purchasing, caring for, and disposing of clothing.

Among those aware of the ads, up to half intend to change their behaviour. Over the campaign period, the "Think Thrice" website saw 14,958 sessions. The campaign also received an estimated \$186,060 worth of earned media. Campaign materials were used by at least 10 member jurisdictions. The 2020 clothing waste reduction campaign will continue to use the "Think Thrice" platform, which will be refined base on learnings in 2019. The Campaign was the recipient of the Recycling Council of British Columbia (RCBC) 2019 Award for Environmental Achievement in the Public Sector category.

Metro Vancouver Housing Corporation

No open agenda items.

Attachments to item
9.1.4 available.

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Created by: Metro Vancouver and the Invasive Species Council of Metro Vancouver

In partnership with: The Invasive Species Council of British Columbia
Diamond Head Consulting



Requested by: Metro Vancouver’s Regional Planning Advisory Committee –
Invasive Species Subcommittee

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June 2019



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CREDIT: F. STEELE

Introduction

The impacts of invasive species on ecological, human, and economic health are of concern in the Metro Vancouver region. Successful control of invasive species requires concerted and targeted efforts by many players. This document - **“Best Management Practices for English Holly in the Metro Vancouver Region”** - is one of a series of species-specific guides developed for use by practitioners (e.g., local government staff, crews, project managers, contractors, consultants, developers, stewardship groups, and others who have a role in invasive species management) in the region. Together, these best practices provide a compendium of guidance that has been tested locally by many researchers and operational experts.

Native to Europe, northern Africa and Asia, English holly (*Ilex aquifolium*) is prized and grown for its bright red berries and spiny, dark green evergreen foliage. It has been widely used in gardens and is still farmed commercially for decorations, floral arrangements and as a landscape plant in the Pacific Northwest (Klinkenberg, 2017). Holly is grown on farms on Vancouver Island, the Sunshine Coast and the Fraser Valley (British Columbia Agriculture in the Classroom Foundation, 2014). Fresh cuttings from holly trees are widely sold in

British Columbia during the Christmas season. A large shrub or tree, English holly has become a serious invader because of its tolerance of a variety of soils and moisture conditions, and the ease with which its seeds are spread by birds. This species is considered a significant urban and forest pest.

Academic institutions, government, and non-government organizations continue to study this species in British Columbia. As researchers and practitioners learn more about the biology and control of English holly, it is anticipated that the recommended best management practices will change over time and this document will be updated. Please check metrovancover.org regularly to obtain the most recent version of these best management practices.

REGULATORY STATUS

Although English holly is an invasive plant of concern in the Metro Vancouver region, it is not currently regulated anywhere in British Columbia.

IMPACTS

English holly creates deep shade under its canopy. Native vegetation is greatly reduced under an English holly canopy; large holly thickets can often suppress all native vegetation over substantial areas (Stokes, Church, Cronkright, & Lopez, 2013). This characteristic enables it to dominate tall shrub layers of forest understories, shading out and suppressing germination of native trees and shrubs (Klinkenberg, 2017).

English holly is a notorious water and nutrient hog, which discourages other plants from growing in its vicinity. It has been shown to modify soil conditions, depositing significant amounts of organic matter and sulphur, making conditions more difficult for native plants to thrive (Berger, 2016).

These changes to soil conditions and rate of colonization are exponential over time, suggesting potential serious implications for the health of forests in the Pacific Northwest (Berger, 2016). Surveys conducted on the North Shore suggest that English holly is spreading rapidly beyond the urban interface into neighbouring forests. English holly is also reproducing successfully in undisturbed forests (Beard, 2018). In a matter of decades, if left unmanaged, English holly can quickly increase in numbers and area occupied (Stokes, Church, Cronkright, & Lopez, 2013). It is hypothesized that English holly is the region's shade tolerant invasive plant with the greatest potential to harm coastal forests (Beard, 2018).

While grown commercially, English holly has the potential to impact the forestry sector. It is invasive in actively managed forests and clear cuts in the Pacific Northwest, spreading across and persisting through forest successional stages (Church, 2016).

Although English holly berries are edible for birds, the British Columbia Drug and Poison Information Centre considers them toxic to humans, causing nausea, vomiting, abdominal pain and diarrhea if ingested (British Columbia Drug and Poison Information Centre, 2010). Local animal protection agencies also consider English holly berries

poisonous to pets (Vancouver Orphan Kitten Rescue, 2019) (British Columbia Society for the Prevention of Cruelty to Animals, 2018).

English holly leaves produce flammable vapour when heated, causing them to ignite easily, and infestations may pose a fire risk (King County Noxious Weed Control Program, 2018). The prickly leaves can hinder human activity around English holly infestations.

All levels of government, non-profit organizations and private property owners spend significant resources managing English holly in the Metro Vancouver region every year. In recent years, agencies represented on Metro Vancouver's Regional Planning Advisory Committee –



Suckering from the base of a large English holly tree

CREDIT: ISCMV

Invasive Species Subcommittee together have spent roughly \$85,000 on English holly control and volunteer stewardship annually. This figure does not include control costs for private landowners across the region or costs associated with education and awareness activities.

REPRODUCTION AND SPREAD

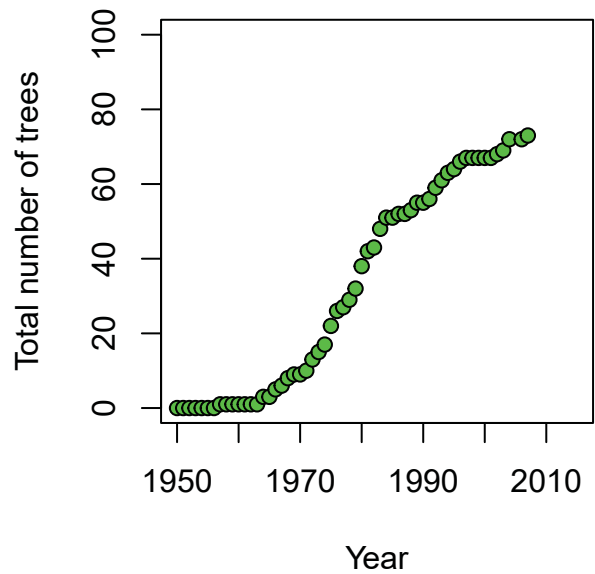
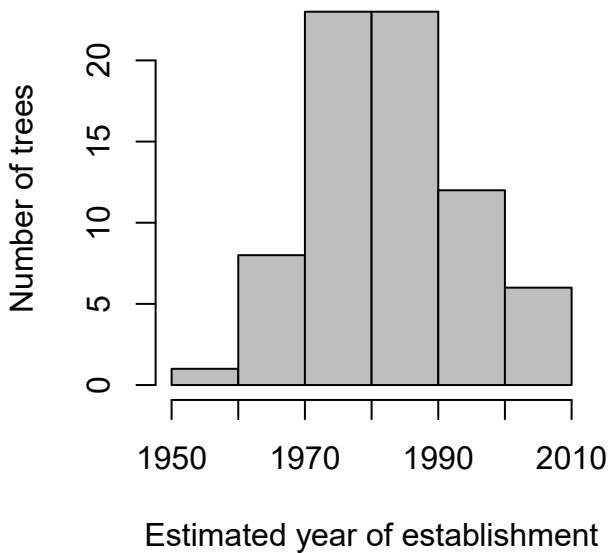
In the region it is common to observe English holly growing as isolated single plants or trees, in small patchy populations, or in large populations ranging in age from seedlings to mature fruiting trees. It is found in urban areas where it may have been intentionally planted, and in rural habitats.

English holly spreads vegetatively and by seeds. These two methods of spread happen at different scales: contiguous spread is correlated with vegetative methods and long-distance spread is correlated with spread by seed (Stokes, Church, Cronkright, & Lopez, 2013). In a study of a large park in central Washington in which English holly had been established for 50 years, it was found that 78% of individuals

originated from vegetative spread and the remaining 22% had spread by seed. English holly spreads by suckering (shoots arising from an existing root system) and layering (when branches or stems touch the ground and rooting occurs) (Evergreen, 2015). Researchers have observed linear expansion of English holly clumps resulting from the fall of a dead tree or limb onto a holly tree, thus pressing the holly tree lengthwise along the ground, leading to branches forming multiple standing trees (Stokes, Church, Cronkright, & Lopez, 2013). English holly also re-sprouts from cut stumps.

Birds eating English holly berries readily disperse the seeds in urban natural areas. In a 2010 Seattle, Washington study of English holly patches, seven species of birds were observed disseminating seeds by eating the berries (Zika, 2010). American robins were the primary consumers (accounting for 96% of observations) followed by European starlings (Zika, 2010).

Holly trees surveyed in a deciduous tree dominated stand in Pacific Spirit Regional Park were found to have established



UBC geography students and staff calculations of tree ages in a selected stand of English holly in the Acadia Forest area of Pacific Spirit Regional Park

CREDIT: WILLIAMS, 2018

around 1980. The figure below shows how the exponential growth pattern exhibited from 1960 – 1980 tapered into a linearly growing population by 2018 (Williams, 2018). This area of the park has been observed to have many more berry producing trees than areas dominated by conifer stands. Williams (2018) found 26.2% of trees in alder dominated stands had berries while in a conifer dominated stand only 2% of the plants had visible berries (Worcester, 2018).

HABITAT AND DISTRIBUTION

English holly is a hardy plant that has adapted to grow in moist forests at low elevations in shade or sun. It is tolerant to a wide range of soil, moisture, temperature and light conditions (Whatcom County Noxious Weed Control Board, 2018).

Its shade tolerance has allowed English holly to invade much of the south coast region of British Columbia, in the Fraser Valley and on Vancouver Island. Seedlings are commonly found in mixed deciduous and coniferous forests, along the edges of wetlands and especially near residential areas.

In some parks and natural areas in the Metro Vancouver region, such as Pacific Spirit Regional Park, English holly is a high priority invasive plant targeted for management (Pierzchalski, 2018).

Identification

Lifecycle: Perennial shrub 2–10 metres tall or sometimes a tree up to 16 metres. Plants may have a single trunk or multiple stems (Whatcom County Noxious Weed Control Board, 2018). English holly plants can live over 250 years and research indicates that individuals over 10 years old show a very low mortality rate and accelerating growth, indicating the species' high chance for success (Stokes, Church, Cronkright, & Lopez, 2013).

Stem: Erect, with spreading branches, minute hairy branchlets. Bark is green on young plants, and smooth, silver to grey on mature plants.

Leaves: Egg-shaped, 2.5–6 centimetres long, alternate, evergreen, leathery, glossy, wavy, and with stiff, sharp spines on the leaf margins. Mature leaves may have smooth leaf margins with few or no spines. Leaves are normally dark green. Variegated leaves are also seen in horticulture varieties.

Flowers: Small, white, inconspicuous, usually dioecious flowers (male and female on different plants, true for all members of the *Ilex* genus), often with a slightly sweet smell. Both male and female flowers have four petals. Male holly flowers have four yellow stamens in the center of the flower whereas female flowers have a large green ovary. Flowers emerge in the spring. The female plants (berry-bearing) are dependent upon male plants for fertilization. Flowers are pollinated by bees.

Fruits: Round, smooth, bright red (occasionally orange), persistent berries, 7–8 millimetres wide, in clusters. Each berry contains 2–8 single-seeded nutlets. The berries are borne on female trees during the fall and winter. In a 2010 Seattle, Washington study, English holly berries persisted for six months after ripening in October, although 99% of all fruit was consumed by birds between November and February (Zika, 2010).

The following photos show English holly plant parts.



Typical spiny holly leaves

CREDIT: DAWN HANNA



Mature leaves (note less spines and smoother leaf margins)

CREDIT: ISCMV



Variegated leaves

CREDIT: JOHN RUTER, UNIVERSITY OF GEORGIA, BUGWOOD.ORG



Female flowers (with large green ovary in the middle)

CREDIT: [USANPN PHENOPHASES, FLICKR](#)



Male flowers (with 4 long stamens)

CREDIT: [BJORN S... FLICKR](#)



Female plant in winter (with berries)

CREDIT: ISCMV



Male plant in winter (without berries but remnants of male flowers)

CREDIT: ISCMV



Bark of a mature holly tree (white spots are lichen)

CREDIT: ISCMV

SIMILAR SPECIES

NATIVE

English holly is commonly mistaken for varieties of the genus *Mahonia* (Oregon grape). There are 2 native *Mahonia* species in the Metro Vancouver region, *M. nervosa* and *M. aquifolium* (Klinkenberg, 2017) – both have blue berries with alternate, evergreen, pinnate leaves with less prominent spines than English holly leaves.



Mahonia nervosa
Dull Oregon grape

CREDIT: RICHIE STEFFEN, GREAT PLANT PICKST



Mahonia aquifolium
Tall Oregon grape

CREDIT: UBC BOTANICAL GARDEN

NON-NATIVE

There are hundreds of holly species worldwide. *Ilex opaca* (American Holly) is found in the region. The Invasive Species Council of British Columbia's '[Grow Me Instead](#)' Program brochure suggests the following *Ilex* varieties as non-invasive ornamental alternatives to *Ilex aquifolium*: *I. x meservae* (Meserve hollies) and *I. x aquipernyi* (San Jose holly).



Ilex opaca
American holly

CREDIT: [DENDROICA CERULEA, FLICKR](#)

Tracking

The Provincial government maintains the [Invasive Alien Plant Program \(IAPP\) application](#) (British Columbia Ministry of Forests, Lands and Natural Resource Operations and Rural Development, 2017), which houses information pertaining to invasive plant surveys, treatments, and monitoring. Many agencies, including local governments, have their own internal invasive species inventory and mapping protocols that are used by staff, contractors and, in some cases, the public. For example, the City of North Vancouver has its own system called AlienMap. Agencies in British Columbia that do not enter data into IAPP are encouraged to check it regularly because it contains public reports and data from other agencies and it is important to consider as much data as possible when making management decisions. The Map Display module of IAPP is publicly accessible.

When carrying out English holly inventory it is useful to record the following information as it will later inform treatment plans:

- Size and density of infestation;
- Location in relation to the 10 metre Pesticide Free Zone adjacent to water courses; and
- Location in relation to other water sources, such as wells.

Reporting

Please report English holly occurrences to:

- The Provincial Report-A-Weed program (via smart phone app www.reportaweedbc.ca)
- The Invasive Species Council of Metro Vancouver: 1-604-880-8358 or www.iscmv.ca
- The municipality where the English holly was found
- The landowner directly – If the landowner is unknown, the [Invasive Species Council of Metro Vancouver](#) can provide support to identify the appropriate authority

Reports submitted through these channels are reviewed by invasive species specialists who coordinate follow-up activities when necessary with the appropriate local authorities. However, some people may be hesitant to report infestations as their presence may affect property values.

Prevention and Control Strategies

Effective invasive plant management techniques may include a variety of control techniques ranging from prevention, chemical, manual, mechanical, biological and/or cultural methods. Each method is described below in order of effectiveness. Follow-up monitoring and treatment will be required for several years regardless of the treatment technique.

Efforts to control English holly are varied throughout the region. It is a popular plant for volunteers and stewardship groups to tackle. The Pacific Spirit Park Society has a dedicated group (formerly called the “Holly Haulers”, now the EcoTeam) who tackle this plant specifically throughout the year (Pierzchalski, 2018).

To avoid scratches or injury from the prickly leaves, wear eye protection, long pants, long sleeves, sturdy footwear and work gloves when working around English holly (Pacific Spirit Park Society, 2018). Children and pets should be kept away from English holly berries. If ingested, vomiting should not be induced. Call the British Columbia Poison Control Centre (24-Hour Line: 1-800-567-8911 or 604-682-5050), or for pets contact a local veterinary emergency clinic.

STRATEGY COLOUR LEGEND
GREEN: RECOMMENDED
ORANGE: CAUTION
RED: NOT RECOMMENDED OR NOT AVAILABLE

PREVENTION: IMPERATIVE

Prevention is the most economical and effective way to reduce the spread of English holly over the long term.

When working in or adjacent to English holly, it is best to inspect and remove plants, plant parts, and seeds from

personal gear, clothing, pets, vehicles, and equipment and ensure soil, gravel, and other fill materials are not contaminated with English holly before leaving an infested area. Plants, plant parts, and seeds should be tarped or bagged before transport to an appropriate disposal site (see Disposal section).

English holly is readily sold as a horticulture plant or hedge throughout British Columbia. For some people, the plant holds cultural value as the berries and foliage are prized for holiday wreaths and crafts. However, it is recommended to avoid selling, planting, propagating, trading and otherwise encouraging the desire and spread of this plant in the region. Non-fruiting varieties of English holly should also be avoided due to the plant’s capacity for vegetative spread. Instead, regional native or non-invasive plants should be used. The Invasive Species Council of British Columbia’s ‘[Grow Me Instead](#)’ Program or [Metro Vancouver’s Grow Green website](#) provide recommendations for non-invasive, drought-tolerant plants, and garden design ideas. All materials (e.g., topsoil, gravel, mulch, compost) should be weed-free. Healthy green spaces are more resistant to invasion by invasive plants, so it is also important to maintain or establish healthy plant communities.

MANUAL/MECHANICAL: RECOMMENDED

Control will be most effective if the entire plants (roots and all) are removed (MacKenzie, 2018) (Pacific Spirit Park Society, 2018). Any remaining underground parts will re-sprout. Multiple follow-up removals are required (MacKenzie, 2018). The following manual/mechanical methods can be used on their own, or in combination, to control English holly:

- **Pulling or digging**
 - **Small plants (up to 3 centimetres in diameter)** removed by hand can be effective when the soil is moist (MacKenzie, 2018). Small seedlings should be pulled soon after they first appear. For sprouts that

don't come out easily by hand, digging around the plant with a shovel or pick will help loosen the soil (Pocock, 2018).

- **Medium-sized plants (trunks up to 10 centimetres in diameter)** may be pulled, dug or excavated using a manually-operated tool (e.g. Weed Wrench®, Extractigator® and others) that removes entire plants via a base with powerful jaws and a handle that uses leverage to pry the roots from the ground. For plants with many branches and prickly leaves, consider first using hand saws, pruners or loppers to cut the branches, followed by cutting the trunk to a height of about 1 metre from the ground, allowing for easier root removal (Pacific Spirit Park Society, 2018). To extract the roots, choose a pickaxe, shovel, extracting tool described above, or similar tool to loosen the roots and remove the entire plant (Pierzchalski, 2018). For larger plants, rock the plant back and forth in different directions or knock it down to help pry it out of the ground (MacKenzie, 2018). The position of extracting tools may need to be adjusted to grasp newly exposed lower portions of the plant as you work (Pacific Spirit Park Society, 2018). It may be necessary to uncover the roots with your hands and use clippers or loppers to cut them as you go if they do not come out easily. All roots should be removed, even if they have been cut.

For safety reasons, some volunteer groups in the region do not remove plants that are greater than 5 centimetres in diameter; larger plants are left for staff with tree removal training or are treated with herbicide (Worcester, 2018). Mature plants and trees have deep and extensive roots so removing them is labour-intensive and expensive and may cause significant soil disturbance. Removal of large trees should only be undertaken by professional arborists.

It is desirable to remove as much of the plant as possible (Stanley Park Ecology Society, 2012), which may be difficult, as the roots are very long and often grow laterally (Pierzchalski, 2018) or can be intertwined around other plant

roots or rocks (Pocock, 2018). Disturbance of the soil may encourage germination of seeds in the soil, so monitoring after pulling and digging is essential (Whatcom County Washington, 2018).

Follow up treatments are critical to successful manual treatment of holly (Worcester, 2018). A local study of holly treatment sites at 4 and 9 years following one-time manual removal, found the mean holly stem abundance was not significantly less than in control sites. In fact, at one site, holly stem abundance was greater than in the control (Haines, Cameron, & Hughes, 2016).

- **Girdling** or ring-barking is possible for large plants and trees. This technique should only be undertaken by professionals who have experience using this technique. The plant should be girdled as low to the ground as possible by cutting into the bark using a handsaw or chainsaw and removing a strip from around the entire circumference of the tree. There should be no branches below where the girdling occurs. The width of the girdle should be about the same as the diameter of the tree itself and the depth of the incision should be at least 1 centimetre (Worcester, 2018). Make a complete ring around the tree ensuring that the tree is unable to transport nutrients from the roots into the tree, and it will eventually die (MacKenzie, 2018).

Holly wood is quite hard and girdling may be more difficult compared to other tree species (Worcester, 2018). This technique should not be used in areas where there is concern about the tree falling after it dies, unless there are plans to cut down or remove the tree at this point (MacKenzie, 2018). Dead holly trees left onsite can also increase the fire hazard and should be assessed by a professional.

- **Cutting** holly at the base will usually result in re-sprouting (MacKenzie, 2018). Monitoring and repeated follow-up cutting of any re-growth may suppress the plant over time (Whatcom County Noxious Weed Control Board, 2018), but this method will likely not kill the plants. It may result



Holly tree with lower branches removed

CREDIT: ISCMV

in multi-stemmed thickets so should be undertaken with caution. Cutting can be done using pruners, loppers or hand saws.

Cutting is recommended when it can be done in combination with cut surface herbicide application, outlined below (Salisbury, 2013). It can also be used to control lower branches of large English holly trees to prevent layering (Stanley Park Ecology Society, 2012). Remove any branches on the lower part of the trees that are growing close to the ground (see photo).

For larger plants that cannot otherwise be removed or as a short-term management strategy, cutting can also be used

to remove berries to prevent seed spread (Pocock, 2018).

- **Brush cutting or mowing** will not be successful with English holly as it does not target the roots and it will grow back (MacKenzie, 2018). Furthermore, these techniques are not possible on large woody shrubs or trees.
- **Prescribed burning** is not recommended for English holly. Although holly wood burns easily, only moderate success is seen with prescribed burning and treatments need to be repeated (DiTomaso & Kyser, 2013). English holly leaves produce flammable vapour when heated, causing them to ignite easily, posing a fire risk (King County Noxious Weed Control Program, 2018). Further, prescribed burning is not selective and may require a permit from the local fire department.

Removal of female plants should be prioritized first to prevent further production of berries, especially if not all plants can be managed in one season. Seeds can still be viable and can germinate after they have been cut, so be sure to follow disposal recommendations (below) when dealing with plants with berries (Evergreen, 2015).

REMOVAL TIMING

English holly can be removed throughout the year. However, as berries can persist for many months, undertaking manual control methods prior to berry maturation or including a plan for removing and disposing of the berries during treatment is ideal. Often holly is managed by crews during the winter months as other high priority plants are targeted during the spring and summer and holly management is possible in the winter (Hendel, 2018). One advantage of conducting management in the winter is that English holly is easy to spot and access since deciduous plants will have lost their leaves (MacKenzie, 2018).

During the hottest part of the summer, English holly plants may be dry and brittle, and branches and roots may be more likely to break during treatment; similarly, during extreme cold and frost, plants may be frozen and easily snap (Pocock, 2018).

As with all environmental activities, caution must be taken to avoid disturbing wildlife throughout the year, especially nesting birds. While birds are not commonly known to nest in English holly, some will eat English holly berries (Pierzchalski, 2018) and use holly for perching and cover (Voth, 2018).

APPLYING MANUAL/MECHANICAL CONTROL METHODS IN RIPARIAN AREAS

English holly often grows in large contiguous patches right up to the edge of water courses. Consider the impact of control techniques and the resulting bare soil on adjacent water courses. Time removal works during a period that of least risk to fish species, outside of the [fish window](#). Adhere to Provincial and Federal riparian regulations. It is recommended to consult with a qualified environmental professional when working around water bodies.

CHEMICAL: CAUTION

When alternative methods to prevent or control invasive plants are unsuccessful, professionals often turn to herbicides. Chemical control may be required to control large English holly infestations that are not feasible to only control manually/mechanically, but this method should be used with caution for the following reasons (Crosby, 2018):

1. Weather conditions greatly influence treatment efficacy;
2. English holly may grow in riparian areas where pesticide use is restricted; and
3. Native vegetation is often integrated with English holly infestations. Mortality of non-target plants is possible.

With the exception of substances listed on Schedule 2 of the [Integrated Pest Management Regulation](#), the use of herbicides is highly regulated in British Columbia. Site characteristics must be considered with herbicide prescribed, based on site goals and objectives and in accordance with legal requirements. [This summary of the Integrated Pest Management Act](#) provides an overview of the Provincial legislation.

PESTICIDE LICENCE AND CERTIFICATION

A valid pesticide licence is required to:

- offer a service to apply most pesticides;
- apply most pesticides on public land including local government lands¹; and
- apply pesticides to landscaped areas on private land, including outside office buildings and other facilities.

Pesticide applicator certificates can be obtained under the category 'Industrial Vegetation Management' to manage weeds on industrial land, roads, power lines, railways, and pipeline rights-of-way for control of noxious weeds on

¹ on up to 50 hectares/year by a single organization. Organizations looking to treat over 50 hectares of land per year are also required to submit a Pest Management Plan and obtain a Pesticide Use Notice confirmation.

private or public land. Assistant applicator training is also available and the [online course and exam](#) are free.

Although an annual fee and annual reporting are required, it is best practice for personnel supervising or monitoring pesticide contracts to also maintain a pesticide applicator licence so they are familiar with certification requirements.

For more information on how to obtain a licence and the requirements when working under the Provincial [Integrated Pest Management Act and Regulation](#), please review the Noxious Weed & Vegetation Management section on this webpage: gov.bc.ca/PestManagement.

Pesticides (e.g., herbicides, insecticides, fungicides) are regulated by the Federal and Provincial government, and municipal governments often have pesticide bylaws.

- Health Canada evaluates and approves chemical pest control products as per the [Pest Control Products Act](#).
- The [Integrated Pest Management Act](#) sets out the requirements for the use and sale of pesticides in British Columbia. This Act is administered by the Ministry of Environment.
- Several municipalities have adopted bylaws that prohibit the use of certain pesticides.

Everyone who uses pesticides must be familiar with all relevant laws.

ONLY companies or practitioners with a valid Pesticide Licence and staff who are certified applicators (or working under a certified applicator) may apply herbicide on invasive plants located on [public lands](#) in British Columbia. Applicators must be either the land manager/owner or have permission from the land manager/owner prior to herbicide application.

On [private property](#) the owner may obtain a Residential Applicators Certificate (for Domestic class products only) or use a qualified company. Residents do not require a Residential Applicator Certificate for certain uses of domestic class glyphosate including treatment of plants that are poisonous for people to touch, invasive plants and noxious weeds listed in legislation, and weeds growing through cracks in hard surfaces such as asphalt or concrete. Refer to the 'Pesticides & Pest Management' and 'Home Pesticide Use' webpages listed in the Additional Resources Section for more information.

Questions? Contact the Integrated Pest Management Program: Telephone: (250) 387-9537
Email: bc.ipm@gov.bc.ca

HERBICIDE LABELS

Individual herbicide labels must always be reviewed thoroughly prior to use to ensure precautions, application rates, and all use directions, specific site and application directions are strictly followed. Under the Federal Pest Control Products Act and the Provincial Integrated Pest Management Regulation, **persons are legally required to use pesticides (including herbicides) only for the use described on the label and in accordance with the instructions on that label.** Failure to follow label directions could cause damage to the environment, poor control results, or danger to health. Contravention of laws and

regulations may lead to cancellation or suspension of a licence or certification, requirement to obtain a qualified monitor to assess work, additional reporting requirements, a stop work order, or prohibition from acquiring authorization in the future. A conviction of an offence under legislation may also carry a fine or imprisonment.

Herbicide labels include information on both the front and back. The front typically includes trade or product name, formulation, class, purpose, registration number, and precautionary symbols. Instructions on how to use the pesticide and what to do in order to protect the health and safety of both the applicator and public are provided on the back (British Columbia Ministry of Environment and Climate Change Strategy, 2011).

Labels are also available from the Pest Management Regulatory Agency's [online pesticide label search](#) or [mobile application](#) as a separate document. These label documents may include booklets or material safety data sheets (MSDS) that provide additional information about a pesticide product. Restrictions on site conditions, soil types, and proximity to water may be listed. If the herbicide label is more restrictive than Provincial legislation, the label must be followed.

HERBICIDE OPTIONS

The following herbicides can be used on English holly; although not specifically listed on these herbicide labels English holly may be treated under the general application provision for woody plants.

ACTIVE INGREDIENT (EXAMPLE BRAND NAMES)+	APPLICATION	PERSISTENCE	GROWTH STAGE	TYPE++
Triclopyr (example: Garlon™)	basal bark, cut surface, foliar	residual	actively growing (just before cut)	selective, no effect on grasses
Imazapyr (example: Arsenal™)	cut surface, foliar	residual	actively growing (just before cut)	non-selective
Glyphosate (many products)*	stem injection, cut surface, foliar	non-residual	actively growing	non-selective

+ The mention of a specific product or brand name of pesticide in this document is not, and should not be construed as, an endorsement or recommendation for the use of that product.

++ Herbicides that control all vegetation are non-selective, while those that control certain types of vegetation (for example, only grasses or only broadleaf plants) are termed selective.

* Glyphosate is considered the least effective herbicide for use with English holly no matter what method is used (Salisbury, 2013).

APPLICATION METHODS

Since manual/mechanical control is recommended for English holly plants less than 10 centimetres in diameter, chemical control is usually considered only for larger plants. Cut surface or stump application and stem injection methods have recently been tested in the Metro Vancouver region on English holly trees with varying success rates (Hendel, 2018). Larger scale American programs to chemically control English holly have shown good success using herbicide (Salisbury, 2013).

The preferred application methods to minimize non-target damage are outlined below.

- **Cut surface/stump application** (also known as 'cut and paint' or 'cut stump') involves cutting the stem as close to the ground as possible and applying herbicide directly to the entire cut surface, immediately after cutting (Whatcom County Washington, 2018). Compared to basal bark application and stem injection, this method usually results in more stump sprouts appearing after treatment (Salisbury, 2013).

This method can be used on any size plant that is too big to be removed by pulling. Use recommendations in the manual control section above for tips on cutting techniques.

Application can be done by a brush or by spray. This treatment can occur anytime during the year except should be avoided in the spring during periods of heavy sap flow or when low temperatures inhibit application of the herbicide due to freezing (Dow AgroSciences, 2018).

APPLYING PESTICIDE IN RIPARIAN AREAS

Provincial legislation prohibits the use of herbicides within 10 metres of natural water courses and 30 metres of domestic or agricultural water sources on public lands. On private lands herbicide labels need to be followed (which means for glyphosate products treatment can happen up to the water's edge) and other restrictions may apply (e.g. industrial sites, forestry sites, golf courses, etc.). On public lands, glyphosate is the only active ingredient that can be applied within the 10 metre Pesticide-Free Zone (PFZ)² in British Columbia in accordance with the Integrated Pest Management Act and Regulation and all public land Pesticide Management Plans (PMPs). A plant must be either a listed Noxious Weed (under the [Weed Control Act](#)) or appear in the *Forest and Range Practices Act Invasive Plants Regulation* to be treated within the 10 metre PFZ. **English holly is not listed and therefore glyphosate and other herbicides can only be applied on English holly up to 10 metres away from the high water mark (HWM)³.** The 30 metre no-treatment zone around a water supply intake or well used for domestic or agricultural purposes may be reduced if the licensee or PMP holder is "reasonably satisfied" that a smaller no-treatment zone is sufficient to ensure that pesticide from the use will not enter the intake or well.

² The Pesticide-Free Zone (PFZ) is an area of land that must not be treated with pesticide and must be protected from pesticide moving into it, under the *Integrated Pest Management Act and Regulation*.

³ The High Water Mark (HWM) is defined as the visible high water mark of any lake, stream, wetland or other body of water where the presence and action of the water are so common and usual and so long continued in all ordinary years as to mark upon the soil of the bed of the lake, river stream, or other body of water a character distinct from that of the banks, both in vegetation and in the nature of the soil itself. Typical features may include, a natural line or "mark" impressed on the bank or shore, indicated by erosion, shelving, changes in soil characteristics, destruction of terrestrial vegetation, or other distinctive physical characteristics. The area below the high water mark includes the active floodplain (British Columbia Ministry of Environment and Climate Change Strategy, 2011).

When managing English holly with herbicide in riparian areas:

- Observe and mark all PFZs while on site.
- The HWM should be determined by careful evaluation by the applicator.
- Distances in PFZs should be measured as horizontal distance.
- Herbicides restricted in a PFZ must not enter these zones by leaching (lateral mobility) through soil or by drift of spray mist or droplets.
- Treatments should be conducted when water levels are low (e.g. summer months) to reduce risk.
- Note that efficacy may be dependent on site conditions, including moisture in the soil.

Monitoring and follow-up treatments are critical as painted stumps will often exhibit re-growth after only one treatment. At the same site, some trees may respond after only one treatment while others may require follow up treatments (Worcester, 2018). Regrowth can occur from the cut stump or laterally from the remaining part of the trunk, sometimes at bizarre angles (Pierzchalski, 2018). The release of the seed bank under cut stumps can also be an ongoing issue (Worcester, 2018). Total control may not be apparent for years after treatment.

- **Stem injection** may be used to insert herbicide capsules around the base of the trunk with an injection lance (such as [EZ-ject®](#)). These hand-held tools are designed to inject herbicide-filled capsules into the base of a tree, stump, or bush with one simple spring-loaded movement. All branches below the application point must be removed (Caldicott, 2019). This technique reduces exposure risk to

the applicator and reduces non-target herbicide effects compared to foliar application. The EZ-ject™ treatments is best for larger English holly plants that cannot be removed manually (Voth, 2018).

The number of capsules injected into the trunk depends on the herbicide product and the DBH (diameter at breast height). EZ-ject™ recommends one capsule every 5 centimetres around the circumference at the base of the tree above the root collar but below the lowest live branch (or remove the branch) (EZject™, 2018). If capsules are injected at only one side of the tree, the herbicide will not be transferred adequately and the damage will not be sufficient for full death as the tree will likely heal over the decay (Caldicott, 2019). English holly wood is quite hard and sometimes capsules fall out during application in which case they need to be re-injected (Hendel, 2018). It is essential to follow the protocols for injection otherwise the treatments will not be successful as holly has an amazing capacity to recover if given the chance (Worcester, 2018).

Injections can be successful in either fall or spring. This method may require several weeks or months to show signs of plant death or death of surrounding sprouts (Law, Chookolingo, Soria, & Nathania, 2017).

Stem injection of English holly trees with glyphosate in Pacific Spirit Regional Park was tested in 2017. All of the trees needed to be monitored and took longer than anticipated to show signs of death (Worcester, 2018). Those trees that were treated in fall using the manufacturer's instructions showed signs of death the following summer. Treatments proved difficult and pre-injection prep (i.e. trimming lower branches to gain good access to apply the herbicide around the base in a complete circle) is recommended to ensure success using this method (Worcester, 2018).

- **Basal bark application** involves spraying the base of woody plants or stems and any exposed roots. All sprouts or stems within a 30 centimetre radius of the main stem

should be cut or treated at the same time (Salisbury, 2013). Triclopyr is the only herbicide that can be applied with this method.

- **Foliar application** is not recommended on English holly due to the thick, waxy leaves that reduce herbicide absorption and lower efficacy (Whatcom County Washington, 2018). The addition of a surfactant may improve absorption.

Note that after herbicide treatment plants may grow small stem enations or buds that may represent potential new sprouts (Salisbury, 2013). This is much more likely to occur with use of glyphosate, no matter what technique is used, especially after spring treatments (Salisbury, 2013).

CULTURAL: NOT RECOMMENDED

Although goats and other livestock may browse English holly foliage, the berries are poisonous to them as they are to humans (Ohio State University, 2018). DiTomaso *et al.* observed poor control rates (below 50%) with grazing of English holly (DiTomaso & Kyser, 2013). Grazing opportunities are limited in urban areas due to municipal bylaws regulating agriculture animals, the high probability of interface with the public, and the damage animals could cause to riparian areas and other sensitive sites with multiple land uses. Due to these constraints and the risk to animal health, cultural control is not recommended as a management option for this species in the Metro Vancouver region.

BIOLOGICAL: NOT AVAILABLE

No biological control agents are currently available for distribution in British Columbia. However, there are a few insects and pathogens that pose challenges to holly farmers in British Columbia (British Columbia Agriculture in the Classroom Foundation, 2014). Since holly is prized for its foliage and berries, farmers desire unblemished holly plants. Two species of leafminer ('Holly leafminer' – *Phytomyza ilicis* and 'native holly leafminer' – *Phytomyza illicola*) found in British Columbia since the early 1900s exclusively feed on English and American hollies. Larvae consume the inner tissue of leaves leaving damage appearing as yellow, brown, or reddish mines on the leaves (Hollingsworth, 2018).

Due to the ornamental value of holly, the leafminers themselves are considered the pests, and are targeted for control (Hollingsworth, 2018). There is no data on whether the leafminers would be suitable biocontrol agents in regions where English holly is an undesired species. Similarly, *Phytophthora ilicis*, a leaf and twig blight, has been observed infecting English holly in Canada, causing leaf and berry damage (Pscheidt & Ocamb, 2018). It is also unclear whether this disease is a candidate for future biocontrol of English holly as its current status is an ornamental plant pest.

The British Columbia Institute of Technology carried out a trial at Burnaby Lake Regional Park using Chontrol peat paste, a biological herbicide for the inhibition of re-sprouting and re-growth from cut stumps; the treatment was ineffective (Caldicott, 2019).

CONTROL SUMMARY

The following table provides a summary and comparison of control methods for English holly.

CONTROL STRATEGY	TECHNIQUES	APPLICABLE SITE TYPE	PROS	CONS
Manual	Pulling or digging	Small to medium sized plants, small infestations	Selective, small plants can be managed by volunteers, inexpensive	Creates disturbance, labour intensive, must remove entire plant, must deal with biomass
Mechanical	Girdling	Large plants, trees	Selective, relatively quick method for killing large plants with no other treatment options, non-chemical	Done by professionals, risk of tree falling once dead
Mechanical	Cutting	Medium to large plants, trees	Selective, non-chemical, inexpensive, can be used in combination with chemical control	Will not kill the plants, stump sprouts will occur
Chemical	Cut surface/stump application, stem injection, basal bark application, foliar application	Large plants, trees	Treatment method for plants that cannot be managed other ways, less labour intensive, treat large areas, less disturbance of surrounding environment	Some techniques not recommended, unintended environmental/health impacts, high public concern, requires trained staff, speciality equipment and herbicide products
Cultural	Not recommended			
Biological	No biological control agents are currently available for distribution in British Columbia			

Disposal

ON SITE DISPOSAL

Due to the risk of suckering and rooting, it is best practice to remove as much of the holly roots and stems off site as possible. If sections of cut holly are left for even a year or two, they can continue to grow (Dreves, 2018).

Holly biomass without berries can be chipped with a machine and blown back onto the site (MacKenzie, 2018). Holly berries should not be composted at home or at municipal works yards as the temperature may not be high enough to kill the seeds.

Dead plants and debris left onsite can increase the fire potential and should be assessed for risk.

OFF SITE DISPOSAL

When disposing off site, transport plant parts on tarps or in thick plastic bags to an appropriate disposal or compost facility. In the Metro Vancouver region, the several facilities accept English holly plants and/or infested soil. Please consult [this disposal facility list](#) for current details.

PLEASE CONTACT ALL FACILITIES BEFOREHAND TO CONFIRM THEY CAN PROPERLY HANDLE THE MATERIAL.

CLEANING AND DISINFECTION⁴

Before leaving a site, all visible plant parts and soil from vehicles, equipment, and gear should be removed and rinsed if possible. When back at a works yard or wash station, vehicles should be cleaned and disinfected using the following steps:

- Wash with 180 °F water at 6 gpm, 2000 psi*, with a contact time of ≥ 10 seconds on all surfaces to remove dirt and organic matter such as vegetation parts or seeds. Pay special attention to undercarriages, chassis, wheel-wells, radiators, grills, tracks, buckets, chip-boxes, blades, and flail-mowing chains.
- Use compressed air to remove vegetation from grills and radiators.
- Sweep/vacuum interior of vehicles paying special attention to floor mats, pedals, and seats.
- Steam clean poor access areas (e.g., inside trailer tubes) – 200 psi @ 300°F.
- Fully rinse detergent residue from equipment prior to leaving facility.

* Appropriate self-serve and mobile hot power-wash companies in the Metro Vancouver region include: Mary Hill Truck Wash, Omega Power Washing, Eco Klean Truck Wash, RG Truck Wash, Ravens Mobile Pressure Washing, Hydrotech Powerwashing, Platinum Pressure Washing Inc, and Alblaster Pressure Washing. Wash stations should be monitored regularly for English holly growth.

⁴ Adapted from Metro Vancouver 2017 Water Services Equipment Cleaning Procedures and Inspection Protocols.

Follow-up Monitoring

Whatever control method is used, follow-up monitoring and maintenance treatments are components of an integrated management plan or approach.

For **manually treated** sites, follow-up monitoring should take place for at least 4 years following initial treatment. English holly has a relatively short-lived seed bank. Research

suggests that germination typically happens after one-year; seed banks are reduced by 80–90% of the initial seeds after three years (Sagrario & Francisco, 2014).

Chemical treatments should be repeated as directed on the herbicide label to control any subsequent growth.

Restoration

Restoration is recommended to create competition, control English holly regrowth and replace lost habitat. Planting should not take place until control of new seedlings has been conducted.

Mulch can be used to avoid leaving bare soil and reduce colonization from other invasive plant species. The International Society of Arboriculture and relevant municipal Parks or arboriculture departments offer guidelines for mulch application. Specific mulch depths can be used to control invasive weeds and encourage plant growth (International Society of Arboriculture, August).

Examples of common competitive native species prescribed for sites within the Metro Vancouver region are summarized in the table below based on site moisture. Replacement species should be chosen based on the ecology of the site by a qualified environmental professional. Local biologists, environmental professionals, agronomists, agrologists, native and domestic forage specialists, seed companies and plant nurseries are all good sources for localized recommendations for regional native species and regionally adapted domestic species, based on site usage. There are several science-based resources available to guide restoration efforts, such as the South Coast Conservation Program’s [Diversity by Design](#) restoration planning toolkit.

WET SITES	MOIST SITES	DRY SITES
SHRUBS		
Salmonberry	Salmonberry	Thimbleberry
Hardhack	Willow	Nootka rose
Willow	Red osier dogwood	Red flowering currant
Red osier dogwood	Red elderberry	Snowberry
Pacific ninebark	Vine maple	Tall Oregon grape
	Indian plum	Oceanspray
TREES		
Western red cedar	Western red cedar	Douglas-fir
Red alder	Red alder	Red alder



CREDIT: ISCMV

Plants listed in the “Similar Species” section above would also be suitable restoration species for English holly management sites.

Revegetation of the site to a domestic or cultured non-native plant species composition may be considered in some circumstances. Often domestic species establish faster and grow more prolifically, which aids in resisting English holly re-invasion.

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Additional Resources

For more information please refer to the following resources.

- British Columbia Ministry of Forests, Lands, and Natural Resource Operations, Invasive Alien Plant Program (IAPP). <https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/invasive-species/reporting-invasive-species>
- E-Flora BC, an Electronic Atlas of the Plants of British Columbia. www.eflora.bc.ca/
- Grow Green Guide. www.growgreenguide.ca
- Grow Me Instead. <http://bcinvasives.ca/resources/programs/plant-wise/>
- Pesticides and Pest Management. Province of British Columbia <https://www2.gov.bc.ca/gov/content/environment/pesticides-pest-management>
- Washington State English Holly. Washington State Noxious Weed Control Board. <https://www.nwcb.wa.gov/weeds/english-holly>

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Hedera helix

Hedera hibernica

BEST MANAGEMENT PRACTICES FOR
English and Irish Ivies
in the Metro Vancouver Region

Disclaimer

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Introduction

The impacts of invasive species on ecological, human, and economic health are of concern in the Metro Vancouver region. Successful control of invasive species requires concerted and targeted efforts by many players. This document – “**Best Management Practices for English and Irish Ivies in the Metro Vancouver Region**” – is one of a series of species-specific guides developed for use by practitioners (e.g., local government staff, crews, project managers, contractors, consultants, developers, stewardship groups, and others who have a role in invasive species management) in the region. Together, these best practices provide a compendium of guidance that has been tested locally by many researchers and operational experts.

English ivy (*Hedera helix*) and Irish ivy (*Hedera hibernica*)¹ are native to Europe and western Asia. English ivy was introduced to North America during the earliest days of colonialism (Centre for Agriculture and Bioscience International, 2018) and has become increasingly problematic in natural and human-altered landscapes throughout the Metro Vancouver region. Ivy spreads

vegetatively and by seed and it tolerates a wide range of soil, moisture and light conditions. It is still commonly grown and sold as an ornamental plant and valued for its hardy, attractive, evergreen groundcover. Ivy’s ability to take over forest understories, suppress the growth of native species, and alter the tree canopy makes it a serious invader.

Academic institutions, government, and non-government organizations continue to study this species in British Columbia. As researchers and practitioners learn more about the biology and control of ivy, it is anticipated that the recommended best management practices will change overtime and this document will be updated. Please check metrovancover.org regularly to obtain the most recent version of these best management practices.

REGULATORY STATUS

Section 2 (1) b (iii) of the [Community Charter, Spheres of Concurrent Jurisdiction – Environment and Wildlife Regulation](#), states that “municipalities may regulate,

¹ Irish ivy (*Hedera hibernica*) is also known by the common name Atlantic ivy (E-Flora, 2017). Unless distinctions are specified, these species are collectively referred to as ivy.

prohibit and impose requirements in relation to control and eradication of alien invasive species”, which includes English ivy under Terrestrial Vascular Plants of Schedule 1.

IMPACTS

Ivy forms dense monocultures that grow along the ground and climb trees and structures. It smothers native vegetation and may inhibit understory growth in Lower Mainland riparian forests (Fierke & Kauffman, 2005). In Vancouver’s Stanley Park, ivy density was correlated with a reduction in species richness and changes in species composition (Quinn & Best, 2002). A similar pattern was found in a survey of three urban parks in Seattle where ivy was found to change community plant structure, largely by reducing the shrub layer (Dlugosch, 2005). Ivy’s shallow root systems can also increase soil erosion (Soll, 2005).

Ivy is especially detrimental to trees. It can engulf and encircle shrubs and trees of all sizes. Ivy cover deprives bark of normal contact with air and microorganisms (King County Noxious Weed Control Program, 2004). The weight of ivy is capable of breaking branches and toppling trees, especially in conjunction with storm or disease events (Soll, 2005).

Ivy can impact a tree’s ability to maintain sufficient healthy branches and leaves to photosynthesize. Ivy also serves as a reservoir for bacterial leaf scorch (*Xylella fastidiosa*), a plant pathogen that is harmful to maples, oaks, elms, and other native plants (Mcelrone, Sherald, & Pooler, 1999). It is more difficult for tree risk assessors to determine the health of trees by visual observation when trees are covered in dense ivy (Pocock, 2018).

Monocultures of ivy can have rippling consequences through higher trophic levels. Altering the structure of all forest layers, ivy can significantly impact native birds that are reliant on native forest structures (Quinn & Best, 2002). The berries are mildly toxic to birds (Barnea, Harborne, & Pannell, 1993), especially native birds that are not adapted to the toxin.

Ivy berries and leaves are toxic to humans and livestock if eaten (King County Noxious Weed Control Program, 2004)



Ivy climbing a mature tree

CREDIT: F. STEELE

and may cause dermatitis in sensitive individuals (Dreves, 2018). Dense ivy mats provide hiding areas for rats, other vermin and debris (King County Noxious Weed Control Program, 2004). Ivy has the ability to damage infrastructure upon which it grows (Invasive Species Council of British Columbia, 2017). Ivy-caused tree failures may also harm infrastructure and residents.

Evidence suggests that ivy benefits from high carbon dioxide concentrations under warm conditions, suggesting that it will become more resilient as the climate changes (Manzanedo, et al., 2018).

All levels of government, non-profit organizations and private property owners spend significant resources

managing ivy in the Metro Vancouver region every year. In recent years, agencies represented on Metro Vancouver's Regional Planning Advisory Committee - Invasive Species Subcommittee together have spent over \$220,000 on ivy control and volunteer stewardship annually. This figure does not include control costs for private landowners across the region or costs associated with education and awareness activities.

REPRODUCTION AND SPREAD

Ivy's primary method of spreading is vegetative (Strelau, Clements, Benner, & Prasad, 2018). Stems or stem fragments root quickly when they come in contact with soil (Waggy, 2010). The plant also produces adventitious roots that adhere easily to both natural and artificial structures, allowing it to spread through a new area quickly once established (Melzer, Seidel, Steinbrecher, & Speck, 2012).

Ivy also reproduces by seeds, but flowers will only develop on mature stems, when there is sufficient light (Soll, 2005). Seeds can be dispersed by birds, especially European birds that are adapted to its mild toxicity such as European starling and English house sparrow. Native birds such as thrushes, Stellar's jay, cedar waxwing and American robin have been observed consuming ivy berries in the Pacific Northwest (Strelau, Clements, Benner, & Prasad, 2018). Ivy seeds germinate quickly (in as little as 5-20 days) but are short-lived and do not form a persistent seed bank (Waggy, 2010). It is not uncommon to see single ivy plants germinating in otherwise undisturbed tracts of forests where the only source can be attributed to seed dispersal by birds.

English ivy was introduced as a horticultural species and continues to be sold by local nurseries and planted by

horticulture professionals and the public. Horticulture and associated garden waste disposal also contribute to its spread (Reichard & White, 2001). A study in Surrey, British Columbia found that ivy occurrence decreases with increased distance from roads, suggesting that human infrastructure is a vector for spread (Chance, et al., 2016).

HABITAT AND DISTRIBUTION

Ivy is commonly found in urban forests growing on the forest floor and up the trunks of canopy trees. It can also be found on rocks/cliffs, sunny fields, and in human-dominated habitats such as gardens and up fences, posts and walls (Centre for Agriculture and Bioscience International, 2018). It is most common in forest parks close to urban centres (Centre for Agriculture and Bioscience International, 2018).

Although ivy can tolerate a variety of light and soil conditions, it prefers direct sunlight and moist, well-drained soils (Strelau, Clements, Benner, & Prasad, 2018). Young plants are shade tolerant, enabling growth under existing dense stands of plants and trees (Invasive Species Council of British Columbia, 2017).

English ivy occurs naturally from the Caucasus Mountains to northern Europe and as far south as Iran and the southern coast of the Mediterranean (Waggy, 2010). Irish ivy has a similar native range (Strelau, Clements, Benner, & Prasad, 2018). Common throughout southwestern British Columbia, including the Metro Vancouver region, Vancouver Island, and the Gulf Islands (Strelau, Clements, Benner, & Prasad, 2018), ivy has also been found in other coastal regions of the province, including on Haida Gwaii. There are isolated reports of English ivy in the southern interior and Kootenays (Invasive Species Council of British Columbia, 2017).

Identification

There are two species of *Hedera* in Canada: *Hedera helix* and *Hedera hibernica*. These species are difficult to distinguish taxonomically and for management purposes are often considered the same taxon (Strelau, Clements, Benner, & Prasad, 2018). *H. helix* has erect trichomes (hairs) on the underside of the leaves while *Hedera hibernica* has flat trichomes. One study of invasive ivy populations in the Pacific Northwest (including several sites in the Lower Mainland) found the majority of samples were *H. hibernica*, not *H. helix* as presumed (Clarke, Reichard, & Hamilton, 2006) (Green, Ramsey, & Ramsey, 2013). The management strategies outlined in this document can be applied to both species (Strelau, Clements, Benner, & Prasad, 2018).

English ivy is an ornamental species and many colour and leaf variations exist, including the *Hedera helix* 'Variegata' with variegated leaves (Moore, 2018). Many varieties of ivy have escaped human cultivation in the Metro Vancouver region. All *Hedera* species are potentially invasive (Invasive Species Council of British Columbia, 2013) and planting should be avoided. The *Hedera* genus is known to hybridize, making separating and identifying species and cultivars difficult (Strelau, Clements, Benner, & Prasad, 2018).

The following identification information was collected from various sources.

Lifecycle: Woody, evergreen perennial with two distinct growth phases. The most common is the shade-tolerant, vegetative **juvenile (immature) phase** that manifests as a vine or groundcover. This stage lasts about 10 years (King County Noxious Weed Control Program, 2004). When enough light becomes available, ivy may develop an **adult (mature) phase**, growing as a shrub or vertically up a tree or structure. In this adult phase, ivy is able to reproduce sexually. Both growth phases may be found on different stems of the same plant. The longevity of ivy in British

Columbia has not been extensively studied, but reports of stems over 50 years old are not uncommon in its native range (Okerman, 2001) (Waggy, 2010).

Stem: Woody stems can grow over 30 metres tall/long and 30 centimetres in diameter (Strelau, Clements, Benner, & Prasad, 2018). Stems are purple-green, turning brown with age. Juvenile stems can grow adventitious roots (or rootlets) at the leaf nodes, helping the ivy to climb by securing it to structure. These rootlets do not absorb nutrients or water, although they can develop into true roots (Strelau, Clements, Benner, & Prasad, 2018).

Leaves: Alternate, leathery, evergreen leaves. Juvenile leaves are distinctive with 3-5 lobes that are dark, glossy green with whitish veins. Mature leaves are spirally arranged, lighter green, unlobed, and more rounded (ovate to rhombic) with veins that are less distinctive (Okerman, 2001). Colour and leaf variations exist, including a variety with variegated leaves (see below).

Flowers: Only produced on mature stems. Flowers are greenish-white to greenish-yellow and appear from summer to early fall (Invasive Species Council of British Columbia, 2017). Flowers grow in terminal clusters (umbels) with 8 to 20 flowers per cluster and 3 to 6 clusters per terminal stem.

Fruit: Bluish-black berries, 2-5 seeded (E-Flora, 2017), maturing in the spring.

Other characteristics: ivy has a potent smell when crushed.

The following photos show ivy plant parts.



Juvenile leaf
CREDIT: ISCMV



Mature leaf
CREDIT: ISCMV



Flowers (mid-November)
CREDIT: ISCMV



Fruit (berries)
CREDIT: FOREST AND KIM
STARR, STARR ENVIRONMENTAL,
BUGWOOD.ORG



Stem
CREDIT: ISCMV



Adventitious roots on juvenile stem allow the plant to adhere to structures (e.g. walls and fences) or other vegetation (e.g. trees)
CREDIT: ISCMV



Ivy roots
CREDIT: ISCMV

SIMILAR SPECIES

NON NATIVE SPECIES

- Virginia creeper (*Parthenocissus quinquefolia*): Leaves alternate and composed of five leaflets, in palmate arrangement (with stems originating from a single central point) (Canadian Wildlife Federation, 2019). This plant is also considered locally invasive.



Virginia creeper

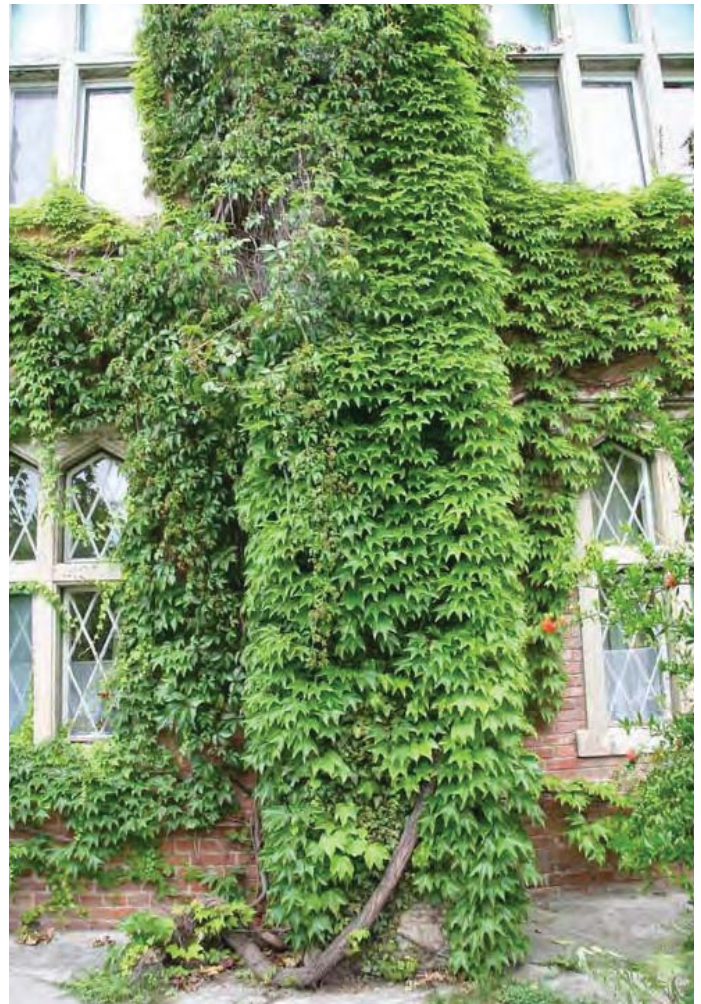
CREDIT: T. WEBSTER, USDA AGRICULTURAL RESEARCH SERVICE, BUGWOOD.ORG



Hedge bindweed

CREDIT: [BREWBOOKS](#), [FLICKR](#)

- Hedge bindweed (*Calystegia sepium*): stems trailing to climbing (cannot attach to structures); leaves alternate, arrowhead-shaped with tips pointed, and thinner than ivy leaves (E-Flora, 2017). This plant is also considered locally invasive.
- Boston ivy (*Parthenocissus tricuspidata*): Leaves are alternate, turning red in the fall; young leaves are composed of 3 distinct leaflets and mature leaves are 3-lobed (Boyd Nursery Company, 2019).



Boston ivy

CREDIT: R. VIDÉKI, BUGWOOD.ORG

Tracking

The Provincial government maintains the [Invasive Alien Plant Program \(IAPP\) application](#) (British Columbia Ministry of Forests, Lands and Natural Resource Operations and Rural Development 2017), which houses information pertaining to invasive plant surveys, treatments, and monitoring. Many agencies, including local governments, have their own internal invasive species inventory and mapping protocols that are used by staff, contractors and, in some cases, the public. For example, the City of North Vancouver has its own system called AlienMap. Agencies in British Columbia that do not enter data into IAPP are encouraged to check it regularly because it contains public reports and data from other agencies and it is important to consider as much data as possible when making management decisions. The Map Display module of IAPP is publicly accessible.

When carrying out an ivy inventory it is useful to record the following information as it will later inform treatment plans:

- Size and density of infestation;
- Whether the ivy is growing on trees or infrastructure;
- Location in relation to the 10 metre Pesticide-Free Zone (PFZ) adjacent to water courses;
- Location in relation to other water sources, such as wells; and
- The suspected source of infestation (e.g., green waste dumping, spread from an adjacent private garden, etc.).

Reporting

Since ivy is widespread throughout the Metro Vancouver region and does not pose an imminent health risk, there is generally little value in reporting individual occurrences, unless it is suspected that the integrity of infrastructure or a tree infested by ivy is compromised and posing a safety risk. In this case, contact the property owner to report the concern.



CREDIT: F. STEELE

Prevention and Control Strategies

Effective invasive plant management techniques may include a variety of control techniques ranging from prevention, manual, mechanical, chemical, cultural and/or biological methods. Each method is described below in order of effectiveness. Factors such as terrain, time of year and density, depth and size of the infestation must be considered when making management decisions for ivy (Strelau, Clements, Benner, & Prasad, 2018).

Some people may develop a skin reaction upon contact with ivy (Strelau, Clements, Benner, & Prasad, 2018). It is advised to wear gloves and protective clothing no matter which control strategies are used. Care should be taken in urban natural areas to inspect the site for hazardous materials or garbage such as broken glass or hypodermic needles prior to management. Debris and discarded materials have a tendency to become embedded in thick patches of ground ivy due to the plant's quick growth (Pocock, 2018).

When working in steep areas, consider slope and erosion safety protocols (King County Noxious Weed Control Program, 2004).

Follow-up monitoring and treatment will be required for several years regardless of the treatment technique.

STRATEGY COLOUR LEGEND
GREEN: RECOMMENDED
ORANGE: CAUTION
RED: NOT RECOMMENDED OR NOT AVAILABLE

PREVENTION: IMPERATIVE

Prevention is the most economical and effective way to reduce the spread of ivy over the long term.

When working in or adjacent to ivy, it is best to inspect and remove plants, plant parts, and seeds from personal gear, clothing, pets, vehicles, and equipment and ensure soil, gravel, and other fill materials are not contaminated with ivy before leaving an infested area. Plants, plant parts, and seeds should be piled in/on tarps or bagged before transport to an appropriate disposal site (see Disposal section).

It is best not to purchase, trade or grow ivy, including ivy plants in hanging baskets or containers. Instead, regional native or non-invasive plants should be used. The Invasive Species Council of British Columbia's '[Grow Me Instead](#)' Program or [Metro Vancouver's Grow Green website](#) provide recommendations for non-invasive, drought-tolerant plants, and garden design ideas. All materials (e.g., topsoil, gravel, mulch, compost) should be weed-free. Healthy green spaces are more resistant to invasion by invasive plants, so it is also important to maintain or establish healthy plant communities.

If ivy is already present in a garden, it is critical to prevent the plant from expanding and invading adjacent parks and natural areas.

MANUAL/MECHANICAL: RECOMMENDED

Although manual/mechanical control is time-consuming, labour-intensive, costly and requires regular monitoring, it is effective (Okerman, 2001) (Quinn & Best, 2002). Manual/mechanical removal may increase the risk of root fragments re-sprouting or reinvasion from adjacent populations (Okerman, 2001); therefore, care must be taken to prevent the spread of plant parts (see Cleaning and Disinfection section below for more information).



Ivy-infested trees after manual control – note the dead ivy stems and leaves in the upper portions of the trees.

CREDIT: F. STEELE

The following manual/mechanical methods can be used to control ivy:

- **Cutting/Pulling** with hand snips, shears, pruners or hand saws may be the most effective control method for ivy and can be used on groundcover ivy and ivy growing up trees/infrastructure. However, the priority should be to remove the ivy growing up trees to prevent tree damage and seed production (Dreves, 2018).

From trees: Using pruners or saws, the ivy stems should be cut at chest height around the entire trunk of the tree (or vertical surface) being careful not to cut or damage the tree bark or surface. It can then be removed off the tree and from the surrounding ground 1-2 meters in diameter from the base of the tree (Pocock, 2018). This method is also known as the 'life-saver ring'. With caution, crowbars

or other tools can be used to pry ivy from trees to avoid damaging the bark. If vines are embedded into the bark, either end of the stem should be cut and left to avoid damaging the tree further. Having severed the nutrient and water supply, the ivy remaining above chest height will eventually die off and should be left in place – trying to remove ivy in tree canopies can damage the tree further or injure the worker. Note that the remaining dead biomass can be a fire hazard for months or even years after treatment. Timing of control should be carefully considered, especially at sites adjacent to human ignition sources (Pocock, 2018).

Cutting and pulling ivy from the ground can be a very effective control method. It is best to take a good hold of the vine and gently tug in the direction of growth, loosening the roots from the ground (Pocock, 2018).

For long vines, each vine should be bundled for ease of removal from the site. As much of the root mass should be removed from the ground as possible, taking care under large woody debris and under the roots of native vegetation (Pocock, 2018). This method requires persistence when vines are tangled. It is best to choose one vine at a time rather than ripping or tearing tangled vines that will leave broken root fragments in the soil (Pocock, 2018).

If a ground infestation is large, a 'continuous mat', 'carpet roll' or 'burrito roll' method can be used. While positioned along the outer edge of the infestation, the ivy should be rolled in a continuous mat away from you, carefully cutting the ivy vines and loosening all roots with your hands as you roll (Pocock, 2018). The 'roll' can be clipped away from native vegetation, and severed into pieces for ease of removal. This method is best used on flat ground, where ivy dominates the site and when multiple people are working together (Pocock, 2018). Be careful not to damage non-target roots. A large roll or pile of ivy is produced using this method, which may be difficult to remove offsite. Alternatively, roughly cut a 2 metre by 3 metre section with hand snips and starting at the short end, roll the ivy away from you. The roll can be picked up and moved as needed.

Care should be taken when working around native plants and to minimize soil disturbance that could lead to increased erosion or compaction (Waggy, 2010). The area around the site should be inspected as the ivy may have runners that extend beyond the main patch. Bird nests (ground and in trees), salamanders, and other wildlife may be present on site. If working during bird nesting season, the site should be inspected by a qualified environmental professional. The site should be replanted with native plants or it may be susceptible to reinvasion (Biggerstaff & Beck, Effects of Method of English Ivy Removal and Seed Addition on Regeneration of Vegetation in a Southeastern Piedmont Forest, 2007). See Restoration section below for more specific recommendations.

- **Mulch application** can be used as a stand-alone control method or after other manual control techniques have been used. Application of a 30 centimetre thick layer of coarse, woody mulch overtop of groundcover ivy may prevent the regrowth of stems and root fragments. If used as the primary control method, mulch should be kept in place for at least two years before implementing restoration activities (King County, 2018). This method is not suitable for steep sites. Mulch can also be applied after ivy has been pulled or around new plants introduced at the site as part of restoration activities.

- **Heat treatment** is possible by use of a weed torch or similar tool. The Langley Environmental Partners Society has had some success using a propane weed torch (Dreves, 2018). The tool produces a continuous flame when ignited and a flame-control squeeze valve on the wand allows the applicator to control the flame size. The flame is applied to the leaves, increasing the temperature enough to destroy the cells, but not burn the leaves. The leaves visibly change after treatment, appearing shiny. This method is best done in teams of two people, with one person operating the wand and the other person managing the propane tank and hose (Dreves, 2018).

This method should only be used during the winter months (Dreves, 2018) or during times of low fire risk (typically October to April in the Lower Mainland). After initial treatment, a follow-up treatment should be conducted three weeks later (Dreves, 2018). Any other plant material contacted by the flame will be impacted, so caution must be used to directly target the ivy. Heat treatment is unlikely to kill ivy outright but with repeated treatments may deplete its energy reserves to the point of killing it (Waggy, 2010). Advantages of this method are that it is suitable for large areas, disposal is not necessary, it is less work for practitioners (doesn't require bending, pulling and repetitive motions), and it requires less people to manage a site (Dreves, 2018).

- **Mowing** ivy infestations may be suitable in areas that are already mowed regularly (King County Noxious Weed

Control Program, 2004). However, mowing may increase the risk of spread by root fragments and clippings must be removed.

REMOVAL TIMING

Ivy can be manually removed year-round, but the ideal time for removal is during the fall and spring when the ground is moist and ivy vines are more flexible (Pocock, 2018). In the fall, leaf litter can make it more difficult to find the plants. During the hottest part of the summer, ivy plants may be dry and brittle, and branches and roots may be more likely to break during treatment. Similarly, during extreme cold and frost, plants may be frozen and easily snap (Pocock, 2018).

Often ivy is the focus of crews during the winter months as other high priority plants are targeted during the spring and summer. One advantage of conducting management in the winter is that it is easy to spot and access the ivy since deciduous plants will have lost their leaves. Winter management also avoids impacts on breeding birds and amphibians (Soll, 2005).

As with all environmental activities, caution must be taken to avoid disturbing wildlife throughout the year, especially nesting birds.

APPLYING MANUAL/MECHANICAL CONTROL METHODS IN RIPARIAN AREAS

Ivy often grows in large contiguous patches right up to the edge of water courses. Consider the impact of control techniques and the resulting bare soil on adjacent water courses. Time removal works during a period that minimizes risk to fish species, outside of the [fish window](#). Adhere to Provincial and Federal riparian regulations. It is recommended to consult with a qualified environmental professional when working around water bodies.

CHEMICAL: CAUTION

When alternative methods to prevent or control invasive plants are unsuccessful, professionals often turn to herbicides. Chemical control may be successful on young, actively growing plants (King County Noxious Weed Control Program, 2004). Herbicide application on mature plants may slow growth but is unlikely to eradicate them, even with the addition of surfactants (Okerman, 2001). The waxy leaves of ivy help it resist herbicide absorption and may increase risk to non-target plants via run-off (King County Noxious Weed Control Program, 2004). In addition, ivy is resistant to some commonly used pre-emergent herbicides (King County Noxious Weed Control Program, 2004). Despite these challenges, chemical application may be the most effective option in large areas of dense ivy and when vines are too large to cut or pull. However, herbicide use may prevent the germination of native seeds in the seedbank and, therefore, promote the reinvasion of the site by other invasive species (Biggerstaff & Beck, 2007b). Regular monitoring is needed after chemical application.

With the exception of substances listed on Schedule 2 of the [Integrated Pest Management Regulation](#), the use of herbicides is highly regulated in British Columbia. Site characteristics must be considered with herbicide prescribed, based on site goals and objectives and in accordance with legal requirements. [This summary of the Integrated Pest Management Act](#) provides an overview of the Provincial legislation.

PESTICIDE LICENCE AND CERTIFICATION

A valid pesticide licence is required to:

- offer a service to apply most pesticides;
- apply most pesticides on public land including local government lands²; and
- apply pesticides to landscaped areas on private land, including outside office buildings and other facilities.

Pesticides (e.g., herbicides, insecticides, fungicides) are regulated by the Federal and Provincial government, and municipal governments often have pesticide bylaws.

- Health Canada evaluates and approves chemical pest control products as per the [Pest Control Products Act](#).
- The [Integrated Pest Management Act](#) sets out the requirements for the use and sale of pesticides in British Columbia. This Act is administered by the Ministry of Environment and Climate Change Strategy.
- Several municipalities have adopted bylaws that prohibit the use of certain pesticides.

Everyone who uses pesticides must be familiar with all relevant laws.

ONLY companies or practitioners with a valid Pesticide Licence and staff who are certified applicators (or working under a certified applicator) may apply herbicide on invasive plants located on public lands in British Columbia. Applicators must be either the land manager/owner or have permission from the land manager/owner prior to herbicide application.

On private property the owner may obtain a Residential Applicators Certificate (for Domestic class products only) or use a qualified company. Residents do not require a Residential Applicator Certificate for certain uses of domestic class glyphosate including treatment of plants that are poisonous for people to touch, invasive plants and noxious weeds listed in legislation, and weeds growing through cracks in hard surfaces such as asphalt or concrete. Refer to the 'Pesticides & Pest Management' and 'Home Pesticide Use' webpages listed in the Additional Resources Section for more information.

Questions? Contact the Integrated Pest Management Program: Telephone: (250) 387-9537

Email: bc.ipm@gov.bc.ca

² on up to 50 hectares/year by a single organization. Organizations looking to treat over 50 hectares of land per year are also required to submit a Pest Management Plan and obtain a Pesticide Use Notice confirmation.

Pesticide applicator certificates can be obtained under the category 'Industrial Vegetation Management' to manage weeds on industrial land, roads, power lines, railways, and pipeline rights-of-way for control of noxious weeds on private or public land. Assistant applicator training is also available and the [online course and exam](#) are free.

Although an annual fee and annual reporting are required, it is best practice for personnel supervising or monitoring pesticide contracts to also maintain a pesticide applicator licence so they are familiar with certification requirements.

For more information on how to obtain a licence and the requirements when working under the Provincial [Integrated Pest Management Act and Regulation](#), please review the Noxious Weed & Vegetation Management section on this webpage: gov.bc.ca/PestManagement.

HERBICIDE LABELS

Individual herbicide labels must always be reviewed thoroughly prior to use to ensure precautions, application rates, and all use directions, specific site and application directions are strictly followed. Under the Federal Pest Control Products Act and the Provincial Integrated Pest Management Regulation, persons are legally required to use pesticides (including herbicides) only for the use described on the label and in accordance with the instructions on that label. Failure to follow label directions could cause damage to the environment, poor control results, or danger to health. Contravention of laws and regulations may lead to cancellation or suspension of a licence or certification, requirement to obtain a qualified monitor to assess work, additional reporting requirements, a stop work order, or prohibition from acquiring authorization in the future. A conviction of an offence under legislation may also carry a fine or imprisonment.

Herbicide labels include information on both the front and back. The front typically includes trade or product name, formulation, class, purpose, registration number, and precautionary symbols. Instructions on how to use the pesticide and what to do in order to protect the health and safety of both the applicator and public are provided on the back (British Columbia Ministry of Environment and Climate Change Strategy, 2011).

Labels are also available from the Pest Management Regulatory Agency's [online pesticide label search](#) or [mobile application](#) as a separate document. These label documents may include booklets or material safety data sheets (MSDS) that provide additional information about a pesticide product. Restrictions on site conditions, soil types, and proximity to water may be listed. If the herbicide label is more restrictive than Provincial legislation, the label must be followed.

HERBICIDE OPTIONS

The following herbicides can be used on ivy; although not specifically listed on these herbicide labels, ivy may be treated under the general application provision for woody plants.

ACTIVE INGREDIENT (EXAMPLE BRAND NAMES)+	APPLICATION	PERSISTENCE	GROWTH STAGE++	TYPE+++
Glyphosate (many products)	spray-on, wipe-on, cut stem, basal bark	non-persistent	actively growing (application during other growth stages may be ineffective)	non-selective
Metsulfuron-methyl*	spray-on, wipe-on	moderately persistent, mobile in soil	actively growing	non-selective
Triclopyr (for example Garlon™)	spray-on, cut stem, basal bark	residual	actively growing	selective, no effect on grasses

+ The mention of a specific product or brand name of pesticide in this document is not, and should not be construed as, an endorsement or recommendation for the use of that product.

++ Active growing periods vary year to year depending on weather and other factors. There may be more than one active growing period for a plant in a year. Typically, the active growing period for ivy is during the spring.

+++ Herbicides that control all vegetation are non-selective, while those that control certain types of vegetation (for example, only grasses or only broadleaf plants) are termed selective.

* Special consideration is required when using metsulfuron-methyl given its persistence and mobility in soil.

Application of metsulfuron-methyl or multiple applications of glyphosate, especially during winter or spring and targeting new growth, has proven an effective treatment strategy (Yang, Wehtje, Gilliam, McElroy, & Sibley, 2013). Combining glyphosate and triclopyr may be more effective than using either herbicide alone (King County, 2018).

APPLYING PESTICIDE IN RIPARIAN AREAS

Provincial legislation prohibits the use of herbicides within 10 metres of natural water courses and 30 metres of domestic or agricultural water sources on public lands. On private lands herbicide labels need to be followed (which means for glyphosate products treatment can happen up to the water's edge) and other restrictions may apply (e.g., industrial sites, forestry sites, golf courses, etc.). On public lands, glyphosate is the only active ingredient that can be applied within the 10 metre Pesticide-Free Zone (PFZ)³ in British Columbia in accordance with the *Integrated Pest Management Act and Regulation* and all public land Pesticide Management Plans (PMPs). A plant must be either a listed Noxious Weed (under the [Weed Control Act](#)) or appear in the *Forest and Range Practices Act Invasive Plants Regulation* to be treated within the 10 metre PFZ. **Neither English nor Irish ivy are listed and therefore glyphosate and other herbicides can only be applied on ivy up to 10 metres away from the high water mark (HWM)⁴.** The 30 metre no-treatment zone around a water supply intake or well used for domestic or agricultural purposes may be reduced if the licensee or PMP holder is "reasonably satisfied" that a smaller no-treatment zone is sufficient to ensure that pesticide from the use will not enter the intake or well.

When managing ivy with herbicide in riparian areas:

- Observe and mark all PFZs while on site.
- The HWM should be determined by careful evaluation by the applicator.
- Distances in PFZs should be measured as horizontal distance.
- Herbicides restricted in a PFZ must not enter these zones by leaching (lateral mobility) through soil or by drift of spray mist or droplets.
- Treatments should be conducted when water levels are low (e.g. summer months) to reduce risk.
- Note that efficacy may be dependent on site conditions, including moisture in the soil.

APPLICATION METHODS

The preferred application methods to minimize non-target damage and applicator exposure are as follows:

- **Foliar application methods:**
 - **Spray-on application** involves using a backpack or handheld sprayer to completely cover the actively growing plant parts with herbicide, including the underside of the leaves when possible. Young leaves that have not fully developed their waxy cuticle will absorb a systemic herbicide most effectively (King

3 The Pesticide-Free Zone (PFZ) is an area of land that must not be treated with pesticide and must be protected from pesticide moving into it, under the *Integrated Pest Management Act and Regulation*.

4 The High Water Mark (HWM) is defined as the visible high water mark of any lake, stream, wetland or other body of water where the presence and action of the water are so common and usual and so long continued in all ordinary years as to mark upon the soil of the bed of the lake, river stream, or other body of water a character distinct from that of the banks, both in vegetation and in the nature of the soil itself. Typical features may include, a natural line or "mark" impressed on the bank or shore, indicated by erosion, shelving, changes in soil characteristics, destruction of terrestrial vegetation, or other distinctive physical characteristics. The area below the high water mark includes the active floodplain (British Columbia Ministry of Environment and Climate Change Strategy, 2011).

County, 2018). The addition of a surfactant may improve absorption (King County, 2018). Application after the spring growth phase is unlikely to be an effective control treatment and this technique may suppress the germination of native seeds in the seed bank, inhibiting recovery.

To access tall foliage and minimize the risk of applicator exposure, long wands and wand extensions are recommended.

- **Wipe-on application** involves applying herbicide directly onto leaf surfaces (including the underside) using a simple hand-held wipe-on applicator or brush. Wipe-on application is time-consuming and can be messy due to herbicide drips.
- **Cut stem application** involves cutting stems as close to the ground as possible and applying herbicide directly to the freshly cut surfaces using a spray bottle, sponge or brush (King County, 2018).
- **Basal bark application** removes a ring of outer bark near ground level with subsequent application of a systemic herbicide (Okerman, 2001). The herbicide should be applied as quickly as possible after exposing the stems to maximize uptake by the plant. This technique may be labour intensive if used for all ivy stems, and is therefore best reserved for very large stems that can not be easily cut.

TREATMENT TIMING

Chemical control can be used year-round as long as the climate conditions are appropriate for the product being used. Foliar application of glyphosate or triclopyr on sunny winter days is more effective (up to 95 percent) than

growing-season applications (Oregon State University Extension Service, 2008). Winter application also reduces injury to non-target or dormant native plants (Oregon State University Extension Service, 2008). Spraying can also occur during the growth phase in the spring.

CULTURAL: NOT RECOMMENDED

Browsing of ivy is not recommended. A 2010 study assessed the potential for goat browsing to control ivy in Willamette Valley in Oregon (Ingham & Borman, 2010). They concluded that short-duration, high-intensity goat browsing could remove enough aboveground biomass to minimize regrowth, especially after two years of treatment. However, ivy is also toxic to livestock when large quantities are consumed (Strelau, Clements, Benner, & Prasad, 2018). Furthermore, grazing opportunities are limited in urban areas due to municipal bylaws regulating agriculture animals, the high probability of interface with the public, and the damage animals could cause to riparian areas and other sensitive sites with multiple land uses. Due to these constraints and the risk to animal health, browsing is not recommended as a management option for ivy in the Metro Vancouver region.

BIOLOGICAL: NOT AVAILABLE

No biological control agents are currently available for use on ivy. It does not have any preferential predators in its home range and its major diseases result from adverse climatic conditions that may limit their success in the temperate conditions in the Metro Vancouver region (Quinn & Best, 2002).

CONTROL SUMMARY

The following table provides a summary and comparison of control methods for ivy.

CONTROL STRATEGY	TECHNIQUES	APPLICABLE SITE TYPE	PROS	CONS
Manual	Cutting/pulling	All accessible sites, including tree ivy	Selective, volunteer friendly, non-chemical, year-round control possible	Creates disturbance; labour intensive
Manual	Mulch application	Large, flat sites, groundcover ivy	Non-chemical, year-round control possible	Labour intensive; can't be used on slopes
Mechanical	Heat treatment	Any size site, accessible, groundcover ivy	Selective, cost-effective, efficient, non-chemical	Requires trained staff and specialized equipment; fire hazard; only possible during certain times of year
Mechanical	Mowing	High density sites, flat sites, non-sensitive areas, groundcover ivy	Less labour intensive, non-chemical	Requires trained staff and specialized equipment; non-selective; creates disturbance
Chemical	Various	Large sites	Less labour intensive, can suppress seed bank, year-round control possible	Unintended environmental/health impacts; high public concern; generally, not effective on ivy's mature waxy leaves
Cultural	Browsing	Accessible sites	Non-chemical	May be less effective; requires specially trained herds and special permits; non-selective
Biological	No biological control agents are currently available for distribution in British Columbia			

Disposal

Manual removal of ivy generates a lot of biomass. Disposal options must be considered on a site by site basis (Pocock, 2018). Ivy should not be composted at home or at municipal works yards as the temperature may not be high enough to kill seeds or root fragments.

ON SITE DISPOSAL

The Stanley Park Ecology Society uses onsite disposal for large ivy piles at forest sites that are not easily accessible for off-site disposal; regrowth from these piles has not been observed (Johnstone, 2019). The ivy will slowly break down to 1/5 of its size when left to dry (King County Noxious Weed Control Program, 2004). To prevent re-rooting, the material should be piled on tarps or concrete or regularly turn the pile (King County Noxious Weed Control Program, 2004). Covering the pile will speed the process (King County Noxious Weed Control Program, 2004). The site should be monitored carefully to prevent spread and re-establishment.

Dead plants and debris left onsite can increase the fire potential and should be assessed for risk.

OFF SITE DISPOSAL

When disposing off site, transport plant parts on/in tarps or in thick plastic bags to an appropriate disposal or compost facility. In the Metro Vancouver region, several facilities accept ivy plants and/or infested soil. Please consult [this disposal facility list](#) for current details.

PLEASE CONTACT ALL FACILITIES BEFOREHAND TO CONFIRM THEY CAN PROPERLY HANDLE THE MATERIAL.

REPURPOSING IVY

In recent years, several artists and collectives have been using ivy as a crafting fiber to make structural art, ropes, baskets, jewelry, ornaments and clothing. Their artwork also builds public awareness about invasive species. The [Urban Weaver Project](#), the [EarthHand Gleaner Society](#), and several other groups offer public workshops and events.

CLEANING AND DISINFECTION⁵

Before leaving a site, all visible plant parts and soil from vehicles, equipment, and gear should be removed and rinsed if possible. When back at a works yard or wash station, vehicles should be cleaned and disinfected using the following steps:

- Wash with 180 °F water at 6 gpm, 2000 psi*, with a contact time of ≥ 10 seconds on all surfaces to remove dirt and organic matter such as vegetation parts or seeds. Pay special attention to undercarriages, chassis, wheel-wells, radiators, grills, tracks, buckets, chip-boxes, blades, and flail-mowing chains.
- Use compressed air to remove vegetation from grills and radiators.
- Sweep/vacuum interior of vehicles paying special attention to floor mats, pedals, and seats.

5 Adapted from Metro Vancouver 2017 Water Services Equipment Cleaning Procedures and Inspection Protocols.

- Steam clean poor access areas (e.g., inside trailer tubes) – 200 psi @ 300 °F.
- Fully rinse detergent residue from equipment prior to leaving facility.

* Appropriate self-serve and mobile hot power-wash companies in the Metro Vancouver region include: Mary Hill Truck Wash, Omega Power Washing, Eco Klean Truck Wash, RG Truck Wash, Ravens Mobile Pressure Washing, Hydrotech Powerwashing, Platinum Pressure Washing Inc, and Alblaster Pressure Washing. Wash stations should be monitored regularly for ivy growth.

Follow-up Monitoring

Whatever control method is used, follow-up monitoring and maintenance treatments are components of an integrated management plan or approach.

- For **manually treated** sites, the number of years of management and monitoring required depends on maturity of the ivy infestation. Sites with immature ivy may see control after only 1–2 sweeps whereas mature ivy will take many years of control and monitoring (Pocock, 2018). Research in Portland, Oregon suggests that manual removal can be an effective control in just one growing season, although sites should be continued to be monitored for several years (Strelau, Clements, Benner, & Prasad, 2018).
- **Chemical treatments** should be repeated as directed on the herbicide label to control any subsequent growth.



CREDIT: ISCMV

Restoration

Following up manual removal with seeding or planting of native species is highly recommended in order to prevent the reinvasion of the site by invasive species and replace lost habitat. Seeding after manual removal has been shown to result in more successful restoration than seeding after herbicide treatment (Biggerstaff and Beck 2007a). Passive restoration may be possible, depending on the persistence of a native seedbank and viability of local source populations (Biggerstaff & Beck, 2007b).

The International Society of Arboriculture and relevant municipal parks or arboriculture departments offer guidelines for mulch application. Specific mulch depths

can be used to control invasive weeds and encourage plant growth (International Society of Arboriculture, 2018).

Examples of common competitive native species prescribed for sites within the Metro Vancouver region are summarized in the table below based on site moisture. Replacement species should be chosen based on the ecology of the site by a qualified environmental professional. Local biologists, environmental professionals, agronomists, agrologists, native and domestic forage specialists, seed companies and plant nurseries are all good sources for localized recommendations for regional native species and regionally adapted domestic species, based on site usage. Several science-based resources are available to guide restoration efforts, such as the South Coast Conservation Program’s [Diversity by Design](#) restoration planning toolkit.

WET SITES	MOIST SITES	DRY SITES
SHRUBS		
Salmonberry	Salmonberry	Thimbleberry
Hardhack	Willow	Nootka rose
Willow	Red osier dogwood	Red flowering currant
Red osier dogwood	Red elderberry	Snowberry
Pacific ninebark	Vine maple	Tall Oregon grape
	Indian plum	Oceanspray
TREES		
Western red cedar	Western red cedar	Douglas-fir
Red alder	Red alder	Red alder

Revegetation of the site to a domestic or cultured non-native plant species composition may be considered in some circumstances. Often domestic species establish faster and grow more prolifically, which aids in resisting ivy re-invasion.

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Additional Resources

For more information please refer to the following resources.

- British Columbia Ministry of Forests, Lands, and Natural Resource Operations, Invasive Alien Plant Program (IAPP). <https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/invasive-species/reporting-invasive-species>
- Controlling English ivy (*Hedera helix*) in the Pacific Northwest. The Nature Conservancy: <https://www.invasive.org/gist/moredocs/hedhel02.pdf>
- E-Flora BC, an Electronic Atlas of the Plants of British Columbia. www.eflora.bc.ca/
- GrowGreen Guide. www.growgreenguide.ca
- Grow Me Instead. <http://bcinvasives.ca/resources/programs/plant-wise/>
- Invasive Species Council of British Columbia, English ivy TIPS Factsheet: https://bcinvasives.ca/documents/English_Ivy_TIPS_2017_WEB.pdf
- Pesticides and Pest Management. Province of British Columbia <https://www2.gov.bc.ca/gov/content/environment/pesticides-pest-management>
- The Biology of Canadian Weeds: 157. *Hedera helix* L. and *Hedera hibernica* (G. Kirchn.) Bean. *Canadian Journal of Plant Science*, 1005-1022.

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CREDIT: F. STEELE







Lamium galeobdolon

BEST MANAGEMENT PRACTICES FOR
Yellow Archangel
in the Metro Vancouver Region



metrovancover
SERVICES AND SOLUTIONS FOR A LIVABLE REGION

Metro Vancouver Regional District



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Introduction

The impacts of invasive species on ecological, human, and economic health are of concern in the Metro Vancouver region. Successful control of invasive species requires concerted and targeted efforts by many players. This document – “**Best Management Practices for Yellow Archangel in the Metro Vancouver Region**” – is one of a series of species-specific guides developed for use by practitioners (e.g., local government staff, crews, project managers, contractors, consultants, developers, stewardship groups, and others who have a role in invasive species management) in the region. Together, these best practices provide a compendium of guidance that has been tested locally by many researchers and operational experts.

Yellow archangel¹ was introduced to North America from the temperate regions of Eurasia as an ornamental ground cover, prized for its unique silver variegated foliage and fast-growing nature. It has now escaped into natural habitats throughout Metro Vancouver and the Pacific Northwest, largely due to illegal green waste dumping, particularly from hanging baskets.

There are several cultivars and subspecies of *Lamium*. The dominant invasive cultivar varies depending on location. In the Metro Vancouver region, the invader cultivar is ‘Variegatum’ within the subspecies *montanum* (Graham & Clements, 2003). In the Seattle area the cultivar is ‘Florentinum’ within the subspecies *argentatum* (Jacobson, 2003). The difference is likely due to what was historically available at nurseries in each region.

Academic institutions, government, and non-government organizations continue to study this species in British Columbia. As researchers and practitioners learn more about the biology and control of yellow archangel, it is anticipated that the recommended best management practices will change overtime and this document will be updated. Please check metrovancover.org regularly to obtain the most recent version of these best management practices.

¹ Yellow archangel (*Lamium galeobdolon*) is also known by the common names lamium, false lamium, yellow lamium, and yellow deadnettle (Lilley & Page, 2010). Taxonomic updates place it in the genus *Lamium* rather than *Lamium*.

REGULATORY STATUS

Although yellow archangel is an invasive plant of concern in the Metro Vancouver region, it is not currently regulated anywhere in British Columbia.

IMPACTS

Yellow archangel can grow up to one metre horizontally per year (Graham & Clements, 2003). This rapid growth makes it a favoured garden ground cover species and allows it to rapidly form dense populations in natural areas, climbing over stumps and smothering native herbs, mosses and low growing shrubs (Lilley & Page, 2010). It quickly out competes native vegetation, forming contiguous cover across the forest understory. The resulting reduction in plant diversity reduces food availability for local fauna and impacts local pollinator communities by limiting access to flowers in the spring (Invasive Species Council of British Columbia, 2017). In the long term, the presence of large populations of yellow archangel may prevent germination of native vegetation including tree saplings, reducing future canopy cover (Steele F., 2018).

All levels of government, non-profit organizations and private property owners spend significant resources managing yellow archangel in the Metro Vancouver region every year. In recent years, agencies represented on Metro Vancouver's Regional Planning Advisory Committee – Invasive Species Subcommittee together spent nearly \$135,000 on yellow archangel control and volunteer stewardship annually. This figure does not include control costs for private landowners across the region or costs associated with education and awareness activities.

REPRODUCTION AND SPREAD

Yellow archangel is a perennial plant that reproduces both vegetatively and sexually. Fast growing horizontal stems called stolons (i.e., 'runners') are the primary means of spread (Graham & Clements, 2003). Each leaf node along

the stolon can generate new roots and upright stems forming extensive ground cover from one individual plant. Fragments of roots and leaf nodes can develop into new plants (DesCamp, 2012).

A secondary form of dispersal is by seed. Plants can produce up to 800 seeds annually. Seed germination rates were found to be very low in controlled trials. Seeds can be carried by animals and humans passing through the vegetation. Seed dispersal is generally considered inefficient. However, ants can transport the seeds as far as 70 metres from the parent plant. Information available on sexually reproduction is based on populations in Great Britain (Packman, 1983). Trails and watercourses often seem to serve as a barrier to the spread of yellow archangel infestations (Steele F., 2018).

Often labelled by the common name 'lamium', yellow archangel is commercially available as a popular ground cover and component of hanging baskets and ornamental container plantings. Consumers report being frustrated once they realize the aggressive plant has taken over their garden (Crosby, 2018).

HABITAT AND DISTRIBUTION

Yellow archangel tolerates a wide range of light, pH, organic content and drainage conditions (Lilley & Page, 2010). It thrives in full shade and moist, rich soils of forest understory but can survive in drier conditions and partial shade (Invasive Species Council of British Columbia, 2017). It is often found in urban forests, ravines, and riparian areas (Lilley & Page, 2010).

Yellow archangel is currently found throughout the South Coast of British Columbia and it is particularly common throughout the Metro Vancouver region. Its presence in or adjacent parks can nearly always be attributed to escape from residential gardens, discarded hanging baskets or illegal green waste dump sites (Steele F., 2009). Yellow archangel has also been reported at a handful of locations in the Kootenay Boundary, North Okanagan, Cariboo and Skeena-Queen Charlotte regions.

Identification

The following identification information was collected from the Invasive Species Council of British Columbia (2017) and Washington State Noxious Weed Control Board (2005).

General: Perennial, vine, evergreen herbaceous plant that forms dense ground cover.

Stem: Erect, hairy and 4-sided (square) stems grow on average to 30 centimetres but may grow as tall as 60 centimetres. Forms 4-sided stolons.

Leaves: Oppositely arranged. The typical leaf is between 2.5 to 8 centimetres in length and up to 5 centimetres in width, with a petiole (stalk that attaches a leaf to the plant stem) up to 3 centimetres long. Leaves are hairy, serrated and ovate shaped, with rounded or cordate bases. Leaf upper sides are

variegated dark green with distinctive silver or white pattern and a 'wrinkly' texture.

Flowers: Flowers are bright yellow between 17 to 25 millimetres, with a helmet or hooded shape. They consist of five modified petals that form a two-lipped bloom. The lower petals have orange-brown markings. Between April and June, the flowers are produced as pairs of dense clusters between pairs of leaves on flowering stems.

Fruits: Flowers have four nutlets, each containing one seed.

Roots: Roots typically reach 30 centimetres in length and can grow 20 centimetres deep in the substrate.

The following photos show yellow archangel plant parts.



Leaves

CREDIT: ISCMV



Flowers

CREDIT: [BRENDA DOBBS, FLICKR](#)

SIMILAR SPECIES

Yellow archangel has a unique appearance due to its silver-white markings and is therefore not easily confused with any other species (Lilley & Page, 2010), but a few of the similar species are described below.

NON NATIVE SPECIES

- Purple deadnettle (*Lamium purpureum*) has smaller leaves (2–4 centimetres) that are green to lavender in colour and do not have the characteristic silver-white markings of yellow archangel. It is an invasive plant of concern,



Purple dead-nettle

CREDIT: DANIEL J. LAYTON, WIKIMEDIA COMMONS

- Hemp nettle (*Galeopsis tetrahit*) has egg to lance-shaped leaves with rounded teeth, pointed tips and covered in bristly hairs. The leaves lack the characteristic silver-white markings of yellow archangel. Flowers can be purple, pink, white or pale yellow. The plant can grow up to 1 metre

although relatively rare in the Metro Vancouver region. It can grow in a variety of soil types on moist to dry sites and prefers full sun. Where disturbance has occurred, it has been known to invade sensitive dry ecosystems (e.g., Garry Oak and associated ecosystems). It can also be a weed in turf grass (University of Maryland Extension, N.D.). Purple dead nettle readily reproduces from seed, as well as stem and root fragments. The plant should be hand-pulled at the seedling stage, prior to flowering (Garry Oak Ecosystem Recovery Team, 2011).



Purple dead-nettle

CREDIT: GAVIN SCHAEFER, WIKIMEDIA COMMONS

tall (Peace River Regional District, 2017) in moist to wet disturbed sites. Hemp nettle is invasive although generally considered an agricultural weed. It is best removed by digging or pulling when in flower bud stage (Wisconsin Department of Natural Resources, 2017).



Purple dead-nettle

CREDIT: DANIEL J. LAYTON, WIKIMEDIA COMMONS



Purple dead-nettle

CREDIT: GAVIN SCHAEFER, WIKIMEDIA COMMONS

- Herman's Pride (*Lamiastrum galeobdolon* 'Herman's Pride') has smaller, narrower and more coarsely serrated leaves than yellow archangel. It is slow growing, forming a 30 to 60 centimetres wide upright clump over time. It does not grow stolons. This plant is typically regarded as non-invasive and has not been observed to be invasive in the Metro Vancouver region (Steele F. , 2018). However, with the same genus and species names and similar silver variegated leaf pattern as yellow archangel, there is a risk of mis-identification.
- Goutweed/bishop's weed (*Aegopodium podagraria* variegata) is a member of the carrot family with its characteristic white flowers in umbel formation. Leaves are trifoliolate (growing in groups of three) and either solid green or variegated. Variegated leaves are white around the edges and green in the center. Goutweed/bishop's weed is also considered locally invasive.



'Herman's Pride'

CREDIT: JAMES STEAKLEY, WIKIMEDIA COMMONS



Goutweed: non-variegated, flowering

CREDIT: ELI SAGOR, VIA FLICKR



Goutweed: variegated, flowering

CREDIT: ISCMV

Tracking

The Provincial government maintains the [Invasive Alien Plant Program \(IAPP\) application](#) (British Columbia Ministry of Forests, Lands and Natural Resource Operations and Rural Development 2017), which houses information pertaining to invasive plant surveys, treatments, and monitoring. Many agencies, including local governments, have their own internal invasive species inventory and mapping protocols that are used by staff, contractors and, in some cases, the public. For example, the City of North Vancouver has its own system called AlienMap. Agencies in British Columbia that do not enter data into IAPP are encouraged to check it regularly because it contains public reports and data from other agencies and it is important to consider as much data as possible when making management decisions. The Map Display module of IAPP is publicly accessible.

When carrying out a yellow archangel inventory it is useful to record the following information as it will later inform treatment plans:

- Size and density of infestation;
- Location in relation to the 10 metre Pesticide Free Zone adjacent to water courses;
- Location in relation to other water sources, such as wells;
- The suspected source of infestation (e.g., green waste dumping, spread from an adjacent private garden, etc.); and
- Proximity to non-target vegetation.

Reporting

Since yellow archangel is common throughout the Metro Vancouver region and does not pose an imminent health or safety risk, there is generally little value in reporting individual occurrences.

Prevention and Control Strategies

Effective invasive plant management techniques may include a variety of control techniques ranging from prevention, chemical, manual, mechanical, biological and/or cultural methods. Each method is described below in order of effectiveness.

Yellow archangel can be effectively controlled through both manual/mechanical and chemical treatment techniques. The techniques used and the number of years required are dependent on the size, complexity of infestation and site characteristics. Chemical treatment is most efficient. However, it is not necessarily suited to all sites and efficacy is dependent on follow-up treatments. Manual/mechanical treatment can also be effective, but will generally be much more time consuming.

Follow-up monitoring and treatment will be required for several years regardless of the treatment technique.

STRATEGY COLOUR LEGEND
GREEN: RECOMMENDED
ORANGE: CAUTION
RED: NOT RECOMMENDED OR NOT AVAILABLE

PREVENTION: IMPERATIVE

Prevention is the most economical and effective way to reduce the spread of yellow archangel over the long term.

When working in or adjacent to yellow archangel, it is best to inspect and remove plants, plant parts, and seeds from personal gear, clothing, pets, vehicles, and equipment and ensure soil, gravel, and other fill materials are not contaminated with yellow archangel before leaving an infested area. Plants, plant parts, and seeds should be

tarped or bagged before transport to an appropriate disposal site (see Disposal section).

It is best not to purchase, trade or grow yellow archangel, including plants in hanging baskets or containers. Instead, regional native or non-invasive plants should be used. The Invasive Species Council of British Columbia's '[Grow Me Instead](#)' Program or [Metro Vancouver's Grow Green website](#) provide recommendations for non-invasive, drought-tolerant plants, and garden design ideas. All materials (e.g., topsoil, gravel, mulch, compost) should be weed-free. Healthy green spaces are more resistant to invasion by invasive plants, so it is also important to maintain or establish healthy plant communities.

If yellow archangel is already present in a garden, it is critical to prevent the plant from expanding and invading adjacent parks and natural areas.

MANUAL/MECHANICAL: RECOMMENDED

When determining the appropriate control method for a site it is important to consider the long-term impacts of repeated, intensive foot traffic that is often inherent with manual control methods (Crosby, 2018). The following manual/mechanical methods can be used to control yellow archangel.

- **Hand removal:** The plant can be hand pulled, although it is highly time consuming. Complete removal of the root systems, stems and stolons is necessary since any plant parts left behind can propagate new stems. Each individual plant should be gently pinched at the base and pulled out (Crosby, 2018). Sift through the soil to ensure no plant parts remain (Invasive Species Council of British Columbia, 2017). Attention to detail is key; plants can often be found under existing vegetation, so it is important to look beneath fern fronds, leaves and forest floor litter (Crosby, 2018).

Hand removal is best done when soil is moist from fall to spring (Washington State Noxious Weed Control Board). Avoid pulling during wet periods when soil is saturated as muddy conditions make it difficult to find plant parts and to keep track of which sections have been pulled (Crosby, 2018). Pulling is most effective in loose loamy soil; roots often break when pulled from clay or compact soils (Crosby, 2018). Using a hand tool like a pick to break apart hardpacked soil is useful; this will improve efficacy in follow-up treatments as soil will be looser. Roots will break if pulled during frost or snow periods (Crosby, 2018).

For large infestations that can be chemically treated, land managers in the region generally only use hand removal for follow-up control once the majority of the plants have died (Crosby, 2018) (Jarvis, 2018).

- **Soil grubbing:** Large scale mechanical removal of the forest organic layer and topsoil is likely to effectively control yellow archangel since roots typically only penetrate 20 centimetres deep. This method could cause soil compaction and severe impacts to surrounding native vegetation. It would be most useful on accessible sites where little to no native vegetation remains and restoration is already necessary (Lilley & Page, 2010).
- **Cover:** Plants can be smothered by applying a cover treatment and mulch (Invasive Species Council of British Columbia, 2017). Thick layers of newspaper or cardboard with large overlaps can be used to ensure plants cannot find their way to the surface. A 10 centimetres layer of mulch (i.e., wood chips or composted mulch) should then be applied. The site should be monitored for plants creeping out, and mulch re-applied as needed. Landscape fabric can also be used with or without mulch. The fabric must be secured to the soil to ensure stems cannot grow out the edges or through holes (Washington State Noxious Weed Control Board). If a non-biodegradable cover is used, maintain the cover for one year minimum. Before removing the cover, test efficacy by uncovering only small portion and monitoring for spring growth for at least a few weeks. Mulching on its own has been found to

be ineffective (Lilley & Page, 2010). A drawback of cover treatments is that it can be difficult to place covers around native vegetation. These gaps will allow the plant to poke through and re-establish (Lilley & Page, 2010).

- **Weed torching:** Weed torching is not recommended because it does not kill the roots and therefore must be repeated frequently to address re-growth. Fire hazard is also a concern.
- **Cutting or mowing:** Cutting and mowing are not recommended because the roots are left in place and will quickly sprout new growth. If the plant has been cut or mowed, all trimmings should be collected to reduce the risk of new plants regenerating from plant fragments (Invasive Species Council of British Columbia, 2017).

APPLYING MANUAL/MECHANICAL CONTROL METHODS IN RIPARIAN AREAS

Yellow archangel often grows in large contiguous patches right up to the edge of water courses. Consider the impact of control techniques and the resulting bare soil on adjacent water courses. Time removal works during a period that minimizes risk to fish species, outside of the [fish window](#). Adhere to Provincial and Federal riparian regulations. It is recommended to consult with a qualified environmental professional when working around water bodies.

CHEMICAL: RECOMMENDED

When alternative methods to prevent or control invasive plants are unsuccessful, professionals often turn to herbicides. Chemical treatment can be an effective and relatively inexpensive method to treat yellow archangel. However, this method should be used with caution for three reasons (Crosby, 2018):

1. Weather conditions greatly influence treatment efficacy;
2. Yellow archangel often grows in riparian areas where pesticide use is restricted; and
3. Native vegetation is often integrated with yellow archangel infestations (particularly true for salmonberry). Mortality of non-target plants should be expected. Sites with well established native shrubs layers should be considered as low priorities for chemical treatment.

With the exception of substances listed on Schedule 2 of the [Integrated Pest Management Regulation](#), the use of herbicides is highly regulated in British Columbia. Site characteristics must be considered with herbicide prescribed, based on site goals and objectives and in accordance with legal requirements. [This summary of the Integrated Pest Management Act](#) provides an overview of the Provincial legislation.

PESTICIDE LICENCE AND CERTIFICATION

A valid pesticide licence is required to:

- offer a service to apply most pesticides;
- apply most pesticides on public land including local government lands²; and
- apply pesticides to landscaped areas on private land, including outside office buildings and other facilities.

Pesticides (e.g., herbicides, insecticides, fungicides) are regulated by the Federal and Provincial government, and municipal governments often have pesticide bylaws.

- Health Canada evaluates and approves chemical pest control products as per the [Pest Control Products Act](#).
- The Provincial [Integrated Pest Management Act](#) sets out the requirements for the use and sale of pesticides in British Columbia. This Act is administered by the Ministry of Environment and Climate Change Strategy.
- Several municipalities have adopted bylaws that prohibit the use of certain pesticides.

Everyone who uses pesticides must be familiar with all relevant laws.

² on up to 50 hectares/year by a single organization. Organizations looking to treat over 50 hectares of land per year are also required to submit a Pest Management Plan and obtain a Pesticide Use Notice confirmation.

ONLY companies or practitioners with a valid Pesticide Licence and staff who are certified applicators (or working under a certified applicator) may apply herbicide on invasive plants located on public lands in British Columbia. Applicators must be either the land manager/owner or have permission from the land manager/owner prior to herbicide application.

On private property the owner may obtain a Residential Applicators Certificate (for Domestic class products only) or use a qualified company. Residents do not require a Residential Applicator Certificate for certain uses of domestic class glyphosate including treatment of plants that are poisonous for people to touch, invasive plants and noxious weeds listed in legislation, and weeds growing through cracks in hard surfaces such as asphalt or concrete. Refer to the 'Pesticides & Pest Management' and 'Home Pesticide Use' webpages listed in the Additional Resources Section for more information.

Questions? Contact the Integrated Pest Management Program: Telephone: (250) 387-9537
Email: bc.ipm@gov.bc.ca

Pesticide applicator certificates can be obtained under the category 'Industrial Vegetation Management' to manage weeds on industrial land, roads, power lines, railways, and pipeline rights-of-way for control of noxious weeds on private or public land. Assistant applicator training is also available and the [online course and exam](#) are free.

Although an annual fee and annual reporting are required, it is best practice for personnel supervising or monitoring pesticide contracts to also maintain a pesticide applicator licence so they are familiar with certification requirements.

For more information on how to obtain a licence and the requirements when working under the Provincial [Integrated](#)

[Pest Management Act and Regulation](#), please review the Noxious Weed & Vegetation Management section on this webpage: gov.bc.ca/PestManagement.

HERBICIDE LABELS

Individual herbicide labels must always be reviewed thoroughly prior to use to ensure precautions, application rates, and all use directions, specific site and application directions are strictly followed. Under the Federal *Pest Control Products Act* and the Provincial Integrated Pest Management Regulation, **persons are legally required to use pesticides (including herbicides) only for the use described on the label and in accordance with the instructions on that label.** Failure to follow label directions could cause damage to the environment, poor control results, or danger to health. Contravention of laws and regulations may lead to cancellation or suspension of a licence or certification, requirement to obtain a qualified monitor to assess work, additional reporting requirements, a stop work order, or prohibition from acquiring authorization in the future. A conviction of an offence under legislation may also carry a fine or imprisonment.

Herbicide labels include information on both the front and back. The front typically includes trade or product name, formulation, class, purpose, registration number, and precautionary symbols. Instructions on how to use the pesticide and what to do in order to protect the health and safety of both the applicator and public are provided on the back (British Columbia Ministry of Environment and Climate Change Strategy, 2011).

Labels are also available from the Pest Management Regulatory Agency's [online pesticide label search](#) or [mobile application](#) as a separate document. These label documents may include booklets or material safety data sheets (MSDS) that provide additional information about a pesticide product. Restrictions on site conditions, soil types, and proximity to water may be listed. If the herbicide label is more restrictive than Provincial legislation, the label must be followed.

HERBICIDE OPTIONS

The following herbicides can be used on yellow archangel (Miller, N.D.):

ACTIVE INGREDIENT (EXAMPLE BRAND NAMES)+	APPLICATION	PERSISTENCE	GROWTH STAGE	TYPE++	COMMENT
Glyphosate (many products)	foliar application	non-residual	early spring and late fall	non-selective	mixing with triclopyr or imazapyr improves efficacy
Imazapyr (example: Arsenal™)	foliar application	residual	actively growing	non-selective	
Aminopyralid (example: Milestone™)	foliar application	residual	actively growing	selective, no effect on grasses	
Triclopyr (example: Garlon™)	foliar application	residual	actively growing	selective, no effect on grasses	
Metsulfuron (example: Escort™)	foliar application	residual	actively growing	selective, no effect on grasses	may affect shrub species

+ The mention of a specific product or brand name of pesticide in this document is not, and should not be construed as, an endorsement or recommendation for the use of that product.

++ Herbicides that control all vegetation are non-selective, while those that control certain types of vegetation (for example, only grasses or only broadleaf plants) are termed selective.

Field trials undertaken in Washington State tested 32 different herbicides. The results showed that glyphosate and imazapyr provided the most effective, long-term control of yellow archangel (Miller, Halpern, Lucero, & Shaw, 2014). The Langley Environmental Partners (LEPS) has found that diluting the application rate of glyphosate to one tenth of the recommended rate is most effective (Dreves, Stewardship Coordinator, Langley Environmental Partners Society, 2018).

APPLYING PESTICIDE IN RIPARIAN AREAS

Provincial legislation prohibits the use of herbicides within 10 metres of natural water courses and 30 metres of domestic or agricultural water sources on public lands. On private lands herbicide labels need to be followed (which means for glyphosate products treatment can happen up to the water's edge) and other restrictions may apply (e.g., industrial sites, forestry sites, golf courses, etc.). On public lands, glyphosate is the only active ingredient that can be applied within the 10 metre Pesticide-Free Zone (PFZ)³ in British Columbia in accordance with the *Integrated Pest Management Act and Regulation* and all public land Pesticide Management Plans (PMPs). A plant must be either a listed Noxious Weed (under the [Weed Control Act](#)) or appear in the *Forest and Range Practices Act Invasive Plants Regulation* to be treated within the 10 metre PFZ. **Yellow archangel is not listed and therefore glyphosate and other herbicides can only be applied on yellow archangel up to 10 metres away from the high water mark (HWM)⁴.** The 30 metre no-treatment zone around a water supply intake or well used for domestic or agricultural purposes may be reduced if the licensee or PMP holder is "reasonably satisfied" that a smaller no-treatment zone is sufficient to ensure that pesticide from the use will not enter the intake or well.

When managing yellow archangel with herbicide in riparian areas:

- Observe and mark all PFZs while on site.
- The HWM should be determined by careful evaluation by the applicator.
- Distances in PFZs should be measured as horizontal distance.
- Herbicides restricted in a PFZ must not enter these zones by leaching (lateral mobility) through soil or by drift of spray mist or droplets.
- Treatments should be conducted when water levels are low (e.g., summer months) to reduce risk.
- Note that efficacy may be dependent on site conditions, including moisture in the soil.

3 The Pesticide-Free Zone (PFZ) is an area of land that must not be treated with pesticide and must be protected from pesticide moving into it, under the *Integrated Pest Management Act and Regulation*.

4 The High Water Mark (HWM) is defined as the visible high water mark of any lake, stream, wetland or other body of water where the presence and action of the water are so common and usual and so long continued in all ordinary years as to mark upon the soil of the bed of the lake, river stream, or other body of water a character distinct from that of the banks, both in vegetation and in the nature of the soil itself. Typical features may include, a natural line or "mark" impressed on the bank or shore, indicated by erosion, shelving, changes in soil characteristics, destruction of terrestrial vegetation, or other distinctive physical characteristics. The area below the high water mark includes the active floodplain (British Columbia Ministry of Environment and Climate Change Strategy, 2011).

APPLICATION METHODS

The preferred application method to minimize non-target damage and applicator exposure is **foliar application**, which involves using a backpack or handheld sprayer to completely cover the actively growing plant parts with herbicide.

TREATMENT TIMING

For glyphosate, optimal performance has been observed during periods of mild temperature (approximately 15 to 22°C). Typically, in the Metro Vancouver region this corresponds to treatment in May to mid June and follow-up treatment from mid-September to early October (Crosby, 2018). Reduced efficacy has been observed when applying herbicide during hot weather, periods of drought or extended wet weather (Crosby, 2018) (Jarvis, 2018). Plants can take up to two weeks from chemical treatment before mortality is visible (Crosby, 2018).

CULTURAL: NOT AVAILABLE

There are no documented cultural control methods for yellow archangel.

BIOLOGICAL: NOT AVAILABLE

The bank mole (*Clethrionomys glareolus*) preferentially consumes yellow archangel in Europe (Packman, 1983) but is not suitable for biological control in North America. No other biological control agents have been found to control yellow archangel in British Columbia at the present time.



CREDIT: ISCMV

CONTROL SUMMARY

The following table provides a summary and comparison of control methods for yellow archangel (adapted from Lilley & Page, 2010).

CONTROL STRATEGY	TECHNIQUES	APPLICABLE SITE TYPE	PROS	CONS
Manual	Hand removal	Small sites (<5m ²), diffuse patches (e.g., after chemical control), environmentally sensitive areas	Selective; low risk to environment	Low efficacy in long term; large investment in time and labour
Mechanical	Soil grubbing	Highly disturbed sites with little or no native vegetation	Medium to high efficacy	Costly; high impact to ecosystems; access constraints
Manual	Cover	Environmentally sensitive areas in places with minimal native vegetation or other obstacles	High efficacy; low risk to environment	Challenging to implement around existing vegetation; access constraints
Chemical	Foliar application	Large, dense infestations except in environmentally sensitive areas and/or where herbicide use is restricted	Medium to high efficacy	Unintended environmental/health impacts; high public concern; weather dependent; requires trained staff
Cultural	No documented cultural controls			
Biological	No biological control agents are currently available in British Columbia			

Disposal

All manually removed plant parts should be collected in green waste bags or on tarps for off site disposal to prevent re-growth; this includes any plant parts hung up in other vegetation (Dreves, Stewardship Coordinator, Langley Environmental Partners Society, 2018). Plant material left on site on tarps to decompose has been found to continue to grow (Dreves, Stewardship Coordinator, Langley Environmental Partners Society, 2018). In cases where it is not possible to safely remove green waste from a site (e.g. the bottom of steep ravines), piles can be left on site to decompose. However, the piles must be turned (to ensure complete decomposition) and monitored for re-growth until plants are completely dead (Crosby, 2018).

Plants treated by herbicide should be left on site to die and decompose.

Yellow archangel should not be composted at home or at municipal works yards as the temperature may not be high enough to kill seeds. Yellow archangel readily regenerates from plant fragments, growing its way out of home composters.

OFF SITE DISPOSAL

When disposing off site, transport plant parts on tarps or in thick plastic bags to an appropriate disposal or compost facility. In the Metro Vancouver region, yellow archangel can be disposed at any regional green waste collection depot, as well as in residential green waste collection bins. Please consult [this disposal facility list](#) for current details.

PLEASE CONTACT ALL FACILITIES BEFOREHAND TO CONFIRM THEY CAN PROPERLY HANDLE THE MATERIAL.

CLEANING AND DISINFECTION⁵

Before leaving a site, all visible plant parts and soil from vehicles, equipment, and gear should be removed and rinsed if possible. When back at a works yard or wash station, vehicles should be cleaned and disinfected using the following steps:

- Wash with 180 °F water at 6 gpm, 2000 psi*, with a contact time of ≥ 10 seconds on all surfaces to remove dirt and organic matter such as vegetation parts or seeds. Pay special attention to undercarriages, chassis, wheel-wells, radiators, grills, tracks, buckets, chip-boxes, blades, and flail-mowing chains.
- Use compressed air to remove vegetation from grills and radiators.
- Sweep/vacuum interior of vehicles paying special attention to floor mats, pedals, and seats.
- Steam clean poor access areas (e.g., inside trailer tubes) – 200 psi @ 300 °F.
- Fully rinse detergent residue from equipment prior to leaving facility.

* Appropriate self-serve and mobile hot power-wash companies in the Metro Vancouver region include: Mary Hill Truck Wash, Omega Power Washing, Eco Klean Truck Wash, RG Truck Wash, Ravens Mobile Pressure Washing, Hydrotech Powerwashing, Platinum Pressure Washing Inc, and Alblaster Pressure Washing. Wash stations should be monitored regularly for yellow archangel growth.

⁵ Adapted from Metro Vancouver 2017 Water Services Equipment Cleaning Procedures and Inspection Protocols.

Follow-up Monitoring

Whatever control method is used, follow-up monitoring and maintenance treatments are components of an integrated management plan or approach. Initial treatments are rarely successful in removing or killing all roots and stolons of yellow archangel. It is almost guaranteed that some plants will be missed during each treatment pass and that re-sprouting will occur from fragments of plants left behind and from the seed bank.

Annual follow-up monitoring should take place following initial treatment for both chemically and manually treated sites. The number of years of monitoring required will vary depending on the control method(s) and site characteristics; the number of years is typically substantial for large patches treated solely by hand removal (Dreves, Stewardship Coordinator, Langley Environmental Partners Society, 2018). It is wise to assume monitoring will be required indefinitely into the future to preserve the investment of time and money put into control efforts (Crosby, 2018). Metro Vancouver Regional Parks staff have documented several patches that were chemically treated 2 to 3 times per year for at least 3 years. These patches will still require ongoing manual follow-up for several additional years before they are ready for restoration planting (Jarvis, 2018).

Restoration

Restoration is recommended to create competition, control yellow archangel regrowth, replace lost habitat, and for erosion control. Due to the capacity for yellow archangel to regenerate, restoration (including the application of mulch) is not recommended until successful control has been achieved (Lilley & Page, 2010). Sometimes there is enough existing native vegetation growing on site that restoration planting is not necessary (Crosby, 2018). However, after several years of chemical control, native vegetation is typically very sparse and therefore planting will be necessary (Jarvis, 2018).

Examples of common competitive native species prescribed for sites within the Metro Vancouver region are summarized in the table below based on site moisture. Replacement species should be chosen based on the ecology of the site by a qualified environmental professional. Local biologists, environmental professionals, agronomists, agrologists, native and domestic forage specialists, seed companies and plant nurseries are all good sources for localized recommendations for regional native species and regionally adapted domestic species, based on site usage. Several science-based resources are available to guide restoration efforts, such as the South Coast Conservation Program’s [Diversity by Design](#) restoration planning toolkit.

WET SITES	MOIST SITES	DRY SITES
SHRUBS		
Salmonberry	Salmonberry	Thimbleberry
Hardhack	Willow	Nootka rose
Willow	Red osier dogwood	Red flowering currant
Red osier dogwood	Red elderberry	Snowberry
Pacific ninebark	Vine maple	Tall Oregon grape
Sword fern	Indian plum	Oceanspray
Deer fern	Sword fern	
TREES		
Western red cedar	Western red cedar	Douglas-fir
Red alder	Red alder	Red alder

Revegetation of the site to a domestic or cultured non-native plant species composition may be considered in some circumstances. Often domestic species establish faster and grow more prolifically, which aids in resisting yellow archangel re-invasion.

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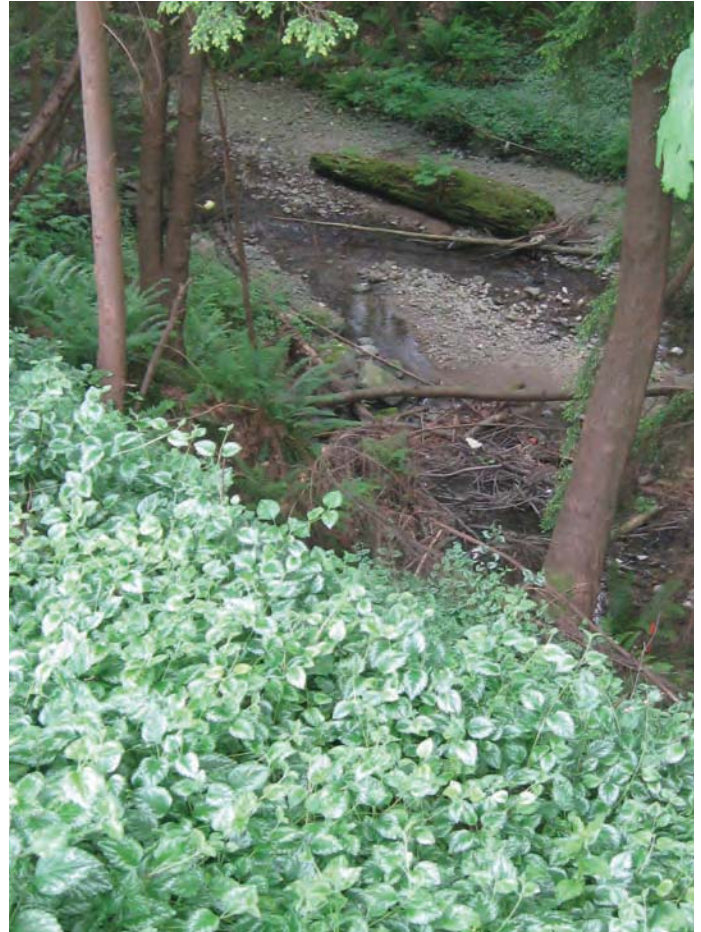
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CREDIT: F. STEELE

Additional Resources

For more information please refer to the following resources.

- British Columbia Ministry of Forests, Lands, and Natural Resource Operations, Invasive Alien Plant Program (IAPP). <https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/invasive-species/reporting-invasive-species>
- E-Flora BC, an Electronic Atlas of the Plants of British Columbia. www.eflora.bc.ca/
- Grow Me Instead. <http://bcinvasives.ca/resources/programs/plant-wise/>
- GrowGreen Guide. www.growgreenguide.ca
- Invasive Species Council of British Columbia, yellow archangel TIPS Factsheet: https://bcinvasives.ca/documents/Yellow_Archangel_TIPS_2017_WEB.pdf
- Pesticides and Pest Management. Province of British Columbia <https://www2.gov.bc.ca/gov/content/environment/pesticides-pest-management>

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Impatiens glandulifera

BEST MANAGEMENT PRACTICES FOR
Himalayan Balsam
in the Metro Vancouver Region

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Introduction

The impacts of invasive species on ecological, human, and economic health are of concern in the Metro Vancouver region. Successful control of invasive species requires concerted and targeted efforts by many players. This document – “**Best Management Practices for Himalayan Balsam in the Metro Vancouver Region**” – is one of a series of species-specific guides developed for use by practitioners (e.g., local government staff, crews, project managers, contractors, consultants, developers, stewardship groups, and others who have a role in invasive species management) in the region. Together, these best practices provide a compendium of guidance that has been tested locally by many researchers and operational experts.

Himalayan balsam¹ is native to the Western Himalayas, most likely brought to Canada in the early 1900s as an ornamental plant. Its high reproductive output, early germination, rich nectar production, hardiness, rapid growth and habitat preference have allowed the species to spread rapidly, dominate landscapes, and compete with and displace

native plant species (Global Invasive Species Database, 2018). Management of this species in Canada seems to be following the invasion trends observed in Europe over the last two decades where it has rapidly become established along waterways (Clements, Feenstra, Jones, & Staniforth, 2008). Himalayan balsam has been predicted to become more widespread in British Columbia (Clements, Feenstra, Jones, & Staniforth, 2008).

Academic institutions, government, and non-government organizations continue to study this species in British Columbia. As researchers and practitioners learn more about the biology and control of Himalayan balsam, it is anticipated that the recommended best management practices will change overtime and this document will be updated. Please check metrovancover.org regularly to obtain the most recent version of these best management practices.

1 Himalayan balsam (*Impatiens glandulifera*) is also known by the common names policeman's helmet, ornamental jewelweed and poor man's orchid. It is referred to as Himalayan balsam in this document.

REGULATORY STATUS

Section 2 of the [Community Charter, Spheres of Concurrent Jurisdiction – Environment and Wildlife Regulation](#), states that “municipalities may regulate, prohibit and impose requirements in relation to control and eradication of alien invasive species”, which includes Himalayan balsam under Terrestrial Vascular Plants of Schedule 1. Although this species is not currently classified as a noxious weed in British Columbia, it is designated as an “invasive plant of concern” in the Province’s [Field Guide to Noxious Weeds and Other Selected Invasive Plants of British Columbia](#).

IMPACTS

Himalayan balsam is a summer blooming annual plant that produces abundant seeds in capsules. These capsules explode when ripe, enabling dispersal and thick growth (Klinkenberg, 2018). Himalayan balsam quickly dominates a variety of areas, forming homogeneous stands in moist shady sites and along creeks, riverbanks, sloughs and open ditches, grassy clearings with full sun, and trail edges. It outcompetes native vegetation, decreasing plant diversity. The plant’s minimal root system does not provide soil stabilization or protect against high water flows. When the plants completely die off in the winter, the ground is left exposed and bare, further promoting erosion. Compared to many native plants, Himalayan balsam offers a sweet, abundant supply of nectar to pollinators, attracting them away from native or other beneficial plants thus adding to its invasiveness (Clements, Feenstra, Jones, & Staniforth, 2008).

All levels of government, non-profit organizations and private property owners spend significant resources managing Himalayan balsam in the Metro Vancouver region every year. In recent years, agencies represented on Metro Vancouver’s Regional Planning Advisory Committee – Invasive Species Subcommittee together have spent over \$55,000 on Himalayan balsam control and volunteer stewardship annually. This figure does not include control costs for private landowners across the region or costs associated with education and awareness activities.

REPRODUCTION AND SPREAD

Like all members of the *Impatiens* genus, Himalayan balsam produces seeds that explode out of mature capsules when disturbed (e.g., when touched or moved by a strong wind). Pods catapult up to 2,500 seeds per plant per growing season, spreading up to 32,000 seeds per square metre in a dense infestation (Invasive Species Council of British Columbia, 2017). Seeds can be ejected up to 7 metres from the plant (Invasive Species Council of British Columbia, 2017).

The buoyant seeds are dispersed by humans and animals, and can be transported long distances via watercourses (Clements, Feenstra, Jones, & Staniforth, 2008). They can travel up to 10 km without loss of viability and can germinate under water (Whatcom County Noxious Weed Board, 2018). This species is thought to have one of the highest rates of



Adventitious roots growing from lower stem nodes

CREDIT: ISCMV

seed spread of all invasive species worldwide (Clements, Feenstra, Jones, & Staniforth, 2008).

Although considered an annual species, hollow woody stems from large Himalayan balsam plants can persist through the winter and may prevent other plant species from growing at the site (Clements, Feenstra, Jones, & Staniforth, 2008).

Another adaptive strategy of this species is the simultaneous germination of seeds that form dense stands of plants of the same age, which may further discourage growth of other plant species (Clements, Feenstra, Jones, & Staniforth, 2008).

Himalayan balsam can produce adventitious roots from lower nodes of the stem, especially when the plants are blown over or growing on a slope (Beerling & Perrins, 1993).

Though not commercially available, people contribute to its spread by collecting and spreading seed, trading it, or maintaining it on properties.

HABITAT AND DISTRIBUTION

Himalayan balsam is partially shade tolerant and requires wet soil. It prefers disturbed, lowland, riparian areas including stream sides, ditches, sloughs, wet meadows, woodlands and wetlands throughout the region. It can also be found in private gardens, along utility rights-of-way, at waste sites and encroaching on moist fields (Crampton, 2018). It forms thick monocultures at moist sites. Himalayan balsam plants are able to retain a lot of moisture to withstand summer drought conditions, but they are sensitive to frost (Saskatchewan Invasive Species Council, 2013).

Native to the Himalaya region of Asia, Himalayan balsam was introduced to North America in the early 1800s as an ornamental plant and in ship ballast water (Saskatchewan Invasive Species Council, 2013). It is predominantly found in the Southern part of the British Columbia, including southern Vancouver Island, Metro Vancouver, Fraser Valley and southeastern British Columbia. It is spreading rapidly through the Metro Vancouver area (Clements, Feenstra, Jones, & Staniforth, 2008). It can also be found in isolated patches in the Northwest of British Columbia (Wichrowski, 2010).

Research suggests that Himalayan balsam is far from reaching its “potential climatic range in Canada” (Clements, Feenstra, Jones, & Staniforth, 2008). Its ability to thrive in cool climates and variable precipitation levels and soil moisture regimes will likely allow its population to expand in British Columbia.

Identification

The following identification information was collected from Clements, Feenstra, Jones, & Staniforth (2008) and the Invasive Species Council of British Columbia (2017).

Lifecycle: Annual, succulent herb; stems erect, often branched; 0.6 - 3 metres tall; roots are red-pink and very superficial, extending only 10 - 15 centimetres into the soil. Germinates starting in February/March.

Stem: Brittle, succulent, hexagonal, glabrous (smooth and hairless), hollow and jointed, sometimes branched, sappy, green to pink-red; leaves and branches arise from stem joints.

Leaves: Opposite to whorled (usually in threes), stalked, egg-shaped to elliptic, sharply and closely saw-toothed, prominent reddish mid vein, 5–20 centimetres long, shiny and dark green.

Flowers: One to several in leaf axils, borne on long stalks, pink to fuchsia (rarely white), usually spotted inside; sepals pouched, with a short-recurved spur. The common name ‘Himalayan balsam’ comes from the flower’s resemblance of an old-fashioned English police ‘Bobby’ helmets; flowers also resemble a slipper or orchid flowers. Flowers bloom from June to November and have a fragrance. Mostly insect-pollinated but rarely self-pollinated.

Fruits: Capsules, elastically dehiscent (burst when ripe, triggered by touch), 1.5 – 3 centimetres long, up to 16 seeds in five chambers. Seeds are mature starting mid-July, and mature later at shady sites. The fascination with the explosive seed capsules when touched gives rise to the common name

'touch-me-not' given to various species in the Impatiens genus. The seeds can be thrown up to 7 metres from the plant. The seeds are cream-coloured to dark brown/black at maturity and viable for 18 months in the soil.

Other characteristics: Plants have a distinctive smell that is described as musty or like sweet gasoline.

The following photos show Himalayan balsam plant parts.



Leaves

CREDIT: ISCMV



Stem with node and branched leaves

CREDIT: SSISC



Roots

CREDIT: SSISC



Flower

CREDIT: ISCMV



Mature, unopened seed pods

CREDIT: ISCMV



Dehiscent capsule and immature seeds

CREDIT: ISCMV

SIMILAR SPECIES

There are a number of other *Impatiens* species in British Columbia that Himalayan balsam could be confused with, especially in the absence of flowers. All *Impatiens* species have similar looking flowers and explosive seed capsules (Clements, Feenstra, Jones, & Staniforth, 2008). Himalayan

balsam can be distinguished by its relatively tall height, opposite or whorled leaves, and the pink-purple flowers. The table below describes the most common *Impatiens* species (unless otherwise noted, sourced from (Klinkenberg, 2018)).

SPECIES	STATUS IN BRITISH COLUMBIA	STEM	LEAVES	FLOWERS
<i>Impatiens noli-tangere</i> (common touch-me-not)	Native to North America	Hairy, 20–60 centimetres tall	Alternate, coarsely saw-toothed, stalked, 3-12 centimetres	Yellow sparingly flecked with dark red to orange spots, gradual taper to the spur
<i>Impatiens glandulifera</i> (Himalayan balsam, Himalayan balsam)	Invasive	Often branched, purple-tinged, 0.6–2.0 metres	Opposite to whorled, stalked, sharply and closely saw-toothed, 6-15 centimetres	White to pink to purple, usually purplish-spotted, with a short recurved spur
<i>Impatiens capensis</i> (spotted touch-me-not, orange balsam, orange jewelweed)	Non-native (Zika, 2006)	20–80 centimetres	Alternate, stalked, shallowly and remotely saw-toothed, 3–12 centimetres	Orange, brown-spotted or mottled, spur curved or hooked
<i>Impatiens parviflora</i> (small-flowered touch-me-not, small touch-me-not)	Invasive	20–80 centimetres	Alternate, stalked, finely and sharply saw-toothed, 3–12 centimetres	Small, pale yellow to orange, spurs straight and directed backward



Impatiens noli-tangere (native)
CREDIT: BARBARA TOKARSKA-GUZIŁ, UNIVERSITY OF SILESIA, BUGWOOD.ORG



Impatiens capensis flower
CREDIT: ISCMV



Impatiens parviflora (invasive)
CREDIT: ARTMECHANIC VIA FLICKR

Impatiens parviflora (Small-flowered touch-me-not or small touch-me-not)

Small-flowered touch-me-not is also an invasive plant of concern in the Metro Vancouver region. It is found in similar habitats and often at the same sites as Himalayan balsam. Sometimes small-flowered touch-me-not is the dominant invader. For example, in the City of Surrey, *I. parviflora* is more widespread than *I. glandulifera*. The flowers are small and yellow; capsules are light green and slender. Its form and leaf look similar to Himalayan balsam, but it is much smaller and lacks the purple-tinge. It is also commonly mistaken for the native *Impatiens noli-tangere* (common touch-me-not). The table above distinguishes the *Impatiens* species. Verifying identification is crucial prior to any management activities.

Small-flowered touch-me-not tends to emerge and flower slightly earlier than Himalayan balsam (Crampton, 2018). It is fairly common in the region, and due to its smaller and more inconspicuous form, is probably more widespread than thought. A high level of effort is required for removal of small-flowered touch-me-not compared to Himalayan balsam due to its smaller size (Crampton, 2018).

Like Himalayan balsam, if left unmanaged, it can spread very quickly, and cover forest floors and other sites it has invaded (see photo).



Impatiens parviflora

CREDIT: JAN SAMANEK, PHYTOSANITARY ADMINISTRATION, BUGWOOD.ORG

Some jurisdictions undertake control of small-flowered touch-me-not concurrent with Himalayan balsam, although Himalayan balsam is usually higher priority. There is value in conducting management at the same time if they are growing together (Crampton, 2018). The management strategies outlined in this document also hold true for small-flowered touch-me-not (Dreves, 2018).

Tracking

The Provincial government maintains the [Invasive Alien Plant Program \(IAPP\) application](#) (British Columbia Ministry of Forests, Lands and Natural Resource Operations and Rural Development 2017), which houses information pertaining to invasive plant surveys, treatments, and monitoring. Many agencies, including local governments, have their own internal invasive species inventory and mapping protocols that are used by staff, contractors and, in some cases, the public. For example, the City of North Vancouver has its own system called AlienMap. Agencies in British Columbia that do not enter data into IAPP are encouraged to check it regularly because it contains public reports and data from other agencies and it is important to consider as much data as possible when making management decisions. The Map Display module of IAPP is publicly accessible.

When carrying out Himalayan balsam inventory it is useful to record the following information as it will later inform treatment plans:

- Size and density of infestation,
- Location in relation to the 10 metre Pesticide-Free Zone (PFZ) adjacent water courses, and
- Location in relation to other water sources, such as wells.

Reporting

Please report Himalayan balsam occurrences to:

- The Provincial Report-A-Weed program (via smart phone app www.reportaweedbc.ca)
- The Invasive Species Council of Metro Vancouver: 1-604-880-8358 or www.iscmv.ca
- The municipality where the Himalayan balsam was found
- The landowner directly – If the landowner is unknown, the [Invasive Species Council of Metro Vancouver](#) can provide support to identify the appropriate authority

Reports submitted through these channels are reviewed by invasive species specialists who coordinate follow-up activities when necessary with the appropriate local authorities. However, some people may be hesitant to report infestations as their presence may affect property values.

Prevention and Control Strategies

Effective invasive plant management techniques may include a variety of control techniques ranging from prevention, chemical, manual, mechanical, biological and/or cultural methods. Each method is described below in order of effectiveness.

Due to the explosive nature of the fruits, be cautious when working around infestations, especially after the seed capsules have matured. Since Himalayan balsam is found and spread primarily by water, management plans should consider targeting upstream infestations first to limit dispersal downstream (Clements, Feenstra, Jones, & Staniforth, 2008).

Whatever control method is undertaken, it is best to aim for complete management at the site. Due to seed production and spread, missing even one flowering plant during control activities can be detrimental to the management effort.

For this species, 99% control efficiency has been shown to be almost as ineffective as no management at all (Wadsworth, Collingham, Willis, Huntley, & Hulme, 2002).

Follow-up monitoring and treatment will be required during the same growing season and for several years regardless of the treatment technique.

PREVENTION: IMPERATIVE

Prevention is the most economical and effective way to reduce the spread of Himalayan balsam over the long term.

When working in or adjacent to Himalayan balsam, inspect and remove plants, plant parts, and seeds from personal gear, clothing, pets, vehicles, and equipment and ensure soil, gravel, and other fill materials are not contaminated with Himalayan balsam before leaving an infested area. Bag or tarp plants, plant parts, and seeds before transport to an appropriate disposal site (see Disposal section).

Do not purchase, trade or grow Himalayan balsam. Instead, grow regional native plants that are naturally adapted to the local environment and non-invasive. Consult the Invasive Species Council of British Columbia's '[Grow Me Instead](#)' Program or [Metro Vancouver's Grow Green website](#) for non-invasive, drought-tolerant plants, and garden design ideas. Ensure all materials (e.g., topsoil, gravel, mulch, compost) are weed-free. Healthy green spaces are more resistant to invasion by invasive plants, so it is also important to maintain or establish healthy plant communities.

STRATEGY COLOUR LEGEND

GREEN: RECOMMENDED

ORANGE: CAUTION

RED: NOT RECOMMENDED OR NOT AVAILABLE

MANUAL/MECHANICAL: RECOMMENDED

The following manual/mechanical methods can be used to control Himalayan balsam. **Due to the explosive nature of seed dispersion, none of these techniques should be used when the seed capsules are mature.** It is recommended to leave the plant in place until the following season if the seed capsules have matured (City of Port Moody, n.d.).

- **Pulling** the plant by hand is simple and easy, as the roots are very shallow and weak and the plants easily come out of the ground with little effort. Digging or use of special tools are not usually necessary unless in dry compacted soil. Using hands, the base of the plant can be carefully pulled from the ground, removing as much of the root as possible (Langley Environmental Partners Society, 2014). Every plant should be removed from the site. Any divots created after pulling should be replaced to minimize soil disturbance (King County Noxious Weed Control Program, 2010). After pulling, the plants wither quickly.

The ideal time to conduct the first pull is prior to and up until the plants flower (usually late May to early June), but certainly before ripened seeds are present to avoid the spread of seeds (Crampton, 2018). Monthly pulls should be conducted until the seed forms, with a minimum of 2 hand pulls each season, the second pull taking place later in summer (Leblanc & Lavoie, 2017). Follow-up is essential as new or missed plants will emerge.

Hand pulling can be used at sites of any size. It is the most desirable form of control when there are native or desirable plants also present (Dreves, 2018). In this situation, care must be taken to inspect under vegetation for juvenile plants. When using this form of control along a waterbody, caution should be used, or consider using a barrier to avoid releasing vegetation or sediment into the water (Washington State University, 2011).

- **Cutting** may be used to remove the top of the plant to prevent fruit formation if it is growing at a sensitive site or on a steep slope or ditch where the bottom of the plant is inaccessible (City of Port Moody, n.d.). If maintenance in the area is required or disturbance is likely after the plant has already flowered or set seed, cutting may also be used (City of Port Moody, n.d.). A bag should be placed around the entire cluster of capsules to prevent them from exploding or escaping and then the flower/seed head should be cut (King County Noxious Weed Control Program, 2010). The rest of the plant can be pulled as per recommendations above. Himalayan balsam can grow new flowering stems after cutting, so monitoring and follow-up with this method is crucial.

- **Mowing or brush cutting** can be effective and may be best suited for large, non-riparian sites. This method can be conducted in June and July, immediately following the appearance of flowers and before the seed capsules form (Clements, Feenstra, Jones, & Staniforth, 2008). Plants should be cut as close to the ground as possible (King County Noxious Weed Control Program, 2010).

The site should be monitored in case plants re-sprout (Whatcom County Noxious Weed Board, 2018). Follow-up may include either pulling or additional mechanical treatments.

- **Knocking** involves the use of a hockey stick or similar instrument to hit the plants, thereby severing or damaging them. This method is possible because the plants are hollow and easily broken. Although this method is less time-consuming and many plants can be targeted within a short period of time, it will not kill all the plants. Some will be knocked down, but will continue to grow or re-root, allowing opportunity for blooming and seed maturation. Pulling or brush cutting are more effective and take the same amount of time.
- **Burning/flaming** is not recommended as the plants contain high water content and the tissue will not burn

well. This technique was tested in the Fraser Valley using a small portable propane flamer prior to flowering with little success as some of the plants either recovered or escaped control (Clements, Feenstra, Jones, & Staniforth, 2008).

APPLYING MANUAL/MECHANICAL CONTROL METHODS IN RIPARIAN AREAS

Himalayan balsam often grows in large contiguous patches right up to the edge of water courses. Consider the impact of control techniques and the resulting bare soil on adjacent water courses. Time removal works during a period that minimizes risk to fish species, outside of the [fish window](#). Adhere to Provincial and Federal instream and riparian regulations. It is recommended to consult with a qualified environmental professional when working around water bodies.

CHEMICAL: CAUTION

When alternative methods to prevent or control invasive plants are unsuccessful, professionals often turn to herbicides. Use of herbicides may be an option for large infestations of Himalayan balsam (King County Noxious Weed Control Program, 2010), but this method should be used with caution for a number of reasons (Crosby, 2018):

1. Weather conditions greatly influence treatment efficacy;
2. Himalayan balsam may grow in riparian areas where pesticide use is restricted;
3. There is a greater chance of missing plants with herbicide treatment compared to manual/mechanical control; and

4. Native vegetation is often integrated with Himalayan balsam infestations. Mortality of non-target plants should be expected. Sites with well established native shrubs layers are not suitable for chemical treatment.

With the exception of substances listed on Schedule 2 of the [Integrated Pest Management Regulation](#), the use of herbicides is highly regulated in British Columbia. Site characteristics must be considered with herbicide prescribed, based on site goals and objectives and in accordance with legal requirements. [This summary of British Columbia's Integrated Pest Management Act](#) provides an overview of the Provincial legislation.

PESTICIDE LICENCE AND CERTIFICATION

A valid pesticide licence is required to:

- offer a service to apply most pesticides;
- apply most pesticides on public land including local government lands²; and
- apply pesticides to landscaped areas on private land, including outside office buildings and other facilities.

² on up to 50 hectares/year by a single organization. Organizations looking to treat over 50 hectares of land per year are also required to submit a Pest Management Plan and obtain a Pesticide Use Notice confirmation.

Pesticides (e.g., herbicides, insecticides, fungicides) are regulated by the Federal and Provincial government, and municipal governments often have pesticide bylaws.

- Health Canada evaluates and approves chemical pest control products as per the [Pest Control Products Act](#).
- The [Integrated Pest Management Act](#) sets out the requirements for the use and sale of pesticides in British Columbia. This Act is administered by the Ministry of Environment.
- Several municipalities have adopted bylaws that prohibit the use of certain pesticides.

Everyone who uses pesticides must be familiar with all relevant laws.

ONLY companies or practitioners with a valid Pesticide Licence and staff who are certified applicators (or working under a certified applicator) may apply herbicide on invasive plants located on public lands in British Columbia. Applicators must be either the land manager/owner or have permission from the land manager/owner prior to herbicide application.

On private property the owner may obtain a Residential Applicators Certificate (for Domestic class products only) or use a qualified company. Residents do not require a Residential Applicator Certificate for certain uses of domestic class glyphosate including treatment of plants that are poisonous for people to touch, invasive plants and noxious weeds listed in legislation, and weeds growing through cracks in hard surfaces such as asphalt or concrete. Refer to the 'Pesticides & Pest Management' and 'Home Pesticide Use' webpages listed in the Additional Resources Section for more information.

Questions? Contact the Integrated Pest Management Program: Telephone: (250) 387-9537
Email: bc.ipm@gov.bc.ca

Pesticide applicator certificates can be obtained under the category 'Industrial Vegetation Management' to manage weeds on industrial land, roads, power lines, railways, and pipeline rights-of-way for control of noxious weeds on private or public land. Assistant applicator training is also available and the [online course and exam](#) are free.

Although an annual fee and annual reporting are required, it is best practice for personnel supervising or monitoring pesticide contracts to also maintain a pesticide applicator licence so they are familiar with certification requirements.

For more information on how to obtain a licence and the requirements when working under the Provincial [Integrated Pest Management Act and Regulation](#), please review the Noxious Weed & Vegetation Management section on this webpage: gov.bc.ca/PestManagement.

HERBICIDE LABELS

Individual herbicide labels must always be reviewed thoroughly prior to use to ensure precautions, application rates, and all use directions, specific site and application directions are strictly followed. Under the *Federal Pest Control Products Act* and the Provincial Integrated Pest Management Regulation, **persons are legally required to use pesticides (including herbicides) only for the use described on the label and in accordance with the instructions on that label.** Failure to follow label directions

could cause damage to the environment, poor control results, or danger to health. Contravention of laws and regulations may lead to cancellation or suspension of a licence or certification, requirement to obtain a qualified monitor to assess work, additional reporting requirements, a stop work order, or prohibition from acquiring authorization in the future. A conviction of an offence under legislation may also carry a fine or imprisonment.

Herbicide labels include information on both the front and back. The front typically includes trade or product name, formulation, class, purpose, registration number, and precautionary symbols. Instructions on how to use the pesticide and what to do in order to protect the health and safety of both the applicator and public are provided on the back (British Columbia Ministry of Environment and Climate Change Strategy, 2011).

Labels are also available from the Pest Management Regulatory Agency's [online pesticide label search](#) or [mobile application](#) as a separate document. These label documents may include booklets or material safety data sheets (MSDS) that provide additional information about a pesticide product. Restrictions on site conditions, soil types, and proximity to water may be listed. If the herbicide label is more restrictive than Provincial legislation, the label must be followed.

HERBICIDE OPTIONS

The following herbicides can be used on Himalayan balsam. For best results, herbicide application should occur before the plants begin to flower to minimize seed production (Invasive Species Council of British Columbia, 2017).

ACTIVE INGREDIENT (EXAMPLE BRAND NAMES)+	APPLICATION	PERSISTENCE	GROWTH STAGE	TYPE++
Glyphosate (many products)*	foliar application	non-residual	actively growing	non-selective
2, 4-D	foliar application	residual	actively growing	selective, no effect on most grasses**
Triclopyr (example: Garlon™)	foliar application	residual	actively growing	selective, no effect on most grasses**

+ The mention of a specific product or brand name of pesticide in this document is not, and should not be construed as, an endorsement or recommendation for the use of that product.

++ Herbicides that control all vegetation are non-selective, while those that control certain types of vegetation (for example, only grasses or only broadleaf plants) are termed selective.

* Treatment with glyphosate should be combined with re-vegetation of the site (see Restoration section below) to prevent seedlings from re-infesting the area (King County Noxious Weed Control Program, 2010).

** Selective herbicides are “most effective when Himalayan balsam is growing in a grassy area or with other monocots. Re-treatment the following year is necessary to control late-germinating plants. Continue to monitor for new plants for several years after the initial treatment and following any disturbance to the soil such as tilling or construction” (King County Noxious Weed Control Program, 2010).



Stand of Himalayan Balsam

CREDIT: CITY OF PORT MOODY

APPLYING PESTICIDE IN RIPARIAN AREAS

Provincial legislation prohibits the use of herbicides within 10 metres of natural water courses and 30 metres of domestic or agricultural water sources on public lands. On private lands herbicide labels need to be followed (which means for glyphosate products treatment can happen up to the water's edge) and other restrictions may apply (e.g., industrial sites, forestry sites, golf courses, etc.). On public lands, glyphosate is the only active ingredient that can be applied within the 10 metre Pesticide-Free Zone (PFZ)³ in British Columbia in accordance with the *Integrated Pest Management Act* and Regulation and all public land Pesticide Management Plans (PMPs). A plant must be either a listed Noxious Weed (under the [Weed Control Act](#)) or appear in the *Forest and Range Practices Act Invasive Plants Regulation* to be treated within the 10 metre PFZ. **Himalayan balsam is not listed in either and therefore glyphosate and other herbicides can only be applied on Himalayan balsam up to 10 metres away from the high water mark (HWM)⁴.** The 30 metre no-treatment zone around a water supply intake or well used for domestic or agricultural purposes may be reduced if the licensee or PMP holder is "reasonably satisfied" that a smaller no-treatment zone is sufficient to ensure that pesticide from the use will not enter the intake or well.

When managing Himalayan balsam with herbicide in riparian areas:

- Observe and mark all PFZs while on site.
- The HWM should be determined by careful evaluation by the applicator.
- Distances in PFZs should be measured as horizontal distance.
- Herbicides restricted in a PFZ must not enter these zones by leaching (lateral mobility) through soil or by drift of spray mist or droplets.
- Treatments should be conducted when water levels are low (e.g., summer months) to reduce risk.
- Note that efficacy may be dependent on site conditions, including moisture in the soil.

3 The Pesticide-Free Zone (PFZ) is an area of land that must not be treated with pesticide and must be protected from pesticide moving into it, under the *Integrated Pest Management Act* and Regulation.

4 The High Water Mark (HWM) is defined as the visible high water mark of any lake, stream, wetland or other body of water where the presence and action of the water are so common and usual and so long continued in all ordinary years as to mark upon the soil of the bed of the lake, river stream, or other body of water a character distinct from that of the banks, both in vegetation and in the nature of the soil itself. Typical features may include, a natural line or "mark" impressed on the bank or shore, indicated by erosion, shelving, changes in soil characteristics, destruction of terrestrial vegetation, or other distinctive physical characteristics. The area below the high water mark includes the active floodplain (British Columbia Ministry of Environment and Climate Change Strategy, 2011).

APPLICATION METHODS

“Both selective and non-selective herbicides should be applied before flower but late enough that seedlings have grown to a stage where they can be covered by the herbicide application” (King County Noxious Weed Control Program, 2010) as sprayed flowers can still set seed (Whatcom County Noxious Weed Board, 2018).

The preferred application methods to minimize non-target damage are outlined below.

- **Foliar application** involves using a backpack or handheld sprayer to completely cover the actively growing plant parts with herbicide. Low pressure and larger droplet size should be used (King County Noxious Weed Control Program, 2010). A second pass of spraying will ensure that smaller individuals protected by larger ones the first time around will get treated (Beerling & Perrins, 1993). Earlier application of herbicides achieves much better control in the majority of products (Beerling & Perrins, 1993).
- **Wick application** involves the use of specialized hand-held wands to apply or wipe herbicide directly on the leaf surfaces (King County Noxious Weed Control Program, 2010). The herbicide solution should not be allowed to drip from the wick and the wick should not contact the foliage of non-target species.

Chemically treated plants can be left onsite to die. If mowing will be conducted at the site, this should not occur until after herbicide has had a chance to work (King County Noxious Weed Control Program, 2010). Manual treatments can be combined with chemical control in riparian areas where regulations prohibit chemical control of an entire infestation (that is, plants within the PFZ should be manually removed where adjacent chemical treatment occurred).

CULTURAL: NOT RECOMMENDED

In the United Kingdom, efficient control has been achieved using cattle and sheep to graze on Himalayan balsam leaves, stems and flowers from early spring and throughout the growing season (Clements, Feenstra, Jones, & Staniforth, 2008). However, grazing opportunities are limited in urban areas due to municipal bylaws regulating agriculture animals, the high probability of interface with the public, and the damage animals could cause to riparian areas and other sensitive sites with multiple land uses.

BIOLOGICAL: NOT AVAILABLE

The Provincial government is working with United Kingdom researchers who are testing host specificity with the *P. komarovii* rust and comparing the efficacy of the rust strains from Pakistan and India on Himalayan balsam from Canada. (British Columbia Ministry of Forests, Lands, Natural Resource Operations and Rural Development, 2018). However, there are currently no approved biological control measures for Himalayan balsam in British Columbia.

CONTROL SUMMARY

The following table provides a summary and comparison of control methods for Himalayan balsam.

CONTROL STRATEGY	TECHNIQUES	APPLICABLE SITE TYPE	PROS	CONS
Manual	Pulling or cutting	Individual plants, sites of all sizes	Selective, can be done by volunteers, inexpensive, non-chemical	Creates disturbance, labour intensive, flowering can still occur on regrowth
Mechanical	Mowing or brush cutting	Possible at all sites, but best suited for large non-riparian infestations	Less labour intensive, non-chemical, reduces risk of disturbance and erosion	Requires trained staff, speciality equipment, flowering can still occur on regrowth
Chemical	Foliar application, wick application	Large infestations, non-aquatic environments	Treatment method for plants that cannot be managed other ways, less labour intensive, treat large areas, less disturbance of surrounding environment	Unintended environmental/health impacts, high public concern, requires trained staff, speciality equipment and herbicide products, manual control may be necessary for plants within the PFZ adjacent to chemical treatments
Cultural	Not recommended			
Biological	No bioagents are currently available for distribution in British Columbia			

Disposal

ON SITE DISPOSAL

The vegetative and pre-flowering parts of Himalayan balsam plants can be dried out and composted on site, usually desiccating within 6-7 days (King County Noxious Weed Control Program, 2010). Large piles of Himalayan balsam may take up to two weeks before desiccation. The piles can either be exposed to air or covered (King County Noxious Weed Control Program, 2010). Himalayan balsam can re-root from nodes (Dreves, 2018) and therefore tarps should be used underneath compost piles or piles should be elevated above ground and dried thoroughly (King County Noxious Weed Control Program, 2010).

For best results, crush stems before placing on compost pile. Re-rooting is more likely to occur in cool or wet weather. Composting onsite during hot weather will promote faster desiccation (Dreves, 2018). Himalayan balsam plants should not be composted if seeds are present.

OFF SITE DISPOSAL

When disposing off site, transport plant parts on tarps or in thick plastic bags to an appropriate disposal or compost facility. In the Metro Vancouver region, the several facilities accept Himalayan balsam plants and/or infested soil. Please consult [this disposal facility list](#) for current details.

PLEASE CONTACT ALL FACILITIES BEFOREHAND TO CONFIRM THEY CAN PROPERLY HANDLE THE MATERIAL.

CLEANING AND DISINFECTION⁵

Before leaving a site, all visible plant parts and soil from vehicles, equipment, and gear should be removed and rinsed if possible. When back at a works yard or wash station, vehicles should be cleaned and disinfected using the following steps:

- Wash with 180 °F water at 6 gpm, 2000 psi*, with a contact time of ≥ 10 seconds on all surfaces to remove dirt and organic matter such as vegetation parts or seeds. Pay special attention to undercarriages, chassis, wheel-wells, radiators, grills, tracks, buckets, chip-boxes, blades, and flail-mowing chains.
- Use compressed air to remove vegetation from grills and radiators.
- Sweep/vacuum interior of vehicles paying special attention to floor mats, pedals, and seats.
- Steam clean poor access areas (e.g., inside trailer tubes) – 200 psi @ 300 °F.
- Fully rinse detergent residue from equipment prior to leaving facility.

* Appropriate self-serve and mobile hot power-wash companies in the Metro Vancouver region include: Mary Hill Truck Wash, Omega Power Washing, Eco Klean Truck Wash, RG Truck Wash, Ravens Mobile Pressure Washing, Hydrotech Powerwashing, Platinum Pressure Washing Inc, and Alblaster Pressure Washing. Wash stations should be monitored regularly for Himalayan balsam growth.

⁵ Adapted from Metro Vancouver 2017 Water Services Equipment Cleaning Procedures and Inspection Protocols.

Follow-up Monitoring

Whatever control method is used, follow-up monitoring and maintenance treatments are components of an integrated management plan or approach. Monitor sites throughout the growing season and remove any new plants (King County Noxious Weed Control Program, 2010). Management should continue until plants are no longer sprouting at the site (Langley Environmental Partners Society, 2014). Seeds can be viable for 18 months (King County Noxious Weed Control Program, 2010). Most sources agree that monitoring of all managed sites should occur annually for several (> 2) seasons following eradication (Clements, Feenstra, Jones, & Staniforth, 2008).

After chemical treatment, sites should be monitored for re-growth from the seed bank for several years (King County Noxious Weed Control Program, 2010).

Restoration

Restoration is recommended to create competition, control Himalayan balsam regrowth and replace lost habitat. Numerous studies have shown that removal of this invasive plant increased the number of non-native plants in the area (Clements, Feenstra, Jones, & Staniforth, 2008). As the plant often grows in wet and sensitive sites, control activities can further damage sites as people access them, making restoration of sites especially important.

The City of Port Moody has noticed that Himalayan balsam often takes over at knotweed species management sites, especially in moist sites (Crampton, 2018). Due to its ability to grow quickly from seed and take advantage of disturbed sites, watch for Himalayan balsam at sites being managed for other invasive species.

If a non-selective herbicide is used in areas with grass or other desirable monocots, the area should be re-vegetated to prevent re-invasion (King County Noxious Weed Control Program, 2010). If a non-selective herbicide is used for treatment along road rights-of-way, re-seeding should occur (King County Noxious Weed Control Program, 2010).

Mulch or a non-invasive grass seed can be used to avoid leaving bare soil and reduce colonization by other invasive plant species. The International Society of Arboriculture and relevant municipal parks or arboriculture departments offer guidelines for mulch application. Specific mulch depths can be used to control invasive weeds and encourage plant growth (International Society of Arboriculture, 2018).

Native plant re-growth may occur naturally at management sites. The Township of Langley has observed Himalayan balsam stands reducing in size after native red alder, hardhack, and willow naturally regenerated following control of the invasive (St. Andrassy, n.d.). Further, in areas where healthy native vegetation existed adjacent to Himalayan balsam infestations the native vegetation eventually regrew to the edge areas where the invasive had been dominant (St. Andrassy, n.d.).

Examples of common competitive native species prescribed for sites within the Metro Vancouver region are summarized in the table below based on site moisture. Replacement species should be chosen based on the ecology of the site by a qualified environmental professional. Local biologists, environmental professionals, agronomists, arborists, native and domestic forage specialists, seed companies

and plant nurseries are all good sources for localized recommendations for regional native species and regionally adapted domestic species, based on site usage. Several science-based resources are available to guide restoration efforts, such as the South Coast Conservation Program’s [Diversity by Design](#) restoration planning toolkit.

WET SITES	MOIST SITES	DRY SITES
SHRUBS		
Salmonberry	Salmonberry	Thimbleberry
Hardhack	Willow	Nootka rose
Willow	Red osier dogwood	Red flowering currant
Red osier dogwood	Red elderberry	Snowberry
Pacific ninebark	Vine maple	Tall Oregon grape
	Indian plum	Oceanspray
TREES		
Western red cedar	Western red cedar	Douglas-fir
Red alder	Red alder	Red alder

If it can be sourced, the native *Impatiens noli-tangere* (common touch-me-not) would also be a suitable restoration species for Himalayan balsam management sites.

Revegetation of the site to a domestic or cultured non-native plant species composition may be considered in some circumstances. Often domestic species establish faster and grow more prolifically, which aids in resisting Himalayan balsam re-invasion.

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Additional Resources

For more information please refer to the following resources.

- British Columbia Ministry of Forests, Lands, and Natural Resource Operations, Invasive Alien Plant Program (IAPP). <https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/invasive-species/reporting-invasive-species>
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- E-Flora BC, an Electronic Atlas of the Plants of British Columbia. www.eflora.bc.ca/
- Field Guide to Noxious and Other Selected Invasive Plants of British Columbia. 2014. https://bcinvasives.ca/documents/Field_Guide_to_Noxious_Weeds_Final_WEB_09-25-2014.pdf
- Grow Me Instead. <http://bcinvasives.ca/resources/programs/plant-wise/>
- GrowGreen Guide. www.growgreenguide.ca
- Invasive Species Council of British Columbia Himalayan balsam Factsheet. https://bcinvasives.ca/documents/Himalayan_Balsam_TIPS_2017_WEB.pdf
- Pesticides and Pest Management. Province of British Columbia <https://www2.gov.bc.ca/gov/content/environment/pesticides-pest-management>

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Myriophyllum aquaticum

BEST MANAGEMENT PRACTICES FOR
Parrot's Feather
in the Metro Vancouver Region

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Introduction

The impacts of invasive species on ecological, human, and economic health are of concern in the Metro Vancouver region. Successful control of invasive species requires concerted and targeted efforts by many players. This document – “**Best Management Practices for Parrot’s Feather in the Metro Vancouver Region**” – is one of a series of species-specific guides developed for use by practitioners (e.g., local government staff, crews, project managers, contractors, consultants, developers, stewardship groups, and others who have a role in invasive species management) in the region. Together, these best practices provide a compendium of guidance that has been tested locally by many researchers and operational experts.

Parrot’s feather is a perennial aquatic plant native to South America. It was introduced to North America as an aquarium and aquatic garden plant (Ontario’s Invasive Species Awareness Program, 2016). It grows from the bottom of fresh water bodies through the water column with plant tips emerging above the surface, quickly forming dense mats of vegetation. It is most problematic in small ponds, irrigation channel networks and streams (CABI, 2018).

Academic institutions, government, and non-government organizations continue to study this species in British Columbia. As researchers and practitioners learn more about the biology and control of parrot’s feather, it is anticipated that the recommended best management practices will change overtime and this document will be updated. Please check metrovancover.org regularly to obtain the most recent version of these best management practices.

REGULATORY STATUS

Although parrot’s feather is an invasive plant of concern in the Metro Vancouver region, it is not currently regulated anywhere in British Columbia.

IMPACTS

Parrot’s feather can contribute to a loss of plant and aquatic species diversity by outcompeting and replacing native plant communities (Lastrucci *et al*, 2018). This has a negative impact on overall biodiversity, and can affect habitat quality and food availability for fish, amphibians, waterfowl and other aquatic species (Ontario’s Invasive Species Awareness

Program, 2016). Studies in Washington State suggest that parrot's feather is highly impactful to slow-water habitats (Kuehen *et al*, 2016). Infestations dramatically reduce the levels of dissolved oxygen in the water column, change invertebrate communities and increase the number of non-native fish species (Kuehne *et al*, 2016). In addition, infestations can trap sediment, causing water levels to rise and slowing water flow. These slow flowing stagnant waters provide optimal breeding grounds for mosquitoes (Pennsylvania Sea Grant, 2013).

Recreationalists and lake shore home owners can be impacted by parrot's feather. Dense infestations in lakes can impede swimming, fishing and boating. Further, decreased recreational and aesthetic values can lead to lower property values (Pennsylvania Sea Grant, 2013).

All levels of government, non-profit organizations and private property owners spend significant resources managing invasive species in the Metro Vancouver region every year. In waterways, irrigation ditches, sloughs and drainage canals, parrot's feather has the potential to inhibit the flow of water, resulting in an increase in maintenance costs. In recent years, agencies represented on Metro Vancouver's Regional Planning Advisory Committee – Invasive Species Subcommittee together spent over \$168,000 per year on parrot's feather control efforts. This figure does not include control costs for private landowners across the region, volunteer 'weed pull' hours, or costs associated with education and awareness activities.

REPRODUCTION AND SPREAD

Parrot's feather reproduces vegetatively through plant fragments. In North America, only female plants are present and sexual reproduction by seed does not occur (Raincoast Applied Ecology, 2016). Plant fragments as small as 4 millimetres are capable of establishing a new population (City of Richmond, 2016). In Pitt Meadows, this invader appears to have expanded its range throughout local sloughs and ditches at a rate of approximately 900 metres

per year, resulting in a cumulative spread of 12.7 kilometres over 13 years, between 2004 and 2017 (Sloboda, 2019).

Parrot's feather can be spread unintentionally by flooding events and natural dispersal from plant fragments floating downstream (Ontario's Invasive Species Program, 2016). Fragments can travel on birds or animals. It can also be spread by contaminated boats, boat trailers or heavy-duty equipment used for parrot's feather control (Hesketh, 2017).

Most parrot's feather infestations in Metro Vancouver appear to be caused by the accidental or purposeful introduction by homeowners from garden ponds or aquariums (Raincoast Applied Ecology, 2016). Parrot's feather has been an ornamental favourite in fountains, and aquariums due to its blue-green color, feather-like leaves and cascading pattern of growth.

HABITAT AND DISTRIBUTION

Parrot's feather is native to South America. It was introduced to North America in the early 1900's through the aquaria and nursery trade and is also found in Europe, New Zealand, Australia, and Africa (Wersal *et al*, 2018). It was first collected in British Columbia in 1980 in North Vancouver and was observed in a local slough by Pitt Meadows Public Works in 2004 (Sloboda, 2019) and found again in 2007 in a Garry Point Park drainage ditch in the City of Richmond (Klinkenberg, 2017). It is now widespread in a number of areas in Richmond and there are established populations in Pitt Meadows, Burnaby, Surrey and south Vancouver (Raincoast Applied Ecology, 2016). Abbotsford and Chilliwack also have infestations (Clegg, 2018). The species has not been recorded in British Columbia outside the Lower Mainland.

Parrot's feather establishes roots in the bottom sediments of water bodies. It is typically found in nutrient-rich, slow-moving water, such as wetlands, streams, irrigation reservoirs or canals, edges of lakes, ponds, sloughs or backwaters. It is most common in shallow water, but can also be found as



Parrot's feather in the Blind Channel of Katie Slough

CREDIT: SUSANNE SLOBODA, CITY OF PITT MEADOWS

a floating plant in nutrient-enriched lakes in depths up to 4.8 metres (Wersal *et al*, 2018).

Parrot's feather prefers habitats where light can penetrate to the bottom of the water column, alkaline conditions (pH range of 6.8-8.0) and water temperatures between 16-23°C. However, it can survive even broader ranges and in saltwater as long as salt concentrations remain below 4 parts per trillion (Wersal *et al*, 2018). Parrot's feather is not usually affected by frost and can survive mild winters in its submersed form (Ontario's Invasive Species Awareness Program, 2016). It usually begins growth when water temperatures reach 7°C (Wersal *et al*, 2018).

Identification

Lifecycle: Perennial aquatic plant that roots in the bottom sediments of water bodies. It produces shoots in spring from overwintering rhizomes. The plant usually dies back to its rhizomes in the autumn with cool weather (Klinkenberg, 2017).

Stem: Stems grow 2–5 metres long (Ontario's Invasives Species Awareness Program, 2016). Submersed shoots creep along the water surface with extensive branching from nodes and vertical growth of emergent stems that can extend up to 30 centimetres above the water surface (Wersal *et al*, 2018). In heavily infested water bodies, the emergent portions can be so dense that the water is not visible, and it appears as if you could walk on top of the plant (Murray, 2018).

Leaves: Leaves are feather-like and resemble small fir trees. They are whorled with 20 or more segments per leaf. The leaves are heterophyllous existing both above water (emergent) and below water (submerged). Emergent leaves have whorls of 4–6 leaves per node, are 2 to 5 centimeters long and appear bright green with a waxy surface (Dickinson & Royer, 2014). Submerged leaves are 1.5–3.5 centimetres long, have whorls of 3–6 leaves per node, and are more feathery and reddish in colour (Ontario's Invasives Species Awareness Program, 2016; Penn State Sea Grant, 2013 and DiTomaso and Kyser, 2013).

Flowers: Flowers are small (1.6 millimetres long) and inconspicuous with white spikes at the tips of emergent shoots (Wersal *et al*, 2018). Flowers usually appear in spring or summer but sometimes in fall (Wersal *et al*, 2018).

Fruits: North American plants are all female and do not produce fruit (Dickinson & Royer, 2014).

The following photos show parrot's feather plant parts.



Emergent leaves

CREDIT: GRAVES LOVELL, ALABAMA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES, BUGWOOD.ORG



Portions of submerged stems

CREDIT: CITY OF RICHMOND



CREDIT: VILSESKOGEN VIA FLICKR

SIMILAR SPECIES

Several aquatic plants resemble parrot's feather in form and habitat, but they all lack upright stems above the surface water. Ten species of *Myriophyllum*, including parrot's feather, have been found in the Pacific Northwest (Williams *et al*, 2018) as outlined below.

NATIVE MYRIOPHYLLUM

1. Cut-leaf water-milfoil (*Myriophyllum pinnatum*) – dark green stems and foliage; whorls of 3 to 5 leaves per node; winter buds are absent.
2. Farwell's water-milfoil (*Myriophyllum farwellii*) – often overlooked as it grows deep at the bottom of lakes; whorls of 3 to 6 leaves per node; winter buds are absent.
3. Western water-milfoil (*Myriophyllum hippuroides*) – appears deep green in color; whorls of 4 to 6 leaves per node, with some additional alternate leaves scattered outside the whorls.

4. Siberian water-milfoil (*Myriophyllum sibiricum*) – whitish stems; whorls of 3 or 4 leaves per node, mostly 1 centimetre or more apart; well-developed winter buds are present.
5. Ussurian water-milfoil (*Myriophyllum ussuriens*) – emergent leaves are opposite or in whorls of 3; threadlike winter buds are present on leaf axis.
6. Whorl-Leaf water-milfoil (*Myriophyllum verticillatum*) – whorls of 4 or 5 leaves per node; leaves usually have myriophylloid glands at the base of the lower segments; winter buds are present.

NON NATIVE MYRIOPHYLLUM

7. Eurasian water milfoil (*Myriophyllum spicatum*) – plant is reddish-brown in color; whorls of 3 to 5 leaves per node, mostly 1 centimetre apart or more on stem; 14–21 leaflet pairs per leaf, which is more than Parrot’s feather and native milfoils; winter buds are absent. This species is also highly invasive in British Columbia.
8. Variable leaf water-milfoil (*Myriophyllum heterophyllum*) – whitish stems; whorls of 4–6 leaves per node.
9. Andean water-milfoil (*Myriophyllum quitense*) – lower leaves are reduced to bract-like structures; strong whitish roots; winter buds are absent.

Parrot’s feather may also be confused with Brazilian elodea (*Egeria densa*), which is native to South America and also invasive in British Columbia. It has been confirmed in two water bodies in British Columbia – a City of Richmond drainage waterway and Glen Lake in Langford. Brazilian elodea is recognized by the provincial government as an Early Detection Rapid Response (EDRR) candidate species (IMISWG, n.d.). It can be distinguished from parrot’s feather by its finely serrated, bright green leaves arranged in whorls of 4 leaves per node. Its leaves are spaced by short internodes giving a ‘leafy’ appearance. Brazilian elodea is usually submerged, but can form dense mats on the surface of water. In the spring and summer, Brazilian elodea blooms with small,



Eurasian water milfoil (*Myriophyllum spicatum*)

CREDIT: ALISON FOX, UNIVERSITY OF FLORIDA, BUGWOOD.ORG

white, three-petal flowers that float on top of the water or slightly above (City of Richmond, 2018; IMISWG, n.d.).

Parrot’s feather may also be confused with the many *Potamogeton* (pondweed) species that grow in British Columbia, that have entirely submersed leaves.



Brazilian elodea (*Egeria densa*)

CREDIT: ROBERT VIDÉKI, DORONICUM KFT., BUGWOOD.ORG

Tracking

The Provincial government maintains the [Invasive Alien Plant Program \(IAPP\) application](#) (British Columbia Ministry of Forests, Lands and Natural Resource Operations and Rural Development, 2017), which houses information pertaining to invasive plant surveys, treatments, and monitoring. Many agencies, including local governments, have their own internal invasive species inventory and mapping protocols that are used by staff, contractors and, in some cases, the public. Agencies in British Columbia that do not enter data into IAPP are encouraged to check it regularly because it contains public reports and data from other agencies and it is important to consider as much data as possible when making management decisions. The Map Display module of IAPP is publicly accessible.

When carrying out parrot's feather inventory, it is useful to record the following information as it will later inform treatment plans (adapted from Raincoast Applied Ecology, 2016):

- Geographic location,
- Size and density of infestation,
- Photo of the infestation,
- Location in relation to nearby areas and water bodies that may be at risk to new invasions, and
- Location of wetlands connected to infested sites by public access routes and boat launch sites.

Reporting

Please report parrot's feather occurrences to:

- The Provincial Report-A-Weed program (via smart phone app www.reportaweedbc.ca).
- The Invasive Species Council of Metro Vancouver: 1-604-880-8358 or www.iscmv.ca.
- The municipality where the parrot's feather was found.
- The landowner directly – If the landowner is unknown, the [Invasive Species Council of Metro Vancouver](#) can provide support to identify the appropriate authority.

Reports submitted through these channels are reviewed by invasive species specialists who coordinate follow-up activities when necessary with the appropriate local authorities.

Prevention and Control Strategies

Effective invasive plant management techniques may include a variety of control techniques ranging from prevention, chemical, manual, mechanical, biological and/or cultural methods. Each method is described below in order of effectiveness.

Since parrot's feather has the ability to reproduce vegetatively through root and stem tissues, management options must be carefully evaluated on a site by site basis to avoid further spread and complications. Eradication of this plant typically requires a dedicated, multi-year, planned approach. Follow-up monitoring and treatment will be required for several years regardless of the treatment technique.

STRATEGY COLOUR LEGEND

GREEN: RECOMMENDED

ORANGE: CAUTION

RED: NOT RECOMMENDED OR NOT AVAILABLE

PREVENTION: IMPERATIVE

Prevention is the most economical and effective way to reduce the spread of parrot's feather over the long term.

Below are some simple actions that can be carried out to prevent the introduction and spread of parrot's feather.

- Parrot's feather should not be purchased, traded or grown. Instead, use non-invasive plants that are naturally adapted to the local environment. [Grow Me Instead](#) (listed under Resources section) and the Restoration section provide recommendations for non-invasive species to use in aquariums and water gardens.
- It is illegal to release plants and animals into the wild, or dump aquarium or water garden debris into rivers, streams, lakes or storm sewers. See the Disposal section

of this document for appropriate disposal locations or inquire with staff at the location where the parrot's feather was purchased.

- Plants, plant parts and mud should be cleaned from boats and fishing gear. Any items that can hold water (e.g. buckets, wells, bilge and ballast) should be drained onto dry land. All items should be completely dried before use at another water body or site. All machinery or equipment that is used for parrot's feather management or used in areas infested with parrot's feather should also be cleaned. See Cleaning and Disinfection section below.
- Special care should be taken when controlling parrot's feather to prevent the movement of plant parts downstream.

MECHANICAL/MANUAL: RECOMMENDED

Manual control should be carried out with extreme caution due to the likelihood of spread through root and stem fragments. Mechanical control is a time-consuming treatment option that will require dedication to frequent removals over numerous years. Treated sites should be surveyed in spring (March), summer (June), and early fall (October) to identify re-occurring infestations. Any necessary in-water work permits should be acquired from the appropriate authorizing organizations.

APPLYING MANUAL/MECHANICAL CONTROL METHODS IN RIPARIAN AREAS

Consider the impact of control techniques and the resulting bare soil on adjacent water courses. Time removal works during a period that minimizes risk to fish species, outside of the [fish window](#). Adhere to provincial and federal riparian regulations. It is recommended to consult with a qualified environmental professional when working around water bodies.

Care should be taken to restrict the downstream movement of stem fragments that will result from cutting operations as regrowth is rapid from this type of propagule. Containment of plant parts during manual/mechanical treatments is critical, particularly during excavation (Ministry of Environment, 2018; Raincoast Applied Ecology, 2016). The following **containment procedures** are recommended. A qualified environmental professional should oversee and monitor this work if there is risk of amphibians, fish or other species getting trapped in the contained area.

- For small infestations (i.e., ditches or canals), a hardware cloth screen (1/4" mesh) should be installed at the upstream and downstream ends of the treatment area. The screen must be left in place for 1 to 5 days following completion of the work and cleaned following management activities (see Cleaning and Disinfection section below). These procedures may require use of a boat.
- For larger watercourses, a flexible floating net with lead-line should be used to contain the treatment area. In most cases, the net should be installed at the downstream end of the site. The net must be cleaned following excavation and left in place for 1 to 5 days (if possible).

- During management activities, visual searches of the area should be conducted and any fragments hand-picked or netted. This may require use of a boat. Note that emergent fragments have higher regeneration capacity, so capture of these fragments is more important than submerged fragments (Xie *et al*, 2018).

Chances of success will improve if several of the following manual/mechanical techniques are used in combination. The City of Richmond has been carrying out parrot's feather management trials since 2011 using various methods including frost treatments, excavation, shade treatments and benthic barriers (geotextile) (Tillyer, 2018). From these trials, the treatment methods that showed the most promise for control of parrot's feather were excavation followed by overhead shading, or benthic barrier placement over the infested substrate (Hesketh, 2017).

EXCAVATION/DREDGING

The removal of stems, roots, and contaminated sediments from the bottom of lakes, rivers, harbours, and other water bodies is possible using an excavator. Excavation should happen in March when overwintering stems are visible as surface mats, with follow up treatment in June or July during



Excavation of parrot's feather in ditches in Richmond

CREDIT: CITY OF RICHMOND



Bucket with a thumb

full growth (Raincoast Applied Ecology, 2016). It is best to use a standard cleaning bucket thumb on the excavator. The excavator operator should be clearly briefed to understand the purpose of the work and to ensure that fragmentation is avoided. It is advisable to have an expert onsite supervising the work. Water levels must be < 0.5 metres deep during excavation so may require drawing down water (see Cultural Control section below). Remove at least 15–25 centimetres of the infested sediment to eliminate regrowth (DiTomaso *et al*, 2013).

This management technique may be more successful if used after another manual removal method or followed by overhead shading placed over the infested substrate (see Cultural Control section below) (Hesketh, 2017).



Side-cast compost of parrot's feather onto the bank of No. 3 Road Slough, Chilliwack.

CREDIT: DAVID BLAIR, CITY OF CHILLIWACK

Excavation is expensive and is best suited for large infestations and projects. It may alter water body characteristics, by increasing turbidity or generating plant fragments that may regrow or disperse downstream. It is critical to follow the containment procedures outlined above, as a targeted activity or in conjunction with regular maintenance operations (e.g., ditch maintenance) (Raincoast Applied Ecology, 2016).

While using these methods, the excavated material should be examined for the presence of aquatic organisms (such as salamanders), which should be released back into the site.

The City of Chilliwack saw good success after excavation of parrot's feather at the No. 3 Road Slough (Blair, 2019). Excavated plant material was side-cast in a manner to prevent its re-release into the channel (see photo) and allowed to compost. Thorough collection and disposal of all floating plant fragments was undertaken downstream of the excavation. Excavated plant material was subjected to sub-zero temperatures in the evenings (Blair, 2019). After 6 weeks, the project yielded a decrease in parrot's feather and improved habitat conditions for waterfowl. The site will continue to be monitored (Blair, 2019).

HAND PULLING

Pulling by hand can be effective for small areas; however, it is labour intensive and care must be taken to remove entire plants including emergent shoots, submersed shoots, roots and rhizomes, as well as all fragments, or regrowth will occur. This method may not be possible at sites where the entire water column is not accessible.

HARVESTING

Harvesting is carried out with a floating harvester machine that contains a cutting mechanism and hydraulic lifts for raising and lowering the cutting depth. Once the weeds are cut, a steel conveyor mesh carries the weeds on board to a holding area beneath the operator's platform. A conveyor in the rear of the vessel off-loads the collected plant matter on-shore where it is left to dewater and then be loaded and trucked away (SOLitude Lake Management, 2017). Harvesting can be effective for larger sites, however, it can be expensive and care must be taken to remove the entire plant including emergent shoots, submersed shoots, roots and rhizomes, as well as all fragments or regrowth will occur. Harvesting has not been used as a treatment method in British Columbia for parrot's feather. However, it has been used in the Okanagan for "cosmetic control" of Eurasian milfoil in large lakes, although it is not the most effective method used for that species (Okanagan Basin Water Board, 2018).



Harvester used to remove aquatic plants from the surface of Burnaby Lake

CREDIT: I. LAU

CULTURAL: CAUTION

SHADING

The shading method is effective for narrow and shallow water courses that can be easily covered. Wersal (2010) found that parrot's feather biomass can be reduced in 70% shade. Growth can be suppressed by placing a permeable shade cloth or other synthetic barrier to light (e.g., plastic or Tac150) over the infestation. Covering materials can be installed as surface layers, on frames over actively growing plants or following excavation to prevent regrowth (Raincoast Applied Ecology, 2016). The shading technique was tested in the City of Richmond along drainage ditches in 2015 and has reduced the parrot's feather biomass significantly. However, construction and installation of shading structures is expensive and time consuming and is therefore unsuitable for large infestations.



Shading trial over parrot's feather infested ditches in the City of Richmond.

CREDIT: CITY OF RICHMOND

BENTHIC BARRIER

A benthic barrier (also known as benthic mat/weed mat/bottom screen) is a mat that can be placed at the bottom of a body of water to prevent or inhibit the growth of plants through shading and smothering. It consists of a dark fabric/material that blocks sunlight and is held against the bottom by weights.

Benthic barrier material must be gas permeable to remain anchored (Wayne County, 2018). For example, plastic or Tac150 can be secured with 10' sections of 3/8" rebar. Other suitable bottom screen materials include densely woven synthetics, landscaping fabric, geotextiles, plastics and nylon tarp. The City of Richmond uses the product 'Nilex 4553' (Tillyer, 2018). It is important to ensure that the entire area, including channel banks, is covered by the material since parrot's feather often persists along the margin of treatment areas and colonizes open water above the fabric (Raincoast Applied Ecology, 2016). Where possible, use a single continuous piece of textile to avoid seams, as areas of overlap can be exploited by parrot's feather rhizomes (Tillyer, 2018). If multiple pieces are required, use extra-large areas of overlap and an accordion fold system to make seams as impermeable as possible (Tillyer, 2018).

Although this method is effective and relatively inexpensive, it is not suitable for large water bodies and it may impact non-target sediment-dependent species, including native aquatic plants and bottom dwelling organisms (Wayne County, 2018).

RIPARIAN REFORESTATION

Re-planting riparian areas with non-invasive species can create shade and reduce parrot's feather growth. Optimal parrot's feather growth occurs in intermediate light intensities, particularly 30% shade. This method typically takes 5 to 10 years of growth to be effective (Raincoast Applied Ecology, 2016).

The City of Pitt Meadows undertook a riparian planting project along Katzie Slough in October 2018 (including willow live-staking) where parrot's feather is prolific (Sloboda, 2019). One of the objectives of the project is to shade out parrot's feather; the site will be monitored in subsequent years to determine success of this method (Sloboda, 2019).

CASE STUDY: SERPENTINE WILDLIFE MANAGEMENT AREA

Around 2012, parrot's feather was first observed by Ducks Unlimited Canada (DUC) staff at the Serpentine Wildlife Management Area (WMA) in Surrey. By 2014, the invasive aquatic plant had begun to dominate one segment of this wetland complex. The Serpentine WMA was agricultural land that has been restored to a series of wetland compartments that can be isolated and their water levels managed through a series of drainage ditches, water control structures and a pump, which draws fresh water from the landward side of the Serpentine Sea Dam.

Beginning in 2014, DUC staff began turning off the pump that feeds water into the segment in which parrot's feather had begun to dominate. The segment dried out naturally during summer months and rainfall refilled it during fall, winter and spring. This new hydrological regime, mimicking a natural coastal ephemeral wetland,

resulted in a dramatic decline in parrot's feather at the Serpentine WMA. However, in deeper ditches and shaded areas where the soil moisture remained, the plant has maintained its stronghold.

Each subsequent year of drawdown has further reduced the extent of parrot's feather, even in areas where moisture remains. Maintaining the lowest possible water levels during winter freezing (December/January) has also been attempted as a part of control efforts but it is hard to determine whether this has significantly contributed to the reduction achieved to date. The next steps will be to continue monitoring annual reductions and to introduce either mechanical removal and/or the benthic barrier approach. The drying out of the wetland seasonally has had co-benefits of managing invasive bullfrogs as well as increasing the abundance of native smartweed (*Polygonum* spp.), a waterfowl superfood.



Parrot's feather in the Serpentine Wildlife Management Area in October 2014.

CREDIT: DUCKS UNLIMITED CANADA



October 2016 after two summers of allowing the wetland to dry out.

CREDIT: DUCKS UNLIMITED CANADA

WATER DRAWDOWN

This method involves controlling the water table at the infested site, thereby exposing sediments and plant roots to prolonged drying or freezing. A qualified environmental professional should oversee and monitor this work if there are amphibians, fish or other species present at the site.

- **Water Drawdown via Drying:** Low water levels will expose the plants to desiccation and can ultimately affect plant vascular structure, rendering the plant incapable of nutrient transport and function. When the water level is again raised, these previously anchored plant structures will often float downstream, or they can be hand-removed (New Hampshire Department of Environmental Services, 2010). A drawdown lasting more than 3 months, or consecutive drawdown events, may result in complete control of parrot's feather, if the sediments remain completely dry (Wersal, 2010).

At sites where drawdown is possible by controlling water levels, it is a relatively inexpensive control method. However, it is also unpredictable, and may cause some undesirable species to increase in abundance. Parrot's feather is well adapted to drawdown and flooding events and success of this method depends on the site, exact water depth and length of drawdown operation (Wersal & Madsen, 2011). Further, drawdown is non-selective and will result in the removal/death of aquatic invertebrates and fish, and the loss of use of the water body for the duration of the drawdown. To mitigate potential losses of submersed plants, fish, and invertebrates, a partial drawdown may be used to expose parrot's feather growing along the shoreline of a water body (Wersal, 2010).

- **Water Drawdown via Freezing:** Freezing temperatures and lake sediments can damage the structure and integrity of the vegetative material. Scouring action of ice moving over the exposed water body bed will force tubers and rooting systems from the substrate. While this method can impact parrot's feather survival, it is considered a passive method as it is unpredictable and uncontrollable.

FLOODING

Although parrot's feather is adaptable to flooding events, it will not thrive in sustained deep flood conditions, as without the emergent vegetation it cannot photosynthesize well (Wersal & Madsen, 2011). It is unclear what kind of flooding event is most conducive to parrot's feather management. Understanding that parrot's feather growth is limited in deeper water may be more useful as a predictor for where this species will grow, rather than as a management technique (Wersal & Madsen, 2011).

CONVERSION TO VEGETATED MARSH

Parrot's feather prefers open, sunny habitats and does not compete well with taller vegetation such as cattails and trees. Decreasing the water depth to 30 centimetres (summer depth) will encourage growth of taller emergent species that may eventually outcompete parrot's feather (Raincoast Applied Ecology, 2016). This method may reduce open water and habitat for fish and other aquatic species, and may also reduce flow (Raincoast Applied Ecology, 2016). This conversion method has not been tested in Metro Vancouver and is probably not a suitable management strategy for many parrot's feather infestations in this region.

CHEMICAL: NOT RECOMMENDED

When alternative methods to prevent or control invasive plants are unsuccessful, professionals often turn to herbicides, however, **herbicide application for parrot's feather is not recommended due to poor absorption and the potential risks to fish, amphibians, and other aquatic species**. It may also impact local water sources intended for human consumption (Raincoast Applied Ecology, 2016). The following section provides more details about the regulations and complexity of using this control method.

With the exception of substances listed on Schedule 2 of the [Integrated Pest Management Regulation](#), the use of herbicides is highly regulated in British Columbia. Site characteristics, goals, objectives and legal requirements must be considered when prescribing a herbicide. [This summary of the Integrated Pest Management Act](#) provides an overview of the provincial legislation.

In Canada, there is one registered herbicide labeled for parrot's feather control in water bodies. It is a restricted herbicide which means it can only be used under certain circumstances by specially trained individuals and it is not available to the general public (most pesticides intended for aquatic application are designated "Restricted" under the federal classification system). In British Columbia, Section 14(1)(b) of the [Integrated Pest Management Act](#) requires anyone using a restricted class product to hold a certificate issued. In British Columbia, it requires either approval or a permit depending on the status of the waterbody.

Herbicide could be used in combination with the drawdown method. After drawdown, the parrot's feather would likely be active for the first few days and herbicide treatment with a glyphosate product (approved for terrestrial use) would be effective (Ralph, 2019). The drawdown would need to remain in place long enough to ensure maximum translocation of the herbicide to the root tips (Ralph, 2019). This period of

time would depend on a number of factors including weather (Ralph, 2019). This method also requires a special permit due to the proximity of herbicide use near water (see below).

PESTICIDE LICENCE AND CERTIFICATION

A valid pesticide license is required to:

- offer a service to apply most pesticides;
- apply most pesticides on public land including local government lands¹; water bodies;

Pesticides (e.g., herbicides, insecticides, fungicides) are regulated by the federal and provincial government, and municipal governments often have pesticide bylaws.

- Health Canada evaluates and approves chemical pest control products as per the [Pest Control Products Act](#).
- The [Integrated Pest Management Act](#) sets out the requirements for the use and sale of pesticides in British Columbia. This Act is administered by the Ministry of Environment and Climate Change Strategy'.
- Several municipalities have adopted bylaws which prohibit the use of certain pesticides.

Everyone who uses pesticides must be familiar with all relevant laws.

¹ on up to 50 ha/year by a single organization. Organizations looking to treat over 50 hectares of land per year are also required to submit a Pest Management Plan and obtain a Pesticide Use Notice confirmation.

HERBICIDE APPLICATION IN AQUATIC SYSTEMS IN BRITISH COLUMBIA

In British Columbia, application of pesticides in water for invasive plants management may require an authorization under the *Integrated Pest Management Act*. Most applications to bodies of water require a pesticide use permit (PUP). Since bodies of water are owned by the province, all decisions regarding potential pesticide use must be made by a responsible member of the provincial government (or delegate). “Self-contained” filtration ponds and ditches may or may not be considered bodies of water (Mullan, 2018). The term is results-based and considers the likelihood that pesticide-treated water can reach rivers, streams or aquifers.

Proponents looking to apply herbicide in water should first contact Integrated Pest Management Program Telephone: (250) 387-9537 or Email: bc.ipm@gov.bc.ca. If the provincial government deems a permit is required, the proponent (owner/land manager) must apply for a PUP and the application fee of \$1,000. Proponents must also conduct public and First Nation consultation. Once all parties have been satisfactorily consulted and all requirements of the permit have been met, the province may issue a PUP for a maximum of 3 years. Issuance is a legal decision, but can be appealed. ONLY companies or practitioners with a valid Pesticide License and staff who are certified applicators (or working under a certified applicator) may apply the herbicide.

HERBICIDE LABELS

Prior to each use, herbicide labels must be reviewed thoroughly to ensure precautions, application rates, all use directions, site characteristics are known and application directions strictly followed. Other label information includes trade or product name, formulation, class, purpose, registration number, precautionary symbols and what to do in order to protect the health and safety of both the applicator and public. (British Columbia Ministry of Environment and Climate Change Strategy, 2011).

Under the Federal *Pest Control Products Act* and the Provincial Integrated Pest Management Regulation, **persons are legally required to use pesticides (including herbicides) only for the use described on the label and in accordance with the instructions on that label.** Failure to follow label directions could cause damage to the environment, poor control results, or danger to health. Contravention of laws and regulations may lead to cancellation or suspension of a license or certification, requirement to obtain a qualified monitor to assess work, additional reporting requirements, a stop work order, or prohibition from acquiring authorization in the future. A conviction of an offence under legislation may also carry a fine or imprisonment.

Labels are also available from the Pest Management Regulatory Agency’s [online pesticide label search](#) or [mobile application](#) as a separate document. These label documents may include booklets or material safety data sheets (MSDS) that provide additional information about a pesticide product. Restrictions on site conditions, soil types, and proximity to water may be listed. If the herbicide label is more restrictive than provincial legislation, the label must be followed.

HERBICIDE OPTIONS

Only diquat (for example, Reward© Aquatic Herbicide), is registered in Canada for general aquatic use, with parrot’s feather identified as a target species. It is a contact herbicide that will kill the vegetation it comes in contact with, but significant regrowth is common. **It is a restricted herbicide and in British Columbia it requires either approval or a permit depending on the status of the water body.**

In British Columbia, other aquatic herbicides are currently only permitted under “emergency registration” from Health Canada. Recent emergency registrations have been granted to glyphosate and imazapyr (R.D. Breckels, B.W. Kilgour, 2018). However, glyphosate is generally not recommended for parrot’s feather control, as this herbicide

only kills emergent shoots and plants often regrow in greater densities. The use of imazapyr has been evaluated on small infestations with excellent and moderate results (Wersal, 2010). In the United States there are formulations of glyphosate and imazapyr registered for use in aquatic systems, but no formulations are currently registered for aquatic use in Canada.

BIOLOGICAL: NOT AVAILABLE

At present, there are no approved biological control measures for parrot's feather in British Columbia (Wersal, 2010); however, a number of biological agents have been evaluated outside of Canada for parrot's feather management. These include *Lysathia* species and *Listronotus marginicollis*, leaf-feeding insects that reduce emergent shoot biomass in the plant's native range and *Pithium carolinianum*, a fungal pathogen that causes root and stem rot and decrease overall plant integrity (DiTomaso *et al*, 2013; Raincoast Applied Ecology, 2016).



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CONTROL SUMMARY

The following table provides a summary and comparison of control methods for parrot's feather.

CONTROL STRATEGY	TECHNIQUES	APPLICABLE SITE TYPE	PROS	CONS
Mechanical	Excavation/dredging	Large scale infestations	Moderate control, particularly after manual removal	Expensive; may alter characteristics of water body; disturbance creates fragments spreading; can be successful if used in combination with other methods
Manual	Hand Pulling	Small scale infestations	Inexpensive	Labor intensive; disturbance creates fragments
	Harvesting	Small infestations	Moderate control	Expensive; requires specialized equipment; may alter characteristics of water body; disturbance creates fragments
Cultural	Shading	Small infestations	Offers moderate control	Need 70% or more shade to reduce biomass; construction of the shading structures is expensive and time consuming
	Benthic Barrier	Small to moderate scale infestations	Effective; inexpensive	Non-selective; can affect other species, including aquatic invertebrates
	Riparian Reforestation	Large scale infestations	Inexpensive	Reduces open water and habitat for other species, may reduce flow; takes a long time for adequate growth to shade water body/infestation
	Water Drawdown	Large scale infestations	Inexpensive	Must be dry; parrot's feather may tolerate drawdowns lasting 9+ months if sediment remains moist; non-selective and can affect other species; not possible for all sites
	Flooding	Large scale infestations	Inexpensive	Non-selective and can affect other species; not possible for all sites
	Conversion to Vegetative Marsh	Large scale infestations	Inexpensive	Reduces open water and habitat for other species; may reduce flow; takes a long time for adequate growth to shade water body/infestation
Chemical	Herbicide Application (diquat)	New growth	Offers moderate control	Restricted herbicide, requires either approval or permit; unintended environmental/health impact, high public concern, requires trained staff and special permits; may observe re-growth; subsurface application may result in fragmentation; may not kill submerged vegetation or rhizomes
Biological	No biological control agents are currently available in British Columbia			

Disposal

Parrot's feather should be disposed off-site in a contained area. Since it does not spread from seeds or colonize terrestrial areas, it can be composted. Biomass can also be disposed on-site (dumped within grassy areas or other locations at least 5 metres from watercourses and outside of wet soils) (Raincoast Applied Ecology, 2016). Ensure that plant material cannot be washed back into a water body during rain.

OFF SITE DISPOSAL

When disposing off site, transport plant parts on tarps or in thick plastic bags to an appropriate disposal or compost facility. In the Metro Vancouver region, several facilities accept parrot's feather plants and/or infested sediments. Please consult [this disposal facility list](#) for current details.

PLEASE CONTACT ALL FACILITIES BEFOREHAND TO CONFIRM THEY CAN PROPERLY HANDLE THE MATERIAL.

CLEANING AND DISINFECTION²

Before leaving a site, all visible plant parts and soil from vehicles, equipment, and gear should be removed and rinsed if possible. When back at a works yard or wash station, vehicles should be cleaned and disinfected using the following steps:

- Wash with 180 °F water at 6 gpm, 2000 psi*, with a contact time of ≥ 10 seconds on all surfaces to remove dirt and organic matter such as vegetation parts or seeds. Pay special attention to undercarriages, chassis, wheel-wells, radiators, grills, tracks, buckets, chip-boxes, blades, and flail-mowing chains.

- Use compressed air to remove vegetation from grills and radiators.
- Sweep/vacuum interior of vehicles paying special attention to floor mats, pedals, and seats.
- Steam clean poor access areas (e.g., inside trailer tubes) – 200 psi @ 300 °F.
- Fully rinse detergent residue from equipment prior to leaving facility.

* Appropriate self-serve and mobile hot power-wash companies in the Metro Vancouver area include: Mary Hill Truck Wash, Omega Power Washing, Eco Klean Truck Wash, RG Truck Wash, Ravens Mobile Pressure Washing, Hydrotech Powerwashing, Platinum Pressure Washing Inc, and Alblaster Pressure Washing. Water bodies neighboring wash stations should be monitored regularly for Parrot's feather growth.

Follow-up Monitoring

Whatever control method is used, follow-up monitoring and maintenance treatments are components of an integrated management plan or approach. Parrot's feather infestations should be monitored to track treatment success. This should include location (GPS coordinates), patch size or segment length (square meters), treatment history (dates and methods), and site photos (upstream and downstream views) (Raincoast Applied Ecology, 2016).

² Adapted from Metro Vancouver 2017 Water Services Equipment Cleaning Procedures and Inspection Protocols.

Restoration

Restoration is recommended to create competition, control parrot’s feather regrowth and replace lost habitat. River pump sand should be used to restore the ditch elevation following excavation. Use of shade or bottom fabric is not recommended after a treatment regime because it does not provide full coverage of ditch margins and culvert inlets, conflicts with future channel maintenance, and is expensive to purchase and install. This strategy requires regular monitoring and repeated excavation by hand and machine (Raincoast Applied Ecology, 2016).

Species must be prescribed based on the ecology of the site and should be determined by a qualified environmental

professional who has experience working in aquatic ecosystems. Local biologists, environmental professionals, native and domestic forage specialists, and plant nurseries are all good sources for localized recommendations for regional native species and regionally adapted domestic species, based on site usage. There are several science-based resources available to guide restoration efforts, such as the South Coast Conservation Program’s [Diversity by Design](#) restoration planning toolkit.

Examples of competitive aquatic species that may be planted at parrot’s feather restoration sites are listed below.

AQUATIC PLANTS		
Bull rush	Cattail	Floating-leaved pondweed
Yellow pond lily	White water-buttercup	Robbin’s pondweed

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[source=bl&ots=vq3rfPMhFz&sig=5U3ajwyP4mDY-loZTP28QL27slQ&hl=en&sa=X&ved=2ahUKEwjN_LrBp6fdAhXprlQKHs6MDf14ChDoATAHegQIAxAB#v=onepage&q=Parrot's%20feather&f=false](https://books.google.ca/books?id=bU8EDQAAQBAJ&pg=PA396&lpg=PA396&dq=Parrot's%20feather&f=false)

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Additional Resources

For more information please refer to the following resources.

- British Columbia Ministry of Forests, Lands, and Natural Resource Operations, Invasive Alien Plant Program (IAPP). <https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/invasive-species/reporting-invasive-species>
- E-Flora BC, an Electronic Atlas of the Plants of British Columbia. www.eflora.bc.ca/
- GrowGreen Guide. www.growgreenguide.ca
- Grow Me Instead. <http://bcinvasives.ca/resources/programs/plant-wise/>
- Invasive Species Council of British Columbia Parrot's Feather Fact Sheet. https://bcinvasives.ca/documents/Parrots_Feather_TIPS_Final_02_18_2015.pdf
- Pesticides and Pest Management. Province of British Columbia <https://www2.gov.bc.ca/gov/content/environment/pesticides-pest-management>

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Susanne Sloboda, City of Pitt Meadows

Taryn Hesketh, City of Richmond

Wade McLeod, Green Admiral Nature Restoration

To submit edits or additions to this report, contact Laurie Bates-Frymel, Senior Regional Planner at laurie.bates-frymel@metrovancouver.org.



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July 22, 2019 Delegation



1. Rail Crossing
2. East Beach Grassy Area
3. Steps from "Off Leash" Beach
4. Picnic Tables
5. West Facing Promenade

ON TABLE

Date/Meeting July 22, 2019 - Regular
Agenda Item 5.1.1

Roderick V. Louis

ON TABLE - JULY 22, 2019
REGULAR, ITEM 5.1.3

- 20-year White Rock resident
- Apolitical in civic politics- but advocates administrative efficiency, transparency and public accountability;

Requests White Rock Council:

....

- **Takes actions** to diversify types of motorized transport used in WR and rest of Semiahmoo Peninsula- away from privately owned combustion-engine automobiles, to:

- 1) “***Car share***” vehicles- full battery electric and hybrid;
- 2) “***Car share***” vehicles- combustion engine;

Car Share Services in Metro Vancouver:

For over 10-years, Car Share" companies have provided services in other Metro Vancouver member cities: Vancouver, Richmond, Burnaby, New Westminster, Coquitlam, Port Coquitlam, Port Moody;

- **Car2Go:** <https://www.car2go.com/CA/en/>
- **Zip Car:** <http://www.zipcar.ca/>
- **Evo Car Share:** <https://evo.ca/>
- **Modo Car Share:** <https://www.modo.coop>

Car Share Services in White Rock= ZERO

The densely populated city of White Rock and neighboring Semiahmoo Peninsula/ South Surrey do not have and never have had any car share companies;

Car share companies should be offered incentives to establish a presence in WR- and Semiahmoo Peninsula/ South Surrey-, such as:

1)“Free” and or subsidized use of city properties, especially near to *White Rock Centre Bus Exchange*, and waterfront (WF) areas;

.....
- such as the “free” city parking lot at N/E corner of Johnston Road & Russell Avenue & WF city parking lots- to park vehicles, install electric charging stations;

2)Promotion and advertising of car share companies on city website and in other media, such as city’s newspaper advertisements;

3)Reduced or deferred taxes for a set number of years;

Requested Actions:

➤ **Pass Motion today** that directs staff to:

- 1) Draft letters “*from the Mayor and or CAO*” to all of the car share companies that currently offer services in and have a presence in other Metro Vancouver cities:
- 2) Request that these companies establish a presence in & offer services in WR- & rest of Semiahmoo Peninsula/ South Surrey- and
- 3) Offer logistical assistance to car share companies;
- 4) Offer incentives to car share companies;

ON TABLE - JULY 22, 2019
REGULAR, ITEM 5.1.4

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The Importance of Community Murals



8th August 2018



2,039 times



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From the 30,000 year old animal murals in France's [Chauvet-Pont-d'Arc Cave](#) to Banksy's [Balloon Girl](#), murals have been part of our cultural

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expressionist and graffiti, to name just a few

become community centrepieces that bring

celebrate the heritage and history of their home.

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Why else are murals important, you ask? Read on for our top three reasons!



Photo credit: [Pavel Nekoranec](#) via [Unsplash](#)

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It's no secret: murals make our neighbourhoods beautiful! They add

colour to building walls and streets that would otherwise be

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which is a treat for locals and tourists alike. Murals attract new local businesses, help bring customers to pre-existing locations, and boost the economy of an area. Some cities even offer walking/biking public art tours as a great way to interact with a city and its art!

Shandon—a small district in Ireland—is a great example of how community murals can transform space. After years of decline and brain drain, the district began an interactive community mural and artistic history project called The Big Washup. The murals painted as part of this project celebrated and identified the city's past, present, and future—and revitalised the residents and their community!

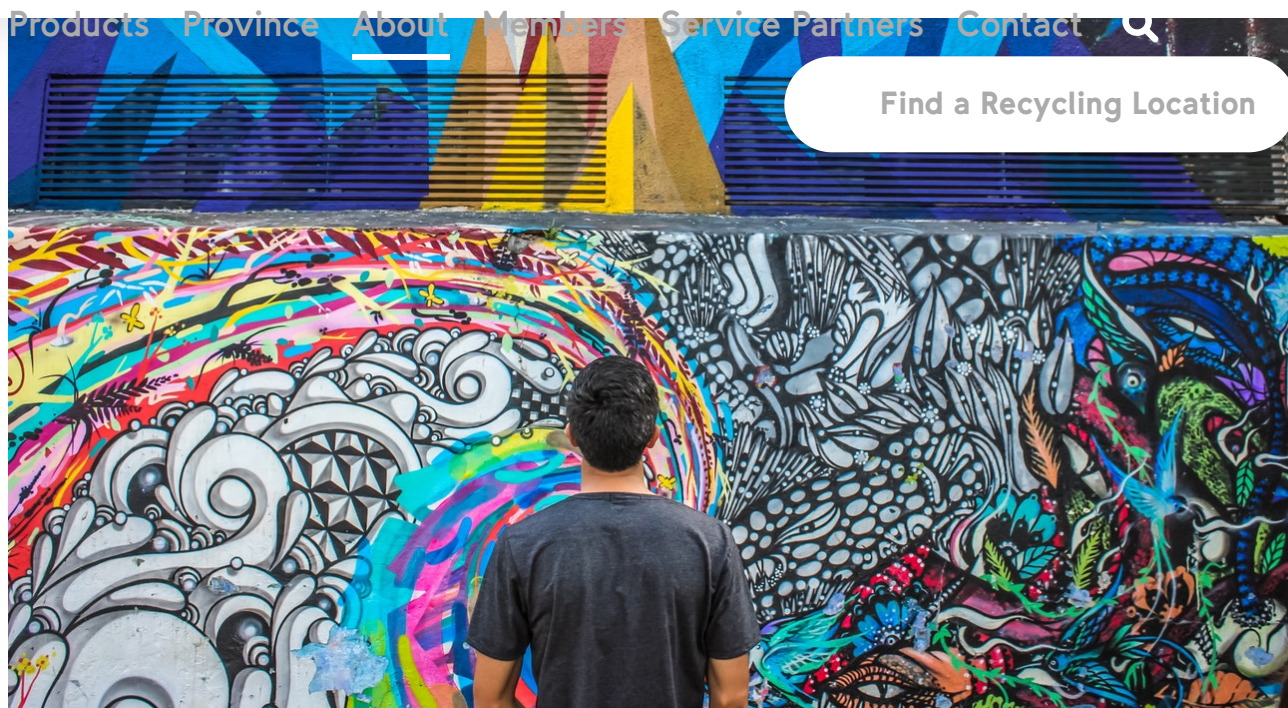


Photo credit: [cturistando](#) via [Unsplash](#)

2. Murals encourage you to slow down and admire your surroundings

Ever heard of [Cittaslow](#) or the slow movement? Inspired by the [slow food movement](#) in Europe, Cittaslow-certified cities encourage longer meal times in schools and workspaces, limit outdoor advertising and other visual clutter, put emphasis on local food initiatives like farmer's markets, and promote relaxed, non-car transportation.

Part of slow living involves appreciating our surroundings and their beauty. This includes our forests, oceans, quaint streets, and yes,

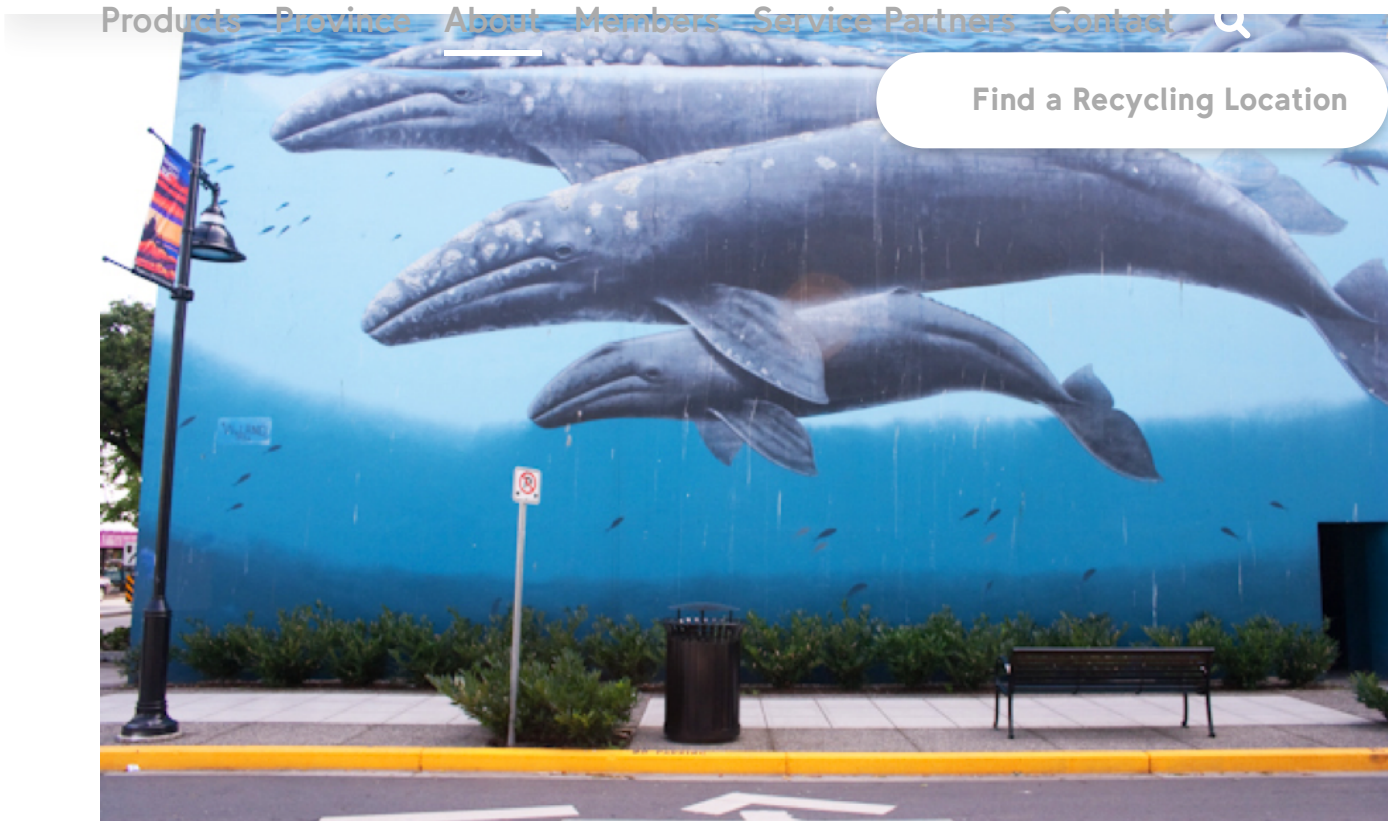


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3. They create important conversations and expand thought

Murals also act as collective thought spaces. They can create dialogue around a subject or community issue through what they depict!

A great example of a dialogue-provoking mural project is American artist Wyland's [Whaling Walls](#). Over a 30 year period, Wyland painted 100

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These community murals add value to their neighborhoods by encouraging dialogue about how individuals and communities can create creatures that are ecologically and culturally important to many.

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Photo credit: [Patrick Tomasso](#) via [Unsplash](#)

Join the conversation!

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[Columbia](#), [Saskatchewan](#), [Ontario](#), [Newfound](#)

[Brunswick](#).

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In British Columbia, [Vancouver Mural Fest](#) (VMF) has been beautifying Mount Pleasant and inspiring conversation in the city through community murals for the past 3 years. This year, VMF has commissioned 30 new murals, including pieces by [Stō:lo/St'át'imc](#) and [Tsleil-Waututh](#) First Nations artists.

Live in Vancouver? We are excited to be attending Vancouver Mural Fest's [Street Party](#) from 12 – 6pm on August 11th. Visit our booth to enter to win a [Vancouver Art Gallery](#) membership and join the conversation (in person, or through our [Facebook](#), [Twitter](#), or [Instagram](#)) by telling us why being green is important to you!

Live in New Brunswick? Moncton's [Festival Inspire](#) completed their 4th year of mural painting in July. Find a map with this year's mural locations on their [website](#)!

 [Share this Post](#)

ON TABLE - JULY 22, 2019
REGULAR, ITEM 5.1.5

Imagine All The People

- **Imagine: All the people coming to our City By the Sea in the Winter Months**
- **Imagine the possibilities that this would bring to White Rock and particularly to the Marine Drive Waterfront businesses**
- **The Time to Imagine is Now!!!!**
- **Presenting.....**



A night scene of a light festival. A path is lined with a series of arches made of white lights, leading into the distance. The arches are illuminated with white lights, and some have red lights interspersed. The path is flanked by trees and bushes, some of which are also decorated with lights. The background shows a dark sky and some distant lights, possibly from buildings or other festival structures. The overall atmosphere is festive and celebratory.

The White Rock Festival of Lights

What is the White Rock Festival of Lights?

- A magical holiday themed walkway along the promenade to the White Rock Pier
- Inspiration for this project is drawn from the Lights at LaFarge in Coquitlam.
 - In 2016, the inaugural year, over **100,000** people attended the event
 - In 2018 over **240,000** people walked around La Farge lake over 12 weeks. (Nov – Jan)



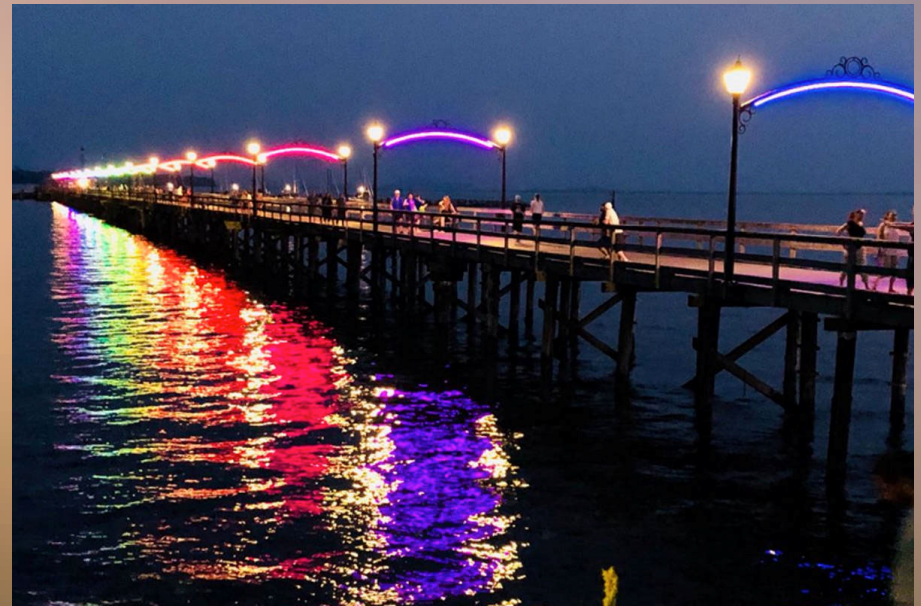
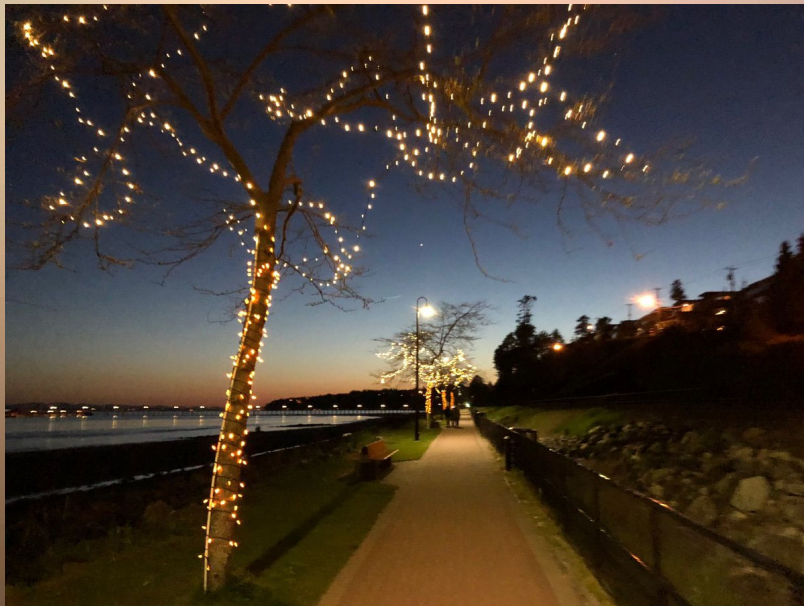
When would the WRFL take place?

- In the first year the event would commence on Friday December 6 ending on Sunday January 3 from 5 to 10 p.m. daily.
- In the second and subsequent years the event could commence at Halloween and possibly run through Spring Break
- LED lights could change depending on the season/time of year



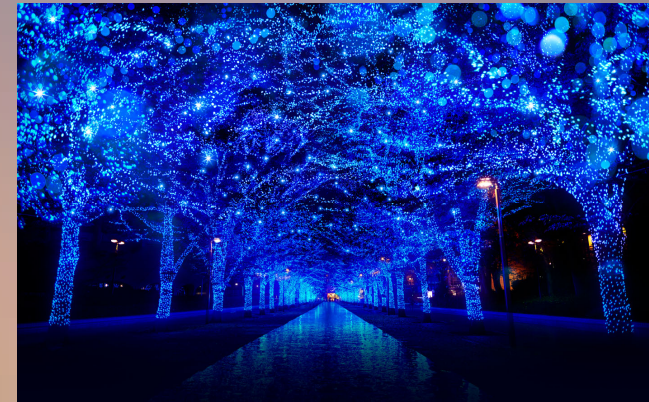
Where do we envision this event taking place?

- The inaugural WRFL adventure could begin at either Finlay or Balsam Street
- The end of the walking adventure could be the White Rock Pier.
- The White Rock Pier and Museum will have new lighting in place that will add to the ambiance of the event



Who are we hoping to draw with this event?

- Many of the 100,000 local White Rock and South Surrey residents
- A significant number of the 1.2 million people living in the Fraser Valley
- Visitors from Washington State and around the world



Why should we launch the White Rock Festival of Lights?

- Our Community needs to attract people to shoulder and winter season events particularly along Marine Drive
- We need to bring more people into our City by the Sea to patronize all of our businesses throughout the city
- We need to encourage and facilitate economic growth in our community now.



Community Engagement in the WRFL

- Engage with SFN to encourage first nations participation
- Showcase the talent of our youth through hosting design segment competition
- Encourage local artists and buskers to participate in staged events
- Facilitate a location to raise funds for the pier
- Open the museum to “warm the patrons” to our history and culture
- Stage light show “events” at the Waterfront Park



The Logistics – what needs to be reviewed

- Parking – City of White Rock and Semiahmoo First Nations
- Pedestrian Traffic Flow – One-Way from East Beach?
- Admission Cost (by Donation) and Operating Cost (Grants/Sponsors)
- Collaboration with BIA, Tourism, SSWR Chamber of Commerce, WR Museum, Parks and Rec, Engineering, Seniors Groups, BNSF Railway



Cost of the White Rock Festival of Lights

- The budget for Lakes at Lafarge is approximately \$100,000 for all components of the Festival for a period of 12 weeks
- It is anticipated that the WRFL will cost approximately \$50,000 in year one
- An application for funding from the Canadian Experiences Fund has been submitted which may result in most of the cost of staging the event being paid for in years one and two
- No funding is being requested from the City of White Rock



Our Ask

- We are here today to request that City Council pass a resolution this evening asking the Recreation Department to provide a corporate report on the White Rock Festival of Lights initiative for the next City Council meeting.
- We are requesting that the report be collaborative with Community Clicks Media Group, covering all of the issues associated with operation of the WRFL event.



A night scene of a festival of lights. A path of light arches made of white and red lights leads into the distance. The arches are illuminated with white lights, and the path is lined with trees and bushes decorated with red and white lights. The background shows a dark sky with some distant lights.

**The White Rock
Festival of Lights
December 6, 2019
to
January 3, 2020**



ON TABLE - JULY 22, 2019
REGULAR, ITEM 6.1.1

The Need for Safe Access to White Rock Beach Tidal Flats

“First and foremost, White Rock is a seaside community – and the Waterfront is its crown jewel. As one on of the key attractions, the Waterfront is a cherished and distinctive community amenity.”



- Accessing the tidal flats is a key part of the White Rock experience;
 - Providing safe, equitable access to the sand and surf is an investment in ensuring we are an inclusive caring community and will promote White Rock in being leaders in inclusion within Metro Vancouver.

Presentation

- 1. Process to Date**
- 2. Stan Leyenhorst with Universal Access Design (UAD)**
- 3. Safety Issues and Action Required**
- 4. Impact Stories**
 - i. White Rock resident, Jacquelyn Perry (Youth)
 - ii. White Rock resident, Dora Gray (Senior)
- 5. SAS Commitment and Contribution**
- 6. Request for Motion**

1. Process to Date

- **October 2015:** Self-Advocates of Semiahmoo (SAS) makes a commitment to increase accessibility as a path to inclusion at White Rock waterfront, creates Beach Wheelchair Initiative
- **June 2016:** SAS partners with Feral Boardsports to provide use of beach wheelchairs, creates Beach Wheelchair User Program, by donation use for White Rock beach
- **September 2016:** SAS meets with Mayor Baldwin about accessible beach access points, highlights beach entry point at “Grizlee” the bear statue at the end of East Beach
- **October 2016:** SAS appears as a delegation to White Rock Council. Motion carried regarding accessible beach access points
- **January 2017:** SAS meets with CAO Dan Botrill to discuss next steps with accessible beach access points, learns about commitment from City to enhance accessible infrastructure
- **March 2019:** SAS reconnects with Dan Botrill via email to discuss following action with beach access points as Improvement Project is nearing completion
- **May 2019:** SAS meets with Councillor Scott Krisjansen at West Beach to show beach wheelchair, highlights beach conditions
- **June 2019:** SAS meets with Catherine Ferguson, UNITI Board of Director to discuss accessible beach access points and direction with City of White Rock
- **June 2019:** SAS meets with Catherine Ferguson and Mayor Daryll Walker to discuss waterfront and accessible beach access points for White Rock beach
- **July 2019:** SAS meets with Stan Leyenhorst with UAD to assess waterfront needs to increase accessibility and accessible access points to tidal flats
- **July 2019:** SAS meets with CAO Dan Botrill, Stan Leyenhorst and Catherine Ferguson, review UAD report which highlights specifics to increase accessibility and accessible access points to tidal flats

2. Stan Leyenhorst with Universal Access Design



Universal Access Design



Stan Leyenhorst

- Designated Rick Hansen Foundation Accessibility Certification (RHFAC) Professional Inclusive Design Specialist
- Contract with BC Parks to do accessibility audits to over 250 campgrounds and day use areas through out BC
- Recent work with Harrison Hotsprings and Gabriola Island to increase access to waterfront

3. Safety Issues and Action Required

The background of the slide features a stylized landscape. The top portion is a solid light blue, representing the sky. Below this is a horizontal band of darker blue, representing the ocean. The bottom portion is a solid tan or light brown color, representing the sand of a beach. The text is centered in the upper half of the slide.

1. “Grizlee”, East Beach



Safety issues needing attention:
The gaps represent a serious impediment to anyone with limited mobility, especially someone using a mobility aid. The rock surfaces may become slippery when wet.

Action required:

Extend ramp to 5% slope. Infill all gaps and create a smooth, firm and stable surface with anti-slip treatment. Add handrail on at least one side to assist persons.

2. Cyprus Entrance, East Beach



Safety issues needing attention:
The boat launch access ramp is currently under construction.

Action required:

Increase ramp length to enable a 5% slope. Install handrails on each side of ramp. Ensure transitions at top and bottom are smooth with no sharp lip or curb.

3. White Rock, Central Beach



Safety issues needing attention:

The access ramp to the white rock and beach is paver construction with a slope of greater than 8.33% in some sections with a combined side slope. The combination of the two sloped conditions may make the ramp difficult to navigate for persons with limited mobility.

Action required:

Extend ramp and realign entrance at the top to reduce slope and eliminate side slope condition. Ensure transitions at top and bottom are smooth with no sharp lip or curb.

4. West Promenade, West Beach



Safety issues needing attention:

The access is uneven with multiple slope conditions. The access to the grassy area is too soft and rough for someone with limited or using a mobility aid to navigate safely.

Action required:

Extend ramp and realign entrance at the top to reduce slope and eliminate side slope condition. Ensure transitions at top and bottom are smooth with no sharp lip or curb. Provide access with a sloped ramp that can be navigated by a person using a mobility aid (walker, cane, wheelchair).

5. Boat Launch, West Beach



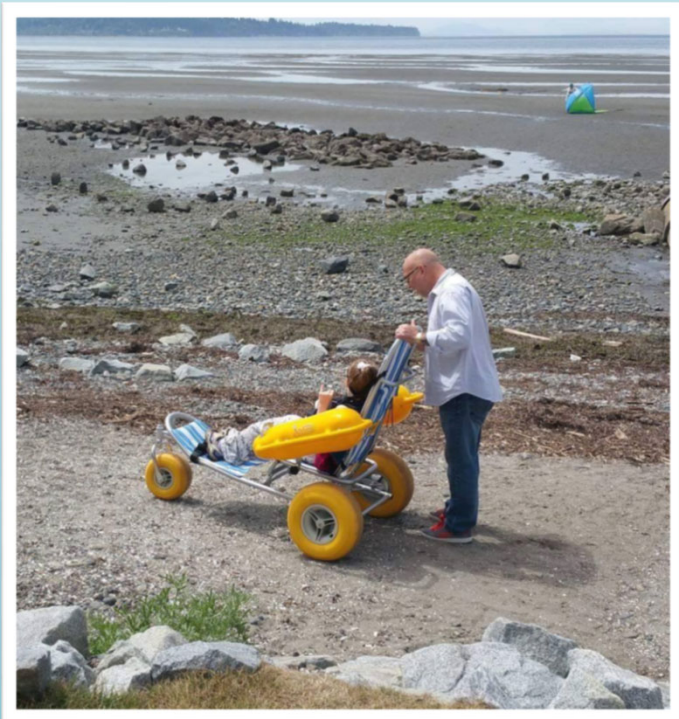
Safety issues needing attention:
The access area at the west end is too steep, even for someone with good mobility.

Action required:
Provide a ramp to 5% slope leading to the sand.

4 . Impact Stories:
Jacquelyn Perry
&
Dora Gray

Impact Story: Jacquelyn Perry

Jacquelyn has lived her 30 years as a White Rock resident.



“When I was little, I went down to the beach all the time. My parents would lift me out of the chair and I would play in the sand & go in the water, I loved it. I want to be included. It is important to me that I go to the beach because all my friends can get down there. I want to be down there with them.”



Impact Story: Dora Gray

Dora is a White Rock resident hadn't been on the beach for 25 years.



"It was a great feeling being able to go down on the beach with my Great Grandchildren and watch them play."



5 . SAS Commitment & Contribution



**SELF ADVOCATES
OF SEMIAHMOO**

*“Making change through
positive relationships.”*

- Funding support for the project through grant applications
 - Connected to infrastructure, accessibility, health, sport, seniors, safety and community enhancement
 - Associated grants;
 - ❑ Community Gaming Grant (Accessibility and Inclusiveness) >\$100,00
 - ❑ New Horizons for Seniors (Social participation and inclusion) >\$25,000

6 . Request for Motion

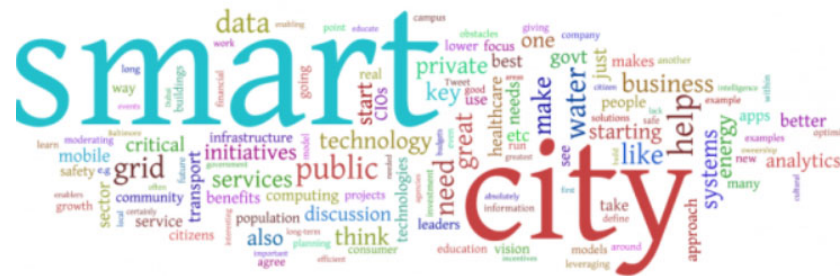


White Rock is a leader to its people, and we ask the City of White Rock to make a motion:

to have staff report back to council with an action plan and timeline for increasing the accessibility of White Rock beach to the tidal flats at Grizlee, Cyprus, the White Rock, West Promenade and the Boat Launch;

and commit to working with SAS in achieving funding grants to make complete the White Rock and Cyprus points of access in 2019 and achieve all 5 points with an end date of 2022 thus making the waterfront accessible and inclusive to all.

Smart City – Concept and Benefits Overview



“Cities are inherently messy and chaotic environments, what makes them smart are the people.”

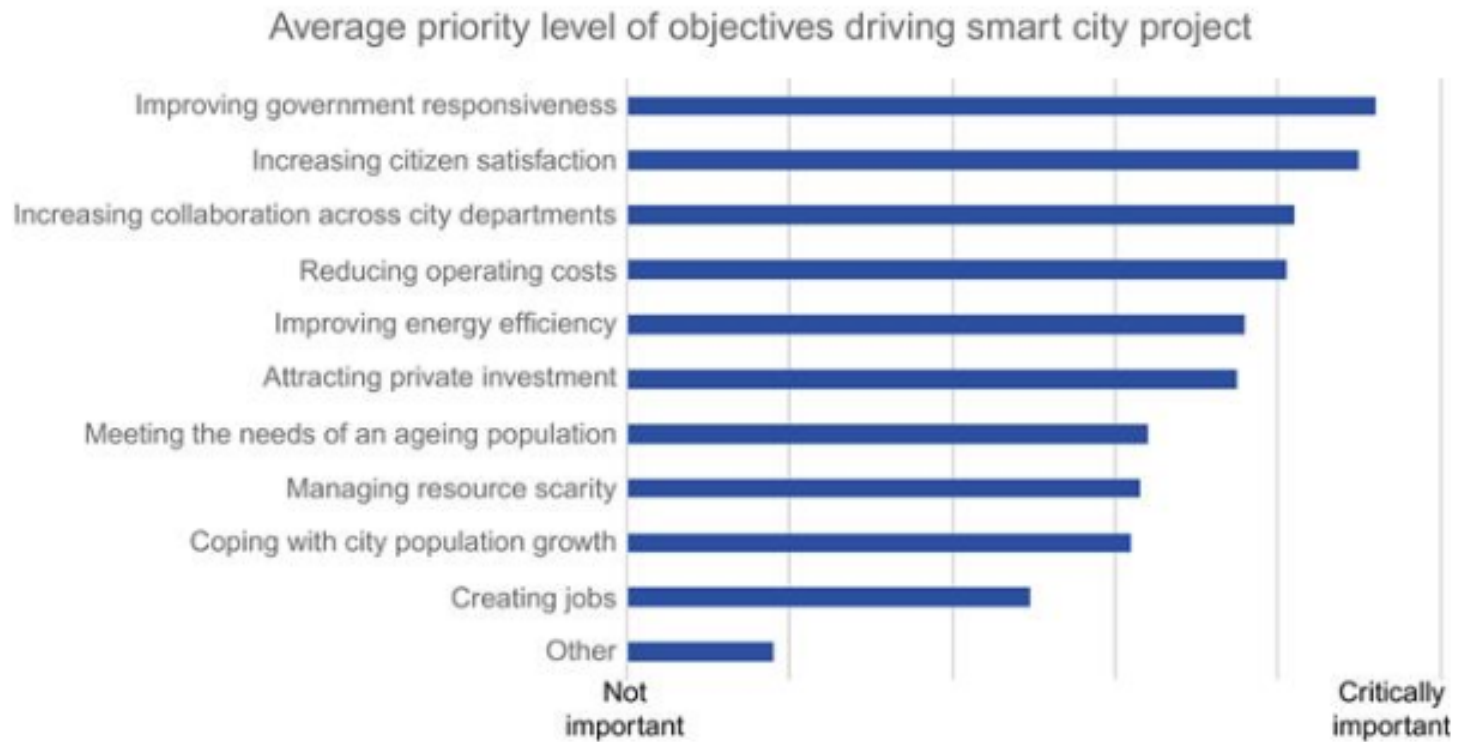
The century of the city

- By 2040, 65% of the global population will be living in the cities
- Every second two persons move into a city worldwide
- Urban societies will consume 80% of the total energy, produce 75% of total CO2 emissions and expend 75% of the resources

The projections convey a clear message: cities represent the living environment of the future.

The smart city concept attempts to confront these negative aspects of cities with innovative, technology based approach.

Figure 1.4. Challenges Addressed by Smart City Projects.



Source: IHS Markit (2018).

**Based on a survey of mayors from across North America*

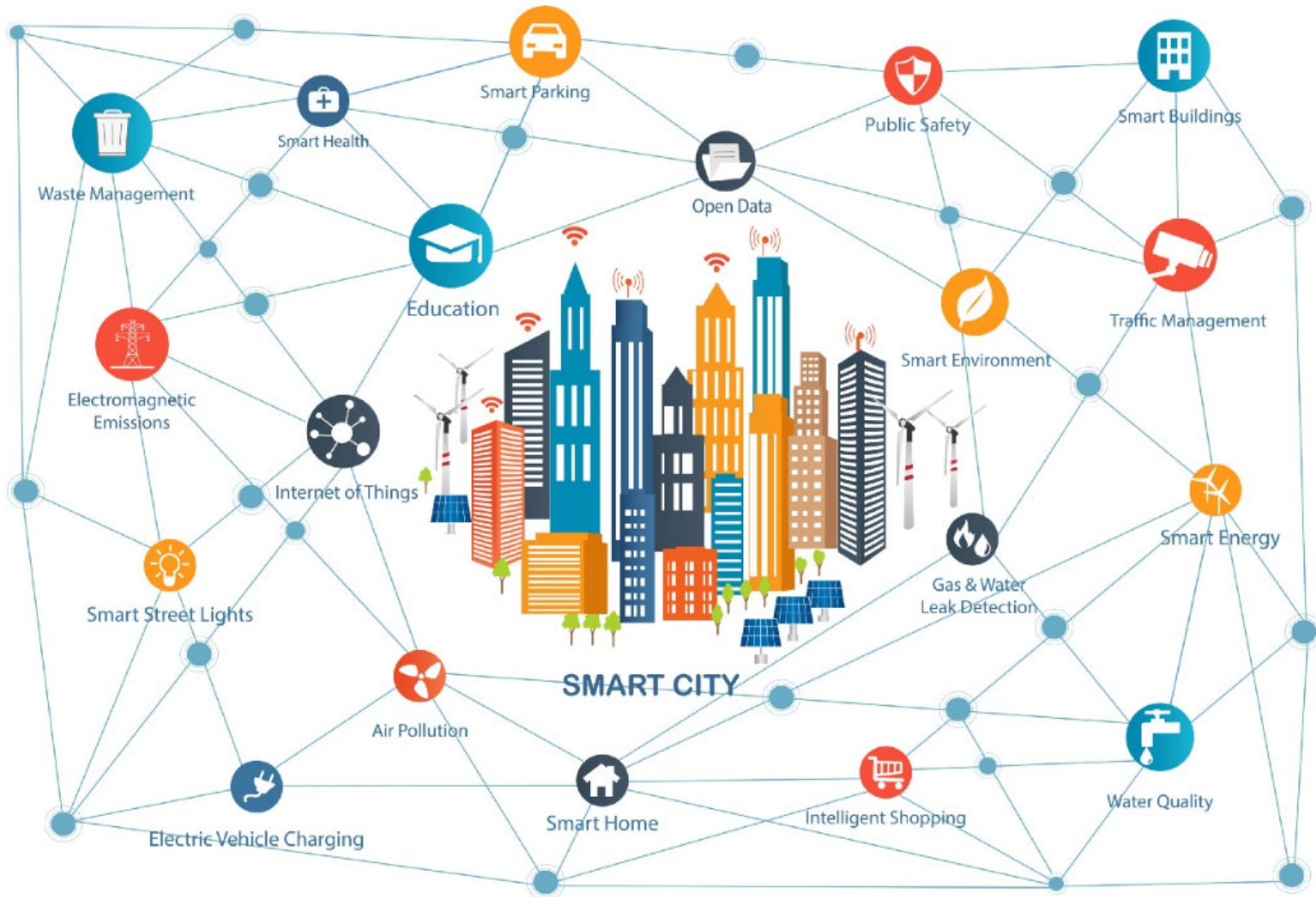
What is a Smart City?

“Smart means genuine civic engagement and the empowerment of citizens to actualize change in their neighborhoods by giving them tools and the capacity to utilize them to answer their questions and build solutions.”

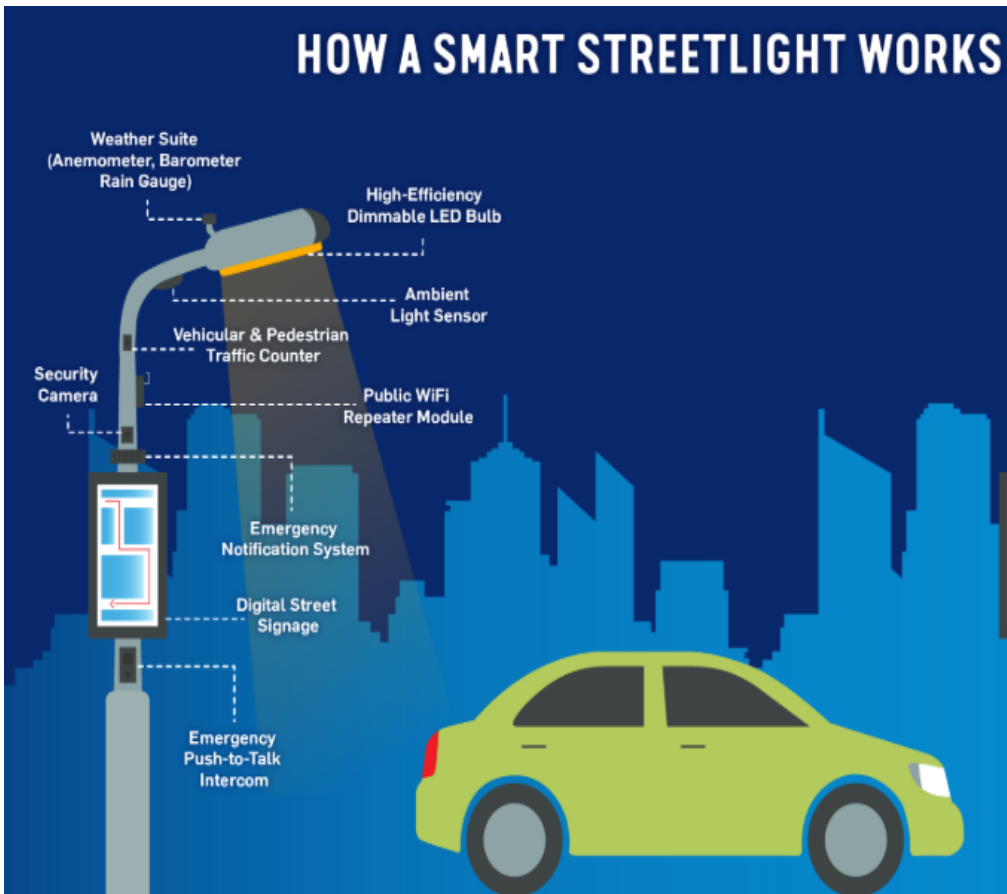
“A resilient, inclusive and collaboratively-built city that uses technology and data to better the quality of life for all people.”

“A smart city is a government that uses information technology to improve the lives of its citizens.”

“A smart city systematically applies digital technologies to reduce resource input and improve it’s people quality of life. It entails the use of intelligent solutions for infrastructure, energy, housing, mobility, services and security.”



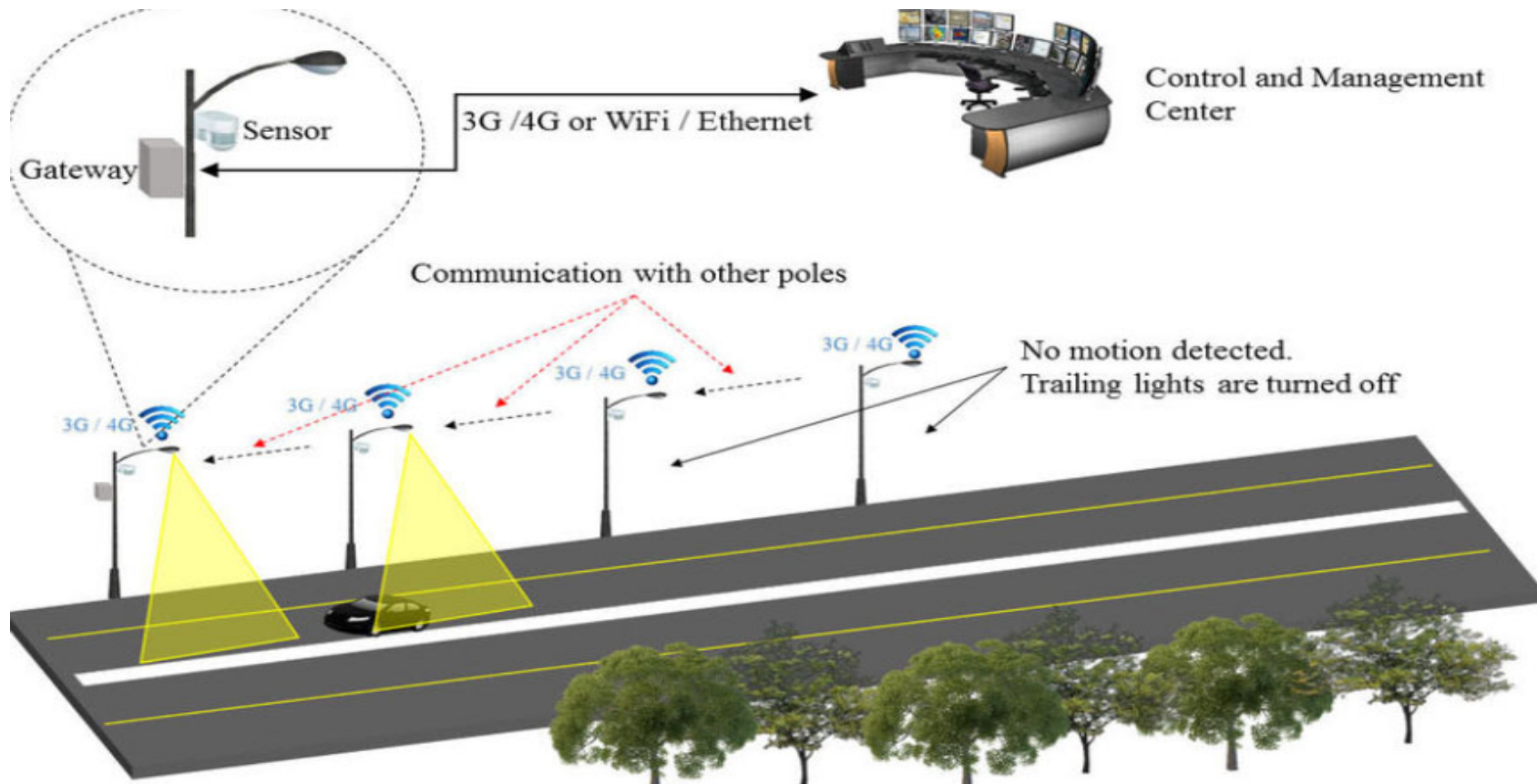
Smart Street Lights



- Proven technologies
- Competitively priced
- Multi-functional with opportunity to *generate revenue
- Measurable energy and cost savings
- Crystal clear lighting vs. pink light
- Can incorporate different kind of sensors enabling accurate decision making based on data

**Revenue from leasing purposely designed space for 4G/5G cell radios*

Adaptive LED Street Lighting



Energy And Maintenance Savings (per fixture)

LED: **232 kWh** (per year; 4,380 hrs)

Adaptive LED: **102 kWh** (per year; average occupancy rate: 20%)

Estimated capital cost (per fixture):

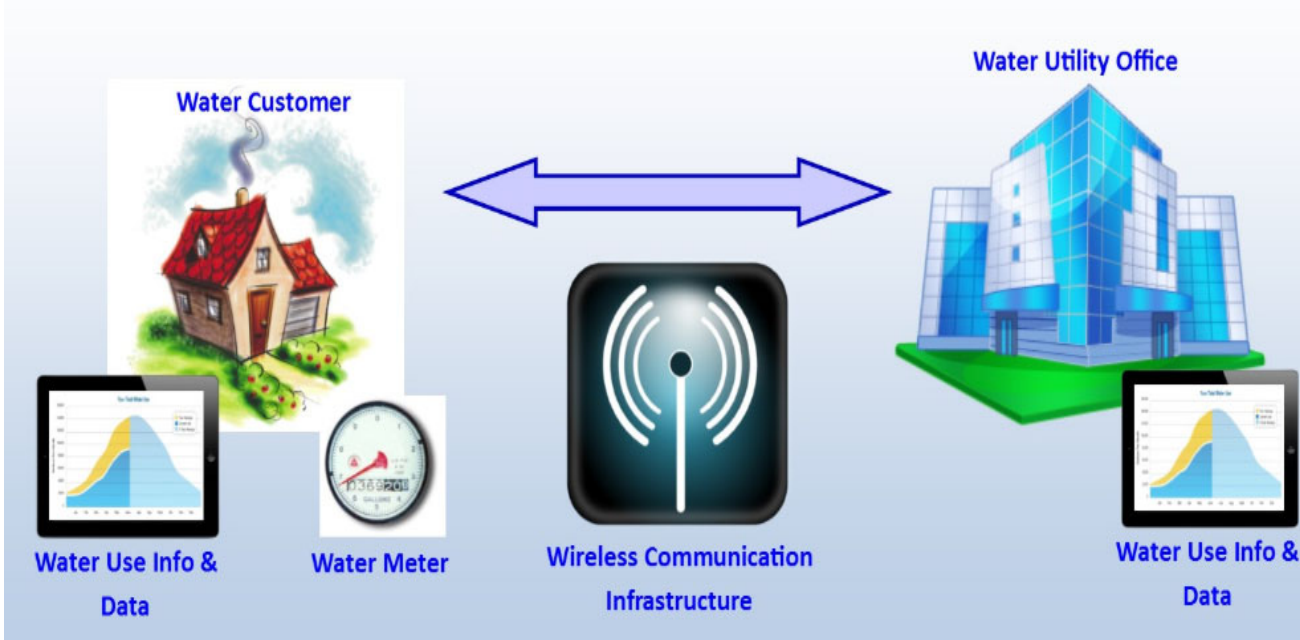
LED: \$370

Adaptive LED: \$420

*Upfront retrofit costs are higher than continuing to use sodium gas based lamps but the investment will pay off in short/medium term

Smart Water Meters

Automated Meter Infrastructure and Smart Water Metering



Benefits:

- Consumption figures available in real-time
- Leak detection
- Automated meter reading
- Rich reporting capability
- Historical data – analytics
- Saves resources

***Smart storm sewer systems.** Sensors monitor water level and flow in real-time to prevent flooding and efficientize operations.

Smart Irrigation Systems

Weather sensors manage automatic watering systems and detect leaks

In-ground sensors monitor soil, temperature and daylight conditions. These factors determine the timing and quantity of water to be released.

Even a large irrigations system can be managed remotely via an iPhone/iPad.

Benefits:

- Save water, time, money and other resources



Smart Waste Collection

Intelligent Waste Collection Solution

Dramatically reduces waste collection costs by up to 80%



Benefits:

- Real-time monitoring of bins & containers
- Pick-up on demand
- Reduced pollution and traffic congestion
- Cost savings

Smart Buildings

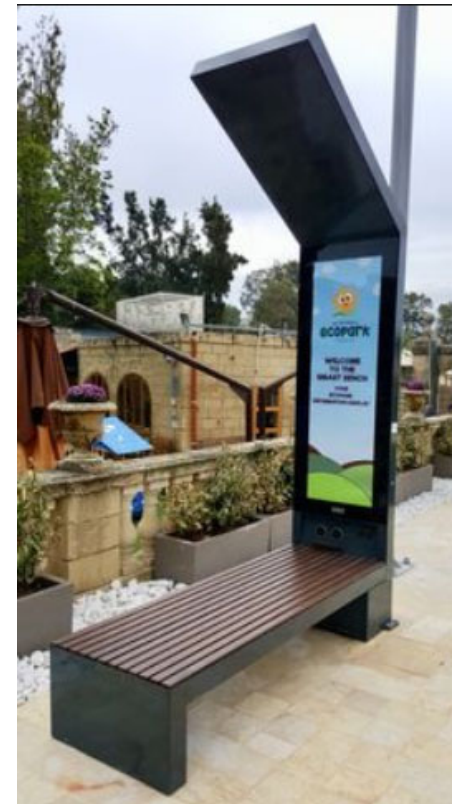
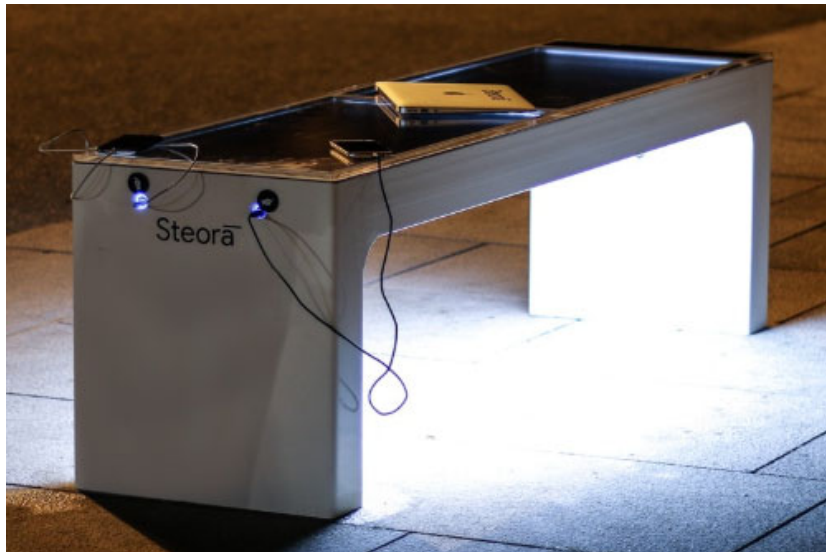


Benefits:

- Environmental sustainability
- Safety and security
- Streamlined operations
- Reduced cost
- Improved services

*Integrated lighting, water, mechanical (HVAC), fire, security, access control and more.

Smart Street Furniture



Utilitarian design. Incorporates: phone charger, WiFi access point, lighting, digital board display and way finding.

Smart Cities Federal Gov. Challenge Winners

- City of Montreal – urban mobility and access to food and services
- City of Guelph and Wellington County – Canada’s 1st technology enabled circular food economy
- Nunavut - Community, Connectivity, and Digital Access for Suicide Prevention
- Town of Bridgewater - install sophisticated energy monitoring and communications equipment in over 1,000 low-income homes, develop a self-funding energy retrofit financing program, improve its transportation systems, and increase local clean tech sector training and literacy

Where are we in this journey?

- Open Data portal: unfettered access to data sets
- eGovernment services: 24 hrs online payment, calls for service, applications
- Parkade: fully automated assisted parking
- Pollution sensors: 1st one available at the Memorial Park
- Fiber optics network: all city buildings connected by fiber
- Free public WiFi: all city buildings with public access and soon the plaza at the Memorial Park

What's next?

- Engage the community through community forums; Residents to be part of the conversation
- Focus on items that our community is passionate about
- Take a programmatic approach to the smart city projects. Set up ideation events and pilot projects
- Create public collaboration/innovation spaces
- Be open to different forms of partnership (academia, private sector)



A large word cloud shaped like a question mark. The words are arranged to form the outline and internal structure of the question mark. The most prominent words are 'WHAT?', 'WHEN?', 'HOW?', 'WHERE?', 'WHY?', 'WHO?', and 'WHICH?'. The colors used include shades of pink, orange, green, blue, and purple. The font sizes vary, with larger words being more central and smaller words filling the gaps.

A smaller word cloud shaped like a question mark, similar in style to the larger one above. It features the same set of question words: 'WHAT?', 'WHEN?', 'HOW?', 'WHERE?', 'WHY?', 'WHO?', and 'WHICH?'. The colors and font sizes are consistent with the larger word cloud, creating a smaller-scale version of the same visual concept.



A circular economy is an alternative to a traditional linear economy (make, use, dispose) in which we keep resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life.

Food is a fundamental requirement of life on this planet. ... Our goals are to increase access to affordable, nutritious food by 50%, create 50 new circular businesses and collaborations and increase circular economic revenues by 50% by recognizing the value of “waste” — all by 2025.

Metro 2040 Land Use Designation Amendment Request from the City of Delta – MK Delta Lands

Although this issue does not affect White Rock directly, we are responsible, as part of MVRD, to give our assessment of its affects on MVRD as a whole.

The following are notes taken from the MVRD documents in the Council 22 July 2019 agenda:

- Concern about potential impact on bog hydrology;
- Concern about the potential impacts of the proposed development on the bog, particularly regarding fill, settlement on the site, and water management;
- Concern about speculation and an anticipated proposal for the lot to the east;
- A conservation covenant was registered on title of these lands that ensures the ecological integrity of the lands is protected. The BBECA is jointly operated by Metro Vancouver and the City of Delta.
- The specifics associated with type and tenure of activity do have regional implications. For example, if the site is developed as a strata development, having a large number of owners on site likely increases the impact risk to the adjacent Burns Bog. Conversely, with a shortage of large, flat, accessible distribution-oriented parcels available in the regional industrial land inventory, this site would serve well for a trade-enabling supportive use given its proximity to the Port and goods movement network.
- Lots 4, A, and B are wetland bog, and exhibit evidence of past peat harvesting, but recovery is in progress for all three sites. Lot 4 is in moderately better condition than Lot B, and Lot C is a mix of wetland bog and wetland swamp.
- The introduction of fill to the site and the resulting sub-surface effects could have wide-ranging impacts including peat damage / fissures, a lowered water table, the intrusion of nutrient water, and an increased risk of fire and invasive species on the bog.
- There is likely a significant environmental impact to converting these lands to industrial uses, and an increased risk to the BBECA. Given that the parcel to the east of Lot 4 would be further isolated as a result of the proposal, the likelihood of a future application for its redesignation also increases.
- An assessment found that drainage improvements would be required to improve the agricultural capability of the lands to organic Class 4 soils with excess water.

Tracey Arthur

From: Kaeley, Sukhvinder IRR:EX <Sukhvinder.Kaeley@gov.bc.ca>
Sent: Friday, July 19, 2019 11:06 AM
To: Tracey Arthur
Cc: Lizee, Yvette IRR:EX
Subject: traditional territory acknowledgement

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello Tracey,

As mentioned, we have had a chance to connect with folks from Corporate Communications, and our standard approach, as the Province, may look something like the following:


We would like to recognize that we are standing/working/meeting on the traditional territory of the Semiahmoo First Nation, and also wish to acknowledge the broader territory of the Coast Salish Peoples.

Please convey to Council, that although this the standard approach that the Province uses, we simply share this language in response to your request, and that the City is in no way obligated to use the same. White Rock has full discretion to adopt an acknowledgement that most appropriately addresses your circumstances as a municipality, and reflects your core relationships and interactions with neighbouring First Nations.

Kind Regards,
Sukh

Sukh Kaeley

Senior Resource Coordination Officer, South Coast
Ministry of Indigenous Relations and Reconciliation
200 - 10470 152 Street, Surrey, BC V3R 0Y3
Office: [604-582-5249](tel:604-582-5249) | Cell: [604-817-2759](tel:604-817-2759) | [MIRR Website](#)
Email: sukhvinder.kaeley@gov.bc.ca

 Please consider the environment before printing this e-mail

ON TABLE

Date/Meeting July 22, 2019 - Regular
Agenda Item 7.2.1a - Event Protocol

White Rock Repealing Bylaw No.'s 2303 and 2304 for Waterfront
Parking Facility Design and Construction Loan Authorization Bylaw,
2017, No. 2206

White Rock Repealing Bylaw for Waterfront Parking Facility Design
and Construction Loan Authorization Bylaw, 2017, No. 2206, No.
2304, proceed for first, second and third readings

and then be forwarded to the Inspector of BC Municipalities for
approval, and that the Inspector be requested to waive electoral
approval, prior to the Bylaw being adopted.