The Corporation of the
CITY OF WHITE ROCK

Regular Council Meeting
AGENDA

Monday, May 30, 2022, 7:00 p.m.

City Hall Council Chambers

15322 Buena Vista Avenue, White Rock, BC, V4B 1Y6

***Live Streaming/Telecast:** Please note that all Committees, Task Forces, 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

T. Arthur, Director of Corporate Administration

Pages

1. CALL MEETING TO ORDER

1.1. FIRST NATIONS LAND ACKNOWLEDGEMENT

We would like to recognize that we are standing/working/meeting on the traditional unceded territory of the Semiahmoo First Nation, and also wish to acknowledge the broader territory of the Coast Salish Peoples.

2. ADOPTION OF AGENDA

RECOMMENDATION
THAT the Corporation of the City of White Rock Council adopt the agenda for its regular meeting scheduled for May 30, 2022 as circulated.

3. ADOPTION OF MINUTES 10

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

- **Regular Council, May 9, 2022;**
- **Special Council, May 12, 2022; and,**
- **Public Meeting for Development Variance Permit 443 (1532 Johnston Road), May 16, 2022.**

4. QUESTION AND ANSWER PERIOD

Question and Answer Period will be taking place both in person at the meeting, as well as electronically through email.

If you wish to have your question submitted electronically you may forward questions and comments to Mayor and Council by emailing ClerksOffice@whiterockcity.ca with Question and Answer Period noted in the subject line.

As of 8:30 a.m., May 25, 2022, there were no Question and Answer period submissions received.

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).

RECOMMENDATION
THAT Council receive for information the correspondence submitted for Question and Answer Period by 8:30 a.m. May 30, 2022, **including "On-Table"** information provided with staff responses that are available at the time.

4.1. CHAIRPERSON CALLS FOR SPEAKERS TO QUESTION AND ANSWER PERIOD

5. DELEGATIONS AND PETITIONS

5.1. DELEGATIONS (PERMITTED 5 MINUTES)

5.1.a. RICK DUCHESNE - WHITE ROCK TREE PROTECTION BYLAW

Rick Duchesne, White Rock resident, to attend to discuss the City's Tree Protection Bylaw, including penalties and circumstances leading up to the bylaw infractions imposed.

5.2. PETITIONS

None

6. PRESENTATIONS AND CORPORATE REPORTS

6.1. PRESENTATIONS

None

6.2. CORPORATE REPORTS

6.2.a. COVID-19 UPDATE (ON TABLE MEMO TO BE PROVIDED)

The Fire Chief to provide an On Table update regarding COVID-19.

6.2.b. WEST COASTER'S CAR SHOW IN WHITE ROCK 37

Corporate report dated May 30, 2022 from the Director of Recreation and Culture titled "West Coaster's Car Show in White Rock".

RECOMMENDATION
THAT Council receive for information the report dated May 30, 2022, from the Director of Recreation and Culture, titled "West Coaster's Car Show in White Rock" for consideration in hosting the event in the Uptown area in future years.

6.2.c. RELOCATION OF PRE-REGISTERED PROGRAMS FROM CENTENNIAL PARK TENNIS COURTS 41

Corporate report dated May 30, 2022 from the Director of Recreation and Culture titled "Relocation of Pre-Registered Programs from Centennial Park Tennis Courts".

RECOMMENDATION
THAT Council approve the use of $2,500 from the City's Pickleball Courts Asset Improvement Budget #75162 for the purchase and installation of a divider curtain for the tennis only courts at Centennial Park.

6.2.d. VEGETATION CONTROL ON THE HUMP 45

Corporate report dated May 30, 2022 from the Director of Engineering and Municipal Operations titled "Vegetation Control on the Hump".

RECOMMENDATION
THAT Council:

1. Receive the corporate report dated May 30, 2022, from the Director of Engineering & Municipal Operations, titled "Vegetation Control on the Hump" providing information on the feasibility of bringing maintenance of the Hump greenery to pre-2019 levels; and
2. Provide direction to staff in regard to the topic of Vegetation Control on the Hump.

6.2.e. WHITE ROCK WATER TREATMENT PLANT - PATENT APPLICATIONS 62

Corporate report dated May 30, 2022 from the Director of Engineering and Municipal Operations titled "White Rock Water Treatment Plant - Patent Applications".

RECOMMENDATION
THAT Council:

1. Receive the report dated May 30, 2022, from the Director of Engineering & Municipal Operations, titled “White Rock Water Treatment Plant – Patent Applications” for consideration; and
2. Direct that the Patent applications submitted on behalf of the City of White Rock at both the US and Canadian Patent Offices be discontinued.

6.2.f. EMERSON PARK - OPTIONS FOR ADDITIONAL PLAYGROUND EQUIPMENT 146

Corporate report dated May 30, 2022 from the Director of Engineering and Municipal Operations titled "Emerson Park - Options for Additional Playground Equipment".

RECOMMENDATION
THAT Council:

1. Receive the corporate report dated May 30, 2022, from the Director of Engineering & Municipal Operations, titled “Emerson Park – Options for Additional Playground Equipment”; and
2. Direct staff to proceed with the current design for Emerson Park as is.

6.2.g. ADVISORY COMMITTEE MEETING METHOD CONSIDERATIONS - VIRTUAL, IN-PERSON OR HYBRID 174

Corporate report dated May 30, 2022 from the Director of Corporate Administration titled "Advisory Committee Meeting Method Considerations - Virtual, In-Person or Hybrid".

RECOMMENDATION
THAT Council direct staff to continue with virtual advisory committee meetings until the end of the current committee term.

6.2.h. STATUS UPDATE OF COUNCIL'S 2022 TOP PRIORITIES

Council's 2022 Top Priorities with new activity comments provided for information:

- **Solid Waste Pickup for Multi-Family:** Staff and the consultant continue to reach out to the industry for insights into obtaining the best value with the RFP. Currently, approximately 50 small multi family properties are being collected by City forces. These will be shifted to the new contract for reasons of efficiency, better match of equipment and to reduce City trucks overlapping contractor trucks in multi family zones. This will also clarify diversion stats for single family without having the multi family mixed in and could lead to increased incentive payments from Recycle BC.

- **Housing Needs / Affordable Housing:** On April 25, 2022 the draft Housing Strategy presented to Council from the Committee was removed by Council for consideration - later in the agenda some committee recommendations were received by Council and some were not approved / not endorsed.

- **Community Amenity Contribution "Shovel-in-the-Ground" Projects:**

  - Emerson Park Playground Upgrade: Staff are acting in accordance with the following resolution approved by Council on May 9, 2022:

  "THAT Council direct staff to bring forward a corporate report with options to add structures for the age group of 8 - 10 year old children at Emerson Park Playground."

  Staff have prepared a corporate report with options for Council to consider on this agenda as Item 6.2.f. The project is near completion with only irrigation and landscaping work remaining to be completed. Further construction is now on hold pending Council's decision on additional works, so as to minimize removal of newly installed infrastructure. The playground will remain closed. Staff are negotiating delay costs and barricade/site maintenance costs with the contractor.

  - **Maccaud Park Upgrade**: Contractor scheduled to start on May 16 with erecting fences and establishing the construction zone. Bird survey experts are contracted and will survey 48 hours before tree removal is scheduled. Although no bird nests are evident now, there could be hidden nests the contract expert will discover.Birds

could also establish nests between now and the scheduled time of tree removal which is why the survey has to be done no longer than 48 hours before tree removal. If nests are present, the contractor will need to establish a protection zone around the tree and work around this zone until the birds leave.When it is thought that the birds have left, an additional 48 hour survey will need to be done before the tree is removed.

- Helen Fathers Centre Street Hillside Walkway: Staff are evaluating the RFP submissions this week. A two envelope system will be used whereby the submissions will be narrowed down to a final three based upon technical criteria. The pricing envelopes will then be opened for the final three submissions only.

Three property owners with encroachments are litigating against the City - a hearing requesting an injunction to stop the project is scheduled for June 7, 2022. If the injunction is granted, the next step would be a court hearing on the matter in late August, at the earliest, and possibly later this Fall.

- **Review Options for Upgrading Multiple Hillside Walkways (Road Ends) to Waterfront**: A funding application was submitted before the March 28th deadline, no further update at this time

- **The City's Relationship with the Semiahmoo First Nation (SFN):** Staff are working with SFN Council to see when they will be ready to meet again to discuss the draft Communications Memorandum of Understanding.

  Staff will be engaging SFN on plans for National Indigenous Peoples Day on June 21.

7. MINUTES AND RECOMMENDATIONS OF COMMITTEES

7.1. STANDING AND SELECT COMMITTEE MINUTES 178

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

- Land Use and Planning Committee, May 9, 2022;
- Public Art Advisory Committee, May 10, 2022;
- Housing Advisory Committee, May 11, 2022; and,
- Arts and Cultural Advisory Committee, May 12, 2022.

7.2. STANDING AND SELECT COMMITTEE RECOMMENDATIONS

7.2.a. LAND USE AND PLANNING COMMITTEE (COUNCILLOR TREVELYAN, CHAIRPERSON)

7.2.a.a. DEVELOPMENT VARIANCE PERMIT NO. 445 - 15385 SEMIAHMOO AVENUE (DVP 22-008)

The following recommendation was discussed at the Land Use and Planning Committee meeting held earlier in the evening. Council may consider the following recommendation at this time, or may defer to a future meeting.

Note: Following the public meeting being conducted Council will consider approval of Development Variance Permit 445

RECOMMENDATION
THAT Council direct Planning staff to obtain public input through a public meeting conducted as an electronic meeting with notice of the meeting given in accordance with Section 466 of the *Local Government Act*, including notice in newspapers and distribution by mail to property owners/occupants within 100 metres of the subject property.

7.2.b. ARTS AND CULTURAL ADVISORY COMMITTEE (COUNCILLOR MANNING, CHAIRPERSON)

7.2.b.a. MULTI-COMMITTEE DISCUSSION WORKSHOP FOR THE CREATION OF A CITY PLACEMAKING REPORT

RECOMMENDATION
THAT Council endorse the Committee establishing their 2021-2022 Work Plan item 1.3.1, *"Explore the options for creating an Arts Endowment Fund,"* as their top priority going forward.

8. BYLAWS AND PERMITS

8.1. BYLAWS

None

8.2. PERMITS

8.2.a. DEVELOPMENT VARIANCE PERMIT NO. 443 - 1532 JOHNSTON ROAD 196

Development Variance Permit (DVP) No. 443 would replace the existing fascia sign with an oversized fascia sign at the White Rock Players' Club. The channel lettering proposed to be mounted directly to the building's bulkhead, above the entrance to the Player's club, exceeds the permissible sign copy area height for a fascia sign.

This DVP was the subject of a Public Meeting held on May 16, 2022.

RECOMMENDATION
THAT Council approve Development Variance Permit No. 443 for 1532 Johnston Road.

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 the following correspondence as circulated under Items 9.1.a. - 9.1.c.

9.1.a. SUBMISSION OF "METR0 2050" FOR ACCEPTANCE BY AFFECTED LOCAL GOVERNMENTS 198

Correspondence dated May 3, 2022 from Sav Dhaliwal, Metro Vancouver Board Chair, regarding the submission of *Metro 2050* for acceptance by affected local governments has been provided for information.

Note: The full *Metro 2050* Regional Growth Strategy can be viewed here.

Note: A corporate report on this topic will be brought forward by staff in June.

9.1.b. LETTER FROM HOUSING ADVISORY COMMITTEE MEMBER REGARDING THE HOUSING NEEDS REPORT 239

Correspondence dated May 11, 2022 from B. Hagerman, Housing Advisory Committee member, regarding the Housing Needs Report.

Note: Councillor Manning requested that this item be placed on the agenda for information.

9.1.c. LETTER FROM SPARC BC REGARDING ACCESS AWARENESS DAY ON JUNE 4, 2022 240

Correspondence dated May 10, 2022, from Lorraine Copas, Executive Director, Social Planning & Research Council of British Columbia (SPARC BC), regarding an invitation for the City to recognize and celebrate Access Awareness Day on June 4, 2022.

Note: Council Policy No. 109 notes that the City of White Rock does not make official proclamations. This item has been included under correspondence for public information purposes.

10. MAYOR AND COUNCILLOR REPORTS

10.1. MAYOR'S REPORT

10.2. COUNCILLORS REPORTS

11. MOTIONS AND NOTICES OF MOTION

11.1. MOTIONS

11.2. NOTICES OF MOTION

12. RELEASE OF ITEMS FROM CLOSED COUNCIL MEETINGS

13. OTHER BUSINESS

14. CONCLUSION OF THE MAY 30, 2022 REGULAR COUNCIL MEETING

Regular Council Meeting of White Rock City Council

Minutes

May 9, 2022, 7:00 p.m.
City Hall Council Chambers
15322 Buena Vista Avenue, White Rock, BC, V4B 1Y6

PRESENT:	Mayor Walker Councillor Chesney Councillor Johanson Councillor Kristjanson Councillor Manning Councillor Trevelyan
STAFF:	Guillermo Ferrero, Chief Administrative Officer Tracey Arthur, Director of Corporate Administration Anne Berry, Director of Planning and Development Services Shannon Johnston, Acting Director of Financial Services Staff Sergeant Kale Pauls, White Rock RCMP Eric Stepura, Director of Recreation and Culture Ed Wolfe, Fire Chief Debbie Johnstone, Deputy Corporate Officer
PUBLIC:	20 (approx.)

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1. CALL MEETING TO ORDER

The meeting was called to order at 7:00 p.m.

1.1 FIRST NATIONS LAND ACKNOWLEDGEMENT

We would like to recognize that we are standing/working/meeting on the traditional unceded territory of the Semiahmoo First Nation, and also wish to acknowledge the broader territory of the Coast Salish Peoples.

2. ADOPTION OF AGENDA

Motion Number: 2022-193 It was MOVED and SECONDED

THAT the Corporation of the City of White Rock Council adopt the agenda for its regular meeting scheduled for May 9, 2022, as amended to include the following:

- **On-Table response for Question and Answer Period - Item 4.; and**
- **On-Table COVID Report - Item 6.2.a.**

Motion CARRIED (6 to 0)

3. ADOPTION OF MINUTES

Motion Number: 2022-194 It was MOVED and SECONDED

THAT Council amend the April 25, 2022, Regular Council meeting minutes as circulated to reflect Councillor Johanson as voting in the affirmative in regard to motion 2022-161.

Voted in the negative (5): Councillor Manning, Councillor Kristjanson, Councillor Chesney, Councillor Trevelyan and Mayor Walker

Motion DEFEATED (5 to 1)

Motion Number: 2022-195 It was MOVED and SECONDED

THAT the Corporation of the City of White Rock Council adopt the April 25, 2022, meeting minutes as circulated.

Voted in the negative (1): Councillor Johanson

Motion CARRIED (5 to 1)

4. QUESTION AND ANSWER PERIOD

Question and Answer Period was held both in person at the meeting, as well as electronically through email.

As of 8:30 a.m., May 9, 2022, there was one (1) Question and Answer period submission received.

- Submission dated April 30, 2022, from D. Freschi regarding lighting at the Foster Martin Building.

Provided On-Table was a response to D. Freschi from the Director of Planning and Development Services. This item was noted and will be included on the City's website.

4.1 CHAIRPERSON CALLS FOR SPEAKERS TO QUESTION AND ANSWER PERIOD

- G. Gumley, White Rock, inquired why the Financial Plan Budget Document in regard to Tour de White Rock does not show a reduction in taxes.
  Staff responded that if Council wishes to remove the event from the entire budget, then there will be savings (would then be the intent to not bring it back) otherwise in future (plan to have it again next year) it will impact the reserves (no tax savings for a removal on a one time basis).

- G. Gumley, White Rock, read an initial statement regarding Bright Walk in White Rock and inquired if Council will direct staff to meet with him on this matter. Mr. Gumley would like the event to be designated as a Class B event.
  Staff responded Council adopted the direction for this event to be a Class A event, and as such it is now a City-produced event.

5. DELEGATIONS AND PETITIONS

5.1 DELEGATIONS

5.1.a DEBBIE LAWRANCE AND NANCY DE VINK - WHITE ROCK PICKLEBALL ASSOCIATION

Debbie Lawrance and Nancy de Vink, White Rock Pickleball Association, attended to request that the North East court at Centennial Park be dedicated as a Pickleball Court.

Motion Number: 2022-196 It was MOVED and SECONDED

THAT Council endorse and direct staff to dedicate the North East Court at Centennial Park for pickleball use permanently and the cost to paint the lines on the court, max of up to $2,500.

Motion CARRIED (6 to 0)

5.2 PETITIONS

None

6. PRESENTATIONS AND CORPORATE REPORTS

6.1 PRESENTATIONS

6.1.a WHITE ROCK RCMP QUARTERLY REPORT (Q1) FOR JANAUARY - MARCH 2022

Staff Sergeant Kale Pauls provided a presentation to update Council regarding their January - March 2022 quarterly report.

6.2 CORPORATE REPORTS

6.2.a COVID-19 PANDEMIC VERBAL UPDATE

The Fire Chief provided the noted on table update regarding the COVID-19 pandemic.

6.2.b WHITE ROCK FINANCIAL PLAN (2022-2026) BYLAW, 2022, NO. 2428

Corporate report dated May 9, 2022, from the Acting Director of Financial Services and P. Murray, Consultant, titled "White Rock Financial Plan (2022-2026) Bylaw, 2022, No. 2428".

Note: Bylaw 2428 is on the agenda for consideration of first, second and third reading under Item 8.1.d.

Motion Number: 2022-197 It was MOVED and SECONDED

THAT Council receive the Corporate Report and Budget Document dated May 9, 2022 from the Acting Director of Finance, titled "White Rock Financial Plan (2022 - 2026) Bylaw, 2022, No. 2428".

Motion CARRIED (6 to 0)

6.2.c WHITE ROCK ANNUAL PROPERTY TAX RATES BYLAW 2022, NO. 2423

Corporate report dated May 9, 2022 from the Acting Director of Financial Services titled "White Rock Annual Property Tax Rates Bylaw 2022, No. 2423".

Note: Bylaw 2423 is on the agenda for consideration of first, second and third reading under Item 8.1.e.

Motion Number: 2022-198 It was MOVED and SECONDED

THAT Council receive the May 9, 2022, corporate report from the Acting Director of Financial Services, "White Rock Annual Property Tax Rates Bylaw 2022, No. 2423."

Motion CARRIED (6 to 0)

6.2.d 2022 ANNUAL UTILITY RATES BYLAWS

Corporate report dated May 9, 2022, from the Acting Director of Financial Services titled "2022 Annual Rates Bylaw".

Note: Bylaw 2425 and Bylaw 2424 are on the agenda for consideration of first, second and third readings under Items 8.1.f and 8.1.g.

Motion Number: 2022-199 It was MOVED and SECONDED

THAT Council receive the May 9, 2022, corporate report from the Acting Director of Financial Services, "2022 Annual Utility Rate Bylaws."

Motion CARRIED (6 to 0)

6.2.e DAYTIME WARMING SHELTER DEBRIEF

Corporate report dated May 9, 2022, from the Director of Recreation and Culture titled "Daytime Warming Shelter Debrief".

The following discussion points were noted:

- November 1, 2022 - March 2023 may need to have the warming shelter at a cost for five (5) months operation of $480,000 however costs will be less if only operated as needed (example: when it feels like -0 degree weather),
- Budget between November 1 and December 31, 2022, required $171,400 once the remaining $20,600 has been applied
- Funding for this project for 2023: January 1 - December 31 2023 = $480,000 - $160,000 already identified in

the City Financial Plan (staff have applied for Union of British Columbia Municipalities grant for $320,000)

Motion Number: 2022-200 It was MOVED and SECONDED

THAT Council:

1. **Receive for information the May 9, 2022, corporate report from the Director of Recreation and Culture, titled "Daytime Warming Shelter Debrief" for Council's consideration in providing extreme weather shelter services for the period November 1, 2022, to March 31, 2023; and**

2. **Direct staff:**
   a) keep the balance on hand for operating the shelter through next year and
   b) contact the City of Surrey in regard to cost sharing.

Motion CARRIED (6 to 0)

6.2.f MAJOR DEVELOPMENT PERMIT - 1485 FIR STREET

Corporate report dated May 9, 2022, from the Director of Planning and Development Services titled "Major Development Permit - 1485 Fir Street".

Note: Development Permit No. 432 is on the agenda for consideration under Item 8.2.a.

The Director of Planning and Development Services provided a PowerPoint presentation that outlined the application / process.

The following discussion points were noted:

- It was confirmed that a servicing agreement has been entered into
- It was stated by the applicant when asked that they had satisfied comments by the City's Advisory Design Panel and the application has been reviewed by City staff.
- It was noted by a member of Council that they would like to see EV stations (all parking spots be pre-wired for this)

Motion Number: 2022-201 It was MOVED and SECONDED

THAT Council receive for information the corporate report from the Director of Planning and Development Services titled "Major Development Permit - 1485 Fir Street".

Voted in the negative (1): Councillor Johanson

Motion CARRIED (5 to 1)

6.2.g STATUS UPDATE OF COUNCIL'S 2021-2022 TO PRIORITIES

Council's 2021-2022 Top Priorities with new activity comments provided for information:

- **Solid Waste Pickup for Multi-Family:** Staff and the consultant continue to reach out to the industry for insights into obtaining best value with the RFP. Currently, approximately 50 small multi family properties are being collected by City forces. These will be shifted to the new contract for reasons of efficiency, better match of equipment and to reduce City trucks overlapping contractor trucks in multi family zones. This will also clarify diversion stats for single family without having the multi family mixed in and lead to increased incentive payments from Recycle BC

- **Housing Needs / Affordable Housing:** Workshop held April 19, 2022. On April 25, 2022 the draft Housing Strategy presented to Council from the Committee was removed by Council for consideration - later in the agenda some committee recommendations were received by Council and some were not approved / not endorsed

- **Community Amenity Contribution "Shovel-in-the-Ground" Projects**

  - **Emerson Park Playground Upgrade:** Playground equipment is installed and grading and compaction of subgrade now complete. Rubberized asphalt to be installed shortly with better weather

- **Maccaud Park Upgrade**: Contractor is mobilizing to start the project. Information notices related to the construction are being hand delivered to nearby residents. Contact numbers are included in the notices. Eleven dead, dying or invasive species trees identified by the previous Parks Manager will be removed and replaced with appropriate species to be selected by the new Parks Manager

- Helen Fathers Centre Street Hillside Walkway: The RFP is extended by one week to May 10, 2022, due to the incorporation of new language related to potential delays if ongoing litigation is successful in delaying parts or all of the project. This could likely result in increased bid prices. There are no updates on the legal process

-Review Options for Upgrading Multiple Hillside Walkways (Road Ends) to Waterfront: Funding application submitted before March 28, 2022

- **The City's Relationship with the Semiahmoo First Nation (SFN):** Staff are following up from SFN approval of graphics for the sign at Grand Chief Bernard Robert Charles Memorial Plaza. Graphics are being placed on the sign base now and steps are underway for an unveiling ceremony

  May 11, 11:30 a.m. – 12:30 p.m. has been set as the date/time for the official naming ceremony of Grand Chief Bernard Robert Charles Memorial Plaza Sign. Staff are working with SFN Council to see when they will be ready to meet again to discuss the draft Communications Memorandum of Understanding. Staff will be engaging SFN on plans for National Indigenous Peoples Day on June 21

It was confirmed by staff that the Solid waste Pickup for Multi Family project is to have the RFP completed and the contract signed by the end of summer with services starting early 2023.

Motion Number: 2022-202 It was MOVED and SECONDED

THAT Council direct the City's Housing Advisory Committee to focus on partnering with non-profit organizations and utilizing the funding and grants as outlined at the Affordable Housing workshop, held in April 2022, in furtherance of affordable seniors housing.

Voted in the negative (1): Mayor Walker

Motion CARRIED (5 to 1)

Motion Number: 2022-203 It was MOVED and SECONDED

THAT Council direct staff to bring forward a corporate report with options to add structures for the age group of 8 - 10-year-old children at the new Emerson Park Playground.

Motion CARRIED (6 to 0)

7. MINUTES AND RECOMMENDATIONS OF COMMITTEES

7.1 STANDING AND SELECT COMMITTEE MINUTES

Motion Number: 2022-204 It was MOVED and SECONDED

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

- **Economic Development Advisory Committee - April 20, 2022; and,**
- **Environmental Advisory Committee - April 21, 2022.**

Motion CARRIED (6 to 0)

7.2 STANDING AND SELECT COMMITTEE RECOMMENDATIONS

7.2.a ECONOMIC DEVELOPMENT ADVISORY COMMITTEE (COUNCILLOR TREVELYAN, CHAIRPERSON)

7.2.a.a SISTER CITY AND FRIENDSHIP CITY AGREEMENTS

7.2.a.a.a Recommendation #1 - Friendship City Agreement with Blaine, Washington

Motion Number: 2022-205
It was MOVED and SECONDED

THAT Council invite Blaine, Washington to partake in a Friendship City Agreement with the City of White Rock, with an understanding that the Friendship City Agreement with Dongyang, China is expired at this time; and

WHEREAS the two communities are adjacent to Semiahmoo Bay;

WHEREAS the two cities have a natural connection through Peace Arch Park;

WHEREAS we share the interest of attracting tourists to our communities; and

THEREFORE, we should compare notes and share governance and business practices.

Motion CARRIED (6 to 0)

7.2.a.a.b Recommendation #2 - Invitation to Future City Events

Motion Number: 2022-206
It was MOVED and SECONDED

THAT Council direct Staff to invite Blaine and LaConner, Washington to future City events.

Motion CARRIED (6 to 0)

7.2 STANDING AND SELECT COMMITTEE RECOMMENDATIONS

7.2.b ENVIRONMENTAL ADVISORY COMMITTEE (COUNCILLOR KRISTJANSON, CHAIRPERSON)

7.2.b.a ELIMINATION OF GAS-POWERED LANDSCAPING EQUIPMENT

Note: Council may wish to refer the recommendation to staff for review prior to consideration

Motion Number: 2022-207
It was MOVED and SECONDED

THAT Council refer the following to staff to bring forward a corporate report:

- **implement policies and practices that will phase out the City's use of equipment that use fossil fuels where there are effective non-fossil fueled alternatives.**

Motion CARRIED (6 to 0)

7.2.b.b 2021-2022 WORK PLAN PRIORITY ITEMS

Note: Council may wish to refer the recommendations #1 and #2 to staff for review prior to consideration

Motion Number: 2022-208
It was MOVED and SECONDED

THAT Council refer the following to staff to bring forward a corporate report:

- **adopt bylaws to phase out single-use plastic items in the same, or a similar, way as is being done in other surrounding municipalities (such as the City of Surrey).**

Voted in the negative (1): Councillor Johanson

Motion CARRIED (5 to 1)

Motion Number: 2022-209
It was MOVED and SECONDED

THAT Council direct staff to review the number, placement and design of recycling bins in public places in White Rock, with the intent of implementing changes to increase recycling in the City.

Motion CARRIED (6 to 0)

8. BYLAWS AND PERMITS

8.1 BYLAWS

8.1.a BYLAW 2426 - WHITE ROCK ELECTION PROCEDURE BYLAW, 2022, NO. 2426

Bylaw 2426 - a bylaw to provide for the determination of various procedures for the conduct of elections and assent voting. Bylaw 2426 was given three readings on April 25, 2022, and was on the agenda for consideration of final reading at this time.

Motion Number: 2022-210 It was MOVED and SECONDED

THAT Council give final reading to "*White Rock Election Procedure Bylaw, 2022, No. 2426*".

Motion CARRIED (6 to 0)

8.1.b BYLAW 2427 - MAIL BALLOT AUTHORIZATION AND PROCEDURE BYLAW, 2022, NO. 2427

Bylaw 2427 - A bylaw to authorize Mail Ballots and Procedures for Elections. Bylaw 2427 was given three readings on April 25, 2022 and was on the agenda for consideration of final reading at this time.

Motion Number: 2022-211 It was MOVED and SECONDED

THAT Council give final reading to "*Mail Ballot Authorization and Procedure Bylaw, 2022, No. 2427".*

Motion CARRIED (6 to 0)

8.1.c BYLAW 2430 - AUTOMATED VOTE COUNTING SYSTEM AUTHORIZATION AND PROCEDURE BYLAW, 2018, BYLAW 2248, AMENDMENT NO. 1, 2022, NO. 2430

Bylaw 2430 - A bylaw to amend the automated vote counting system authorization and procedure bylaw. Bylaw 2430 was given three readings on April 25, 2022 and was on the agenda for consideration of final reading.

Motion Number: 2022-212 It was MOVED and SECONDED

THAT Council give final reading to "*Automated Vote Counting System Authorization and Procedure Bylaw, 2018, Bylaw 2248, Amendment No. 1, 2022 No. 2430".*

Voted in the negative (1): Councillor Johanson

Motion CARRIED (5 to 1)

8.1.d BYLAW 2428 - WHITE ROCK FINANCIAL PLAN (2022-2026 BYLAW, 2022, NO. 2428)

Bylaw 2428 - A bylaw to adopt a Financial Plan for 2022-2026.

Note: Bylaw 2428 was the subject of a corporate report under Item 6.2.b.

Note: A Special Council Meeting will be called Thursday, May 12 for consideration of final reading of this Bylaw

Motion Number: 2022-213 It was MOVED and SECONDED

THAT Council give first, second and third reading to "*White Rock Financial Plan (2022-2026) Bylaw, 2022, No. 2428*".

Voted in the negative (1): Councillor Johanson

Motion CARRIED (5 to 1)

8.1.e BYLAW 2423 - WHITE ROCK ANNUAL PROPERTY TAX RATES BYLAW, 2022, NO. 2423

Bylaw 2423 - A bylaw for the levying of rates on land and improvements and to provide for the payment of taxes and user fees for the year 2022.

Note: Bylaw 2423 was the subject of a corporate report under Item 6.2.c.

Note: A Special Council Meeting will be called Thursday, May 12 for consideration of final reading of this Bylaw.

Motion Number: 2022-214 It was MOVED and SECONDED

THAT Council give first, second and third reading to "*White Rock Annual Property Tax Rates Bylaw, 2022, No. 2423"*.

Voted in the negative (1): Councillor Johanson

Motion CARRIED (5 to 1)

8.1.f BYLAW 2425 - WHITE ROCK COLLECTION, REMOVAL, DISPOSAL AND RECYCLING OF SOLID WASTE BYLAW 2015, NO. 2084, AMENDMENT NO. 6, 2022 NO. 2425

Bylaw 2425 - A bylaw to amend the Collection, Removal, Disposal and Recycling of Solid Waste Bylaw 2015, No. 2084.

Note: Bylaw 2425 was the subject of a corporate report under Item 6.2.d.

Note: A Special Council Meeting will be called Thursday, May 12 for consideration of final reading of this Bylaw.

Motion Number: 2022-215 It was MOVED and SECONDED

THAT Council give first, second and third reading to *"White Rock Collection, Removal, Disposal and Recycling of Solid Waste Bylaw, 2015, No. 2084, Amendment No. 6, No. 2425".*

Motion CARRIED (6 to 0)

8.1.g BYLAW 2424 - WHITE ROCK DRAINAGE UTILITY USER FEE BYLAW, 2004, NO. 1739, AMENDMENT NO. 15, 2022, NO. 2424

Bylaw 2424 - A bylaw to amend the White Rock Drainage Utility User Fee Bylaw, 2004, No. 1739.

Note: Bylaw 2424 was the subject of a corporate report under Item 6.2.d.

Note: A Special Council Meeting will be called Thursday, May 12 for consideration of final reading of this Bylaw.

Motion Number: 2022-216 It was MOVED and SECONDED

THAT Council give first, second and third reading to *"White Rock Drainage Utility Fee Bylaw, 2004, No. 1739, Amendment No. 15, 2022, No. 2424".*

Motion CARRIED (6 to 0)

8.1.h BYLAW 2429 - WHITE ROCK ZONING BYLAW, 2012, NO. 2000, AMENDMENT (RS-4 - 15916 RUSSELL AVENUE) BYLAW, 2022, NO. 2429

Bylaw 2429 - A bylaw to amend the White Rock Zoning Bylaw from the “RS-1 One-Unit Residential Zone” to the “RS-4 One-Unit (12.1 m Lot Width) Residential Zone” at 15916 Russell Avenue, allowing for a two-lot subdivision and the construction of two single detached dwellings.

Motion Number: 2022-217 It was MOVED and SECONDED

THAT Council give first and second readings to "*White Rock Zoning Bylaw, 2012, No. 2000, Amendment (RS-4 - 15916 Russell Avenue) Bylaw, 2022, No. 2429".*

Voted in the negative (1): Councillor Johanson

Motion CARRIED (5 to 1)

Motion Number: 2022-218 It was MOVED and SECONDED

THAT Council direct staff to schedule the public hearing for "*White Rock Zoning Bylaw, 2012, No. 2000, Amendment (RS-4 – 15916 Russell Avenue) Bylaw, 2022, No. 2429*".

Voted in the negative (1): Councillor Johanson

Motion CARRIED (5 to 1)

Motion Number: 2022-219 It was MOVED and SECONDED

THAT Council direct staff to address the following conditions prior to bringing "White Rock Zoning Bylaw, 2012, No. 2000, Amendment (RS-4 – 15916 Russell Avenue) Bylaw, 2022, No. 2429" back for consideration of final adoption:

a) Ensure that all engineering requirements and issues, including road dedication and the execution of a Works and Servicing Agreement, are addressed to the satisfaction of the Director of Engineering and Municipal Operations;

b) Ensure that all matters pertaining to tree protection and retention are addressed to the satisfaction of the Director of Planning and Development Services;

c) Require the applicant to sign a no-build covenant related to the 17-metre setback, the no-build covenant is to be registered on title;

d) Confirm and ensure the recommendations of the final arborist report, approved by the Director of Planning and Development Services and, more specifically the City's Arboricultural Technician, are implemented and maintained through future demolition and construction activities; and,

e) Complete the demolition of the existing dwelling to the satisfaction of the Director of Planning and Development Services.

Voted in the negative (1): Councillor Johanson

Motion CARRIED (5 to 1)

8.2 PERMITS

8.2.a DEVELOPMENT PERMIT NO. 432 FOR 1485 FIR STREET

Note: This was the subject of a corporate report under item 6.2.e.

It was noted for clarification that there was an error in the agenda, consideration on this item is for Development Permit 432 for 1485 Fir Street (not a Development Variance Permit).

Motion Number: 2022-220 It was MOVED and SECONDED

THAT Council approve Development Permit No. 432 for 1485 Fir Street.

Voted in the negative (1): Councillor Johanson

Motion CARRIED (5 to 1)

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.

Motion Number: 2022-221 It was MOVED and SECONDED

THAT Council receive the correspondence Item 9.1.a as circulated.

Motion CARRIED (6 to 0)

9.1.a METRO VANCOUVER BOARD IN BRIEF

Metro Vancouver Board in Brief from meetings of April 29, 2022.

10. MAYOR AND COUNCILLOR REPORTS

10.1 MAYOR'S REPORT

Mayor Walker noted the following information:

- April 26, Video promoting "Mayor's Food Band Challenge" taking place during the month of May
- April 26, City's Council Meeting Recap with Councillor Chesney

- April 27, International Mobility & Trade Corridor Program meeting
- April 27, Recognition Event hosted by the White Rock Fire Services to thank the White Rock Rotary Club for their donation to purchase a Forcible Entry Training Aid and a Rescue Mannequin
- April 28, Film Festival Event at HT Thrift Elementary School hosted by the Self-Advocates of Semiahmoo through their Equally Empowered Program, along with the Grade 7 Leadership Team
- April 29, Metro Vancouver Board meeting
- April 30, Mann Park Lawn Bowling Club's Opening Day Ceremony
- May 1, Hike for Hospice
- May 4 - 6, Lower Mainland Local Government Association (LMLGA) Annual Conference and Annual General Meeting
- May 7, Peace Arch Hospital Foundation Gala
- May 9, Interview with two (2) BCIT Journalism Students regarding "Mayors' Food Bank Challenge"

10.2 COUNCILLORS REPORTS

Councillor Johanson noted the following information:

- April 19, The City hosted Affordable Housing Workshop
- May 4 - 6 Lower Mainland Local Government Association Annual General Meeting (the City's resolution regarding the creation of an independent Office of the Ethics Commissions was adopted)

Councillor Manning noted the following information:

- April 19, The City hosted Affordable Housing Workshop
- April 20, Economic Development Advisory Committee meeting
- April 26, South Surrey White Rock Chamber of Commerce Board meeting
- April 27, Recognition Event hosted by the White Rock Fire Services to thank the White Rock Rotary Club for their donation to purchase a Forcible Entry Training Aid and a rescue mannequin

Councillor Kristjanson noted the following information:

- May 7, Peace Arch Hospital Foundation Gala
- May 6, Participated with local pickleball group for "Friday Musical Pickleball" event
- Informed of a new play Curious Incident of the Dog in the Nighttime (show starting May 14)

Councillor Chesney noted the following information:

- Sunday White Rock Farmers' Market
- April 19, The City hosted Affordable Housing Workshop
- May 1, Hike for Hospice

Councillor Trevelyan noted the following:

- Attendance of various meetings

11. MOTIONS AND NOTICES OF MOTION

11.1 MOTIONS

None

11.2 NOTICES OF MOTION

None

12. RELEASE OF ITEMS FROM CLOSED COUNCIL MEETINGS

None

13. OTHER BUSINESS

13.1 COUNCIL APPOINTMENT TO OUTSTANDING CANADIANS ON THE PENINSULA COMMITTEE

Mayor Walker provided the following for consideration:

Motion Number: 2022-222 It was MOVED and SECONDED

THAT Council appoint the following Councillor to serve on the Outstanding Canadians on the Peninsula Selection Committee for 2022:

- **Councillor Manning.**

Motion CARRIED (6 to 0)

14. CONCLUSION OF THE MAY 9, 2022, REGULAR COUNCIL MEETING

The meeting was concluded at 9:09 p.m.

Mayor Walker

Tracey Arthur, Director of Corporate Administration

Special Meeting of White Rock City Council

Minutes

May 12, 2022, 6:00 p.m.
City Hall Council Chambers
15322 Buena Vista Avenue, White Rock, BC, V4B 1Y6

PRESENT:	Mayor Walker Councillor Chesney Councillor Johanson Councillor Kristjanson Councillor Manning Councillor Trevelyan
STAFF:	Guillermo Ferrero, Chief Administrative Officer Tracey Arthur, Director of Corporate Administration Jim Gordon, Director of Engineering and Municipal Operations Shannon Johnston, Acting Director of Financial Services Debbie Johnstone, Deputy Corporate Officer
PUBLIC:	None

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1. CALL MEETING TO ORDER

The meeting was called to order at 6:00 p.m.

1.1 FIRST NATIONS LAND ACKNOWLEDGEMENT

We would like to recognize that we are standing/working/meeting on the traditional unceded territory of the Semiahmoo First Nation, and also wish to
acknowledge the broader territory of the Coast Salish Peoples.

2. ADOPTION OF AGENDA

Motion Number: 2022-223 It was MOVED and SECONDED

THAT the Corporation of the City of White Rock Council adopt the agenda for its special meeting scheduled for May 12, 2022, as circulated.

Motion CARRIED (6 to 0)

3. BYLAW 2428 - WHITE ROCK FINANCIAL PLAN (2022-2026 BYLAW, 2022, NO. 2428)

Bylaw 2428 - A bylaw to adopt a Financial Plan for 2022-2026. This bylaw was given first, second and third reading on May 9, 2022 and was on the agenda for consideration of final reading.

Motion Number: 2022-224 It was MOVED and SECONDED

THAT Council give final reading to "*White Rock Financial Plan (2022-2026) Bylaw, 2022, No. 2428*".

Voted in the negative (1): Councillor Johanson

Motion CARRIED (5 to 1)

4. BYLAW 2423 - WHITE ROCK ANNUAL PROPERTY TAX RATES BYLAW, 2022, NO. 2423

Bylaw 2423 - A bylaw for the levying of rates on land and improvements and to provide for the payment of taxes and user fees for the year 2022. This bylaw was given first, second and third reading on May 9, 2022, and was on the agenda for consideration of final reading.

Motion Number: 2022-225 It was MOVED and SECONDED

THAT Council give final reading to "*White Rock Annual Property Tax Rates Bylaw, 2022, No. 2423"*.

Voted in the negative (2): Councillor Johanson, and Councillor Kristjanson

Motion CARRIED (4 to 2)

5. BYLAW 2425 - WHITE ROCK COLLECTION, REMOVAL, DISPOSAL AND RECYCLING OF SOLID WASTE BYLAW 2015, NO. 2084, AMENDMENT NO. 6, 2022 NO. 2425

Bylaw 2425 - A bylaw to amend the Collection, Removal, Disposal and Recycling of Solid Waste Bylaw 2015, No. 2084. This bylaw was given first, second and third reading on May 9, 2022, and was on the agenda for consideration of final reading.

Motion Number: 2022-226 It was MOVED and SECONDED

THAT Council give final reading to *"White Rock Collection, Removal, Disposal and Recycling of Solid Waste Bylaw, 2015, No. 2084, Amendment No. 6, No. 2425".*

Motion CARRIED (6 to 0)

6. BYLAW 2424 - WHITE ROCK DRAINAGE UTILITY USER FEE BYLAW, 2004, NO. 1739, AMENDMENT NO. 15, 2022, NO. 2424

Bylaw 2424 - A bylaw to amend the White Rock Drainage Utility User Fee Bylaw, 2004, No. 1739. This bylaw was given first, second and third reading on May 9, 2022, and was on the agenda for consideration of final reading.

Motion Number: 2022-227 It was MOVED and SECONDED

THAT Council give final reading to *"White Rock Drainage Utility Fee Bylaw, 2004, No. 1739, Amendment No. 15, 2022, No. 2424".*

Motion CARRIED (6 to 0)

7. BUSINESS LICENSE BYLAW - REVIEW FOR BREWERY LICENSE FEES

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

Motion Number: 2022-228 It was MOVED and SECONDED

THAT Council directs staff to bring forward the Business License Bylaw with the fee structure to include business licence fees in regard to breweries to be the same in relation to restaurant business license fees.

Motion CARRIED (6 to 0)

8. CONCLUSION OF THE MAY 12, 2022 SPECIAL COUNCIL MEETING

The meeting was concluded at 6:14 p.m.

Mayor Walker

Tracey Arthur, Director of Corporate Administration

Regular Council Meeting for the purpose of PUBLIC MEETING

Minutes

May 16, 2022, 5:00 p.m.
City Hall Council Chambers
15322 Buena Vista Avenue, White Rock, BC, V4B 1Y6

PRESENT:	Mayor Walker Councillor Chesney Councillor Johanson Councillor Kristjanson (arrived at 5:05 p.m.) Councillor Manning Councillor Trevelyan
STAFF:	Guillermo Ferrero, Chief Administrative Officer Anne Berry, Director of Planning and Development Services Debbie Johnstone, Deputy Corporate Officer Janessa Auer, Committee Clerk
PUBLIC:	1

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1. CALL MEETING TO ORDER

The meeting was called to order at 5:00 p.m.

2. DIRECTOR OF CORPORATE ADMINISTRATION READS A STATEMENT REGARDING THE PROCEDURE TO BE FOLLOWED FOR THE PUBLIC MEETING

3. PUBLIC MEETING - DEVELOPMENT VARIANCE PERMIT NO. 443

CIVIC ADDRESS: 1532 Johnston Road

PURPOSE: The Development Variance Permit (DVP) would replace the existing fascia sign with an oversized fascia sign at the White Rock Players' Club. The channel lettering proposed to be mounted directly to the building's bulkhead, above the entrance to the Player's club, exceeds the permissible sign copy area height for a fascia sign.

4. DIRECTOR OF CORPORATE ADMINISTRATION ADVISES HOW THIS PUBLIC MEETING HAS BEEN PUBLICIZED

- Notice was published in the May 5 and May 12 editions of the Peace Arch News.
- 982 notices were mailed out to owners and occupants within 100 meters of the subject property.
- A copy of the notice was placed on the public notice posting board on May 3, 2022.

5. THE CHAIRPERSON INVITES THE DIRECTOR OF PLANNING AND DEVELOPMENT SERVICES TO PRESENT THE PROPOSED APPLICATION

Note: Public information package attached for information purposes.

The Director of Planning and Development Services provided a PowerPoint presentation with an overview of the application.

Councillor Kristjanson entered the meeting at 5:05 p.m.

6. THE CHAIRPERSON WILL REQUEST THE DIRECTOR OF CORPORATE ADMINISTRATION TO ADVISE OF ANY CORRESPONDENCE OR SUBMISSIONS RECEIVED

As of 8:30 a.m. on May 11, 2022 (the time of agenda publication), there were **no** submissions.

The Deputy Corporate Officer noted that there were **no** On-Table submissions (submissions received between 8:30 a.m. on May 11, 2022 and 12:00 p.m. (noon) on May 16, 2022).

7. THE CHAIRPERSON INVITES THOSE IN ATTENDANCE TO PRESENT THEIR COMMENTS

J. Desrochers, representative for Priority Permits (signage company for the application), noted that if there were questions regarding the sign, he was available to answer them.

Council asked the following questions:

- How long have the naming rights for the sign been secured by Oceana Parc?
  Staff noted this information could be provided prior to consideration of the Development Variance Permit on May 30th.

- What would the colouring for the lighting be?
  The applicant noted that it is an LED sign, with the ability to change three (3) different colours.

At 5:10 p.m. phone-in instructions were provided as to how to participate in the public meeting for anyone wishing to speak that had not registered earlier in the day.

At 5:15 p.m. it was determined that there were no further speakers.

8. <u>IF REQUIRED, THE CHAIRPERSON INVITES THE DIRECTOR OR PLANNING AND DEVELOPMENT SERVICES TO SUMMARIZE THE PROPOSED APPLICATION</u>

A brief closing summary of the proposed application was provided.

9. <u>CONCLUSION OF THE MAY 16, 2022 PUBLIC MEETING</u>

The meeting concluded at 5:16 p.m.

Mayor Walker	Debbie Johnstone, Deputy Corporate Officer

THE CORPORATION OF THE

CITY OF WHITE ROCK

CORPORATE REPORT

DATE: **May 30, 2022**

TO: **Mayor and Council**

FROM: **Eric Stepura, Director, Recreation and Culture**

SUBJECT: **West Coaster's Car Show in White Rock**

RECOMMENDATION

THAT Council receive for information the report dated May 30, 2022, from the Director of Recreation and Culture, titled "West Coaster's Car Show in White Rock" for consideration in hosting the event in the Uptown area in future years.

EXECUTIVE SUMMARY

At the April 11, 2022 Regular Council meeting, Council received a delegation from the West Coaster's Car Club to discuss a potential car show in White Rock.

The West Coaster's Car Show features approximately 500 antique cars and hot rods. Prior to 2020 (pre-COVID), the show had been held on the BC Day long weekend at the beginning of August for 12 years at the Semiahmoo Park as part of the annual Semiahmoo Days celebrations hosted by Semiahmoo First Nation (SFN). The show was cancelled in 2020 and 2021 due to the COVID-19 pandemic and the Provincial Health Order restrictions on group gatherings.

On April 6, 2022, City representatives met with the West Coaster's Carl Club representative to discuss the potential of hosting the car show in the Uptown area of White Rock on July 31, 2022. The suggested car show site would be on the streets surrounding White Rock Elementary School property.

Following this, the Club received confirmation from SFN that the car show can go ahead on July 31, 2022 at Semiahmoo Park.

The purpose of this corporate report is to provide some background on the pros and cons to be considered if Council agrees to support hosting the West Coaster's Car Show in the Uptown area of White Rock in future years.

PREVIOUS COUNCIL DIRECTION

Motion # & Meeting Date	Motion Details
2022-125 April 11, 2022	It was MOVED and SECONDED THAT Council direct staff work with Mr. Herrick of West Coaster's Car Club, regarding a potential car show in the City's Uptown area in July 2022. Motion CARRIED

INTRODUCTION/BACKGROUND

In the early spring of 2022, the President of the West Coaster's Car Club approached Semiahmoo First Nation Council for approval to again hold the West Coaster's Car Show at Semiahmoo Park during the annual Semiahmoo Days celebration. As confirmation was not received from SFN by early April, the City of White Rock was contacted to explore the possibility of hosting this year's West Coaster's Car Show on City property.

On April 6, 2022, City representatives met with the President of the West Coaster's Car Club to discuss the potential of hosting the car show in the Uptown area of White Rock on July 31, 2022. The suggested car show site would be on the streets surrounding White Rock Elementary School property. This is the same site used as the criterium race route used for the Tour de White Rock.

At the April 11, 2022 Regular Council meeting, Council received a delegation, the President of the West Coaster's Car Club to discuss a potential car show in White Rock. The proposed car show was anticipated to be held in the Uptown area with cars to be parked by 11:00 a.m. and depart by 5:00 p.m. with a possible parade heading east on Marine Drive to be part of the Sea Festival/Semiahmoo Days celebrations on Sunday, July 31, 2022. Following the presentation, Council directed staff to work with the West Coaster's Car Club regarding a potential car show in the City's Uptown in July 2022.

Staff have researched some of the pros and cons of hosting the car show in the Uptown Area of White Rock. They are as follows:

Pros

- The car show would attract many visitors to the Uptown area of the City, which could provide economic spin-offs for uptown businesses;
- The car show would be a new attraction in the Uptown area, which along with the White Rock Farmer's Market, The White Rock Blues and Jazz Festival, the White Rock Arts Festival, the Pride Family Day Festival and other Uptown events would increase the Uptown area's reputation as an attractive and vibrant area to shop and visit.
- If car show participants were asked to cruise Marine Drive from West to East at the end of the car show, this parade of antique cars and hot rods would be an excellent addition to Sea Festival/Semiahmoo Day activities at the waterfront.

Cons

- The West Coaster's Car Club does not require traffic control when they use Semiahmoo Park. The cost for traffic control for closing the roads (around White Rock Elementary School) that would be needed for the car show is estimated at $12-13K. This cost would either have to be borne by the Club or could be part of the City's support as a B Category event sponsor.
- Transit buses and first responder's vehicles would have to be re-routed for the duration of the event.
- Semiahmoo First Nation would experience smaller crowds and lose substantial parking revenue if the car show is relocated from Semiahmoo Park.
- Some Uptown area businesses located in the area of the car show may lose business as a result of the road closure.
- Some residents whose homes are located in the area of the car show may be inconvenienced by the road closure.

FINANCIAL IMPLICATIONS

There are no financial implications in 2022, as the West Coaster's Car Show this year will again be held on SFN property at Semiahmoo Park.

If Council agrees to co-host the West Coaster's Car Show in the Uptown area of White Rock in 2023, then consideration could be given for the City to provide some level of financial support as part of the City's 2023 Financial Plan.

INTERDEPARTMENTAL INVOLVEMENT/IMPLICATIONS

The City's Engineering and Municipal Operations Department would be involved in approving any road closures for the car show, if it is moved onto City property in future years.

White Rock Fire Rescue, BC Ambulance, Coast Mountain Bus Company and the White Rock RCMP will need to be notified of any road closures.

ALIGNMENT WITH STRATEGIC PRIORITIES

Council's Corporate Vision is to provide a high quality of life where arts and culture flourish and heritage is celebrated, where we can all live, work and play in an enjoyable atmosphere and where the community feels safe, secure and friendly. Special Events greatly enrich the quality of life for residents and visitors by providing entertaining and festive arts, culture and heritage experiences.

OPTIONS

If Council is supportive of the West Coaster's Car Show taking place in the Uptown area of White Rock in future years, another option would be to consider designating this as a Class B event, and this would require the addition of up to $15,000 in the 2023 or future financial plan to cover items such as traffic control, marketing, etc.

CONCLUSION

On April 6, 2022, City representatives met with the President of the West Coaster's Car Show to discuss the potential of hosting the Car Show in the Uptown area of White Rock on July 31, 2022. The suggested car show site would be on the streets surrounding White Rock Elementary School property. Subsequent to this, confirmation was received by the Club from SFN that the car show can go ahead on July 31, 2022 at Semiahmoo Park.

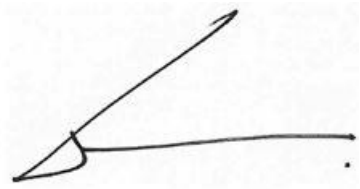
This corporate report provided some background on the pros and cons to host the West Coaster's Car Show in the Uptown area of White Rock for consideration in future years.

Respectfully submitted,

Eric Stepura
Director of Recreation and Culture

Comments from the Chief Administrative Officer

This corporate report is provided for information purposes.



Guillermo Ferrero
Chief Administrative Officer

THE CORPORATION OF THE

CITY OF WHITE ROCK

CORPORATE REPORT

DATE: **May 30, 2022**

TO: **Mayor and Council**

FROM: **Eric Stepura, Director, Recreation and Culture**

SUBJECT: **Relocation of Pre-Registered Programs from Centennial Park Tennis Courts**

RECOMMENDATION

THAT Council approve the use of $2,500 from the City's Pickleball Courts Asset Improvement Budget #75162 for the purchase and installation of a divider curtain for the tennis only courts at Centennial Park.

EXECUTIVE SUMMARY

At the May 9, 2022 Regular Council Meeting, Council received a delegation from members of the White Rock Pickleball Club (WRPC) requesting that the northeast court at Centennial Park be reallocated for pickleball use only.

Following the presentation, Council approved a motion to dedicate the northeast court at Centennial Park to pickleball use permanently and approved up to a maximum of $2,500 to change the markings on the court to remove the tennis court markings.

Operational changes were necessary to facilitate the recent direction to dedicate the northeast court for pickleball only which includes permanent loss of northeast court access by the tennis players and the cancellation or relocation of a pre-registered children's tennis camp to one of the tennis only courts at Centennial Park. Staff recommend facilitating the relocation of pre-registered programs. To achieve this, it is also recommended that the City purchase a divider curtain for installation between the tennis only courts to create an enclosed court area so that stray tennis balls from the lesson participants do not interfere with the users of the other two tennis courts.

Staff have received a quote of $2,500 for a divider curtain. There are funds remaining in the City's Pickleball Courts Asset Improvement Budget #75162 to purchase and install a divider curtain for the tennis only courts at Centennial Park. Staff seek Council's approval to purchase and install a divider curtain on the tennis courts at Centennial Park.

PREVIOUS COUNCIL DIRECTION

Motion # & Meeting Date	Motion Details
#2022-196 May 9, 2022	THAT Council endorse and direct staff to dedicate the North East Court at Centennial Park for pickleball use permanently and the cost to paint the lines on the court, max of up to $2,500. Motion CARRIED

INTRODUCTION/BACKGROUND

At the Regular Council Meeting held June 28, 2021, Council approved a request from the WRPC to make the northwest court at Centennial Park dedicated for pickleball play only. Work has been underway to remove tennis net post, nets and line markings, plus add permanent pickleball nets and a practice wall onto one of the tennis only courts.

At the May 9, 2022 Regular Council Meeting, Council received a delegation from members of the WRPC requesting that the northeast court at Centennial Park also be reallocated for pickleball use only. Following the presentation, Council approved a motion to dedicate the northeast court at Centennial Park to pickleball use permanently and approved up to a maximum of $2,500 to change the markings on the court to remove the tennis court markings.

It was noted at the meeting that the WRPC are wanting the line markings done in June along with the other lines that are being painted on the northwest court. This work is tentatively scheduled to be done by mid-June (weather dependent).

Operational changes were required to facilitate the additional direction, resulting in the permanent loss of northeast court access by the tennis players and the cancelling or relocation of pre-registered programming.

Staff are currently working on the relocation of the pre-registered programming, children's tennis camps that utilized this space on weekdays throughout the months of July through early September. The weeklong Tennis Day Camps run Monday to Friday from 9;00 a.m. – 3:30 p.m. starting July 4, ending September 3 in 2022.

Currently, there are 32 children registered in each of the nine weeks of Tennis Day Camps (16 in the morning and 16 in the afternoon). By locating the camps in the northeast court, it has in the past given tennis camp instructors the opportunity to provide exceptional service by having the children in a more controlled and contained environment. The instructors bring four (4) tennis nets and set up similar to how pickleball sets up to maximize the times each participant hits the ball.

By moving the children's day camps to the south tennis only courts, it will impact all 3 courts as the tennis balls are not contained, and stray balls would interrupt the other 2 courts of play.

Staff considered options to facilitate the operational impacts in designating the northeast court for pickleball use only, which included either:

a) cancelling the children's tennis camps, which would result in the loss of tennis skill development for 288 registrants in the community, and a potential loss of program revenue of approximately $40,000; or

b) relocating the children's tennis camps to the tennis only courts which would reduce the amount of public playing time for local tennis players on weekdays throughout the summer months, especially if all three courts are closed during children's tennis camp lessons. However, by installing a divider curtain between two of the tennis only courts, the children's tennis camp lessons could be properly contained in an enclosed court, and tennis players could continue to use the other two remaining tennis only public courts while the tennis camps are being held.

FINANCIAL IMPLICATIONS

If the purchase and installation of the divider curtain is approved, the source of funds would be to use of $2,500 from the City's Pickleball Courts Asset Improvement Budget #75162. If the Children's tennis camps were cancelled, there would be a potential loss of program revenue of approximately $40,000.

COMMUNICATION AND COMMUNITY ENGAGEMENT IMPLICATIONS

The City's Communication and Government Relations Department will help notify the public of the court use changes.

INTERDEPARTMENTAL INVOLVEMENT/IMPLICATION

The City's Engineering and Municipal Operations Department would project manage the divider curtain installation work, and be responsible for ongoing maintenance of the curtain.

The City's Recreation and Culture Department will work with local tennis and pickleball players to arrange for any new signage, and notify the court users of any court use changes.

ALIGNMENT WITH STRATEGIC PRIORITIES

Provide safe, reliable and sustainable infrastructure for the community while minimizing impacts on the environment.

OPTIONS / RISKS / ALTERNATIVES

The following alternate options are available for Council's consideration:

1. Relocate the children's tennis camps to the tennis only courts and close all three public tennis courts while the children's tennis camps are in progress.
2. Cancel the children's tennis camp lessons for 2022 and refund the 288 registrants.
3. Continue to host children's tennis camps on the northeast court at Centennial Park until the end of the current registered program set is finished on September 3, 2022.

CONCLUSION

At the May 9, 2022 Regular Council Meeting, Council received a delegation from members of the White Rock Pickleball Club (WRPC) requesting that the northeast court at Centennial Park be reallocated for pickleball use only.

Following the presentation, Council approved a motion to dedicate the northeast court at Centennial Park to pickleball use permanently.

Operational impacts included the permanent loss of northeast court access by the tennis players and the cancelling or relocation of pre-registered programming.

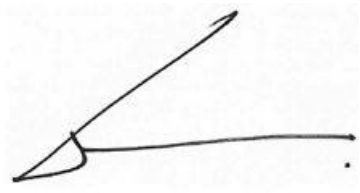
To reduce operational impacts, staff recommend relocating the children's tennis camp lessons to one of the tennis only courts and seek Council's support of the purchase and install a divider curtain between two of the courts at a cost of approximately $2,500.

Respectfully submitted,

Eric Stepura
Director, Recreation and Culture

Comments from the Chief Administrative Officer

I concur with the recommendation of this corporate report.



Guillermo Ferrero
Chief Administrative Officer

THE CORPORATION OF THE

CITY OF WHITE ROCK

CORPORATE REPORT

DATE: **May 30, 2022**

TO: **Mayor and Council**

FROM: **Jim Gordon, P.Eng., Director, Engineering & Municipal Operations**

SUBJECT: **Vegetation Control on the Hump**

RECOMMENDATION

THAT Council receive the corporate report dated May 30, 2022, from the Director of Engineering & Municipal Operations, titled "Vegetation Control on the Hump" providing information on the feasibility of bringing maintenance of the Hump greenery to pre-2019 levels and to provide direction to staff.

EXECUTIVE SUMMARY

The blackberries on the Hump are currently being trimmed in areas immediately south of the fence. However, the tree shoots growing from stumps south of the fence are not being trimmed. The tree shoots have grown to the extent that they block some resident's views and also the views of pedestrians and those seated on the benches at various viewpoints along the Hump.

In response to a delegation that appeared before Council at its regular meeting on February 22, 2022, Council requested that the feasibility of more extensive trimming, including the trimming of tree shoots be investigated.

This report discusses options for consideration related to maintenance of the vegetation growth on the Hump.

PREVIOUS COUNCIL DIRECTION

Motion # & Meeting Date	Motion Details
2019-278 July 8, 2019	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). Motion CARRIED
2019-311 July 22, 2019	THAT Council 1. Receives 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";

INTRODUCTION/BACKGROUND

	2. Directs staff to maintain the vegetation of the blackberry bushes; however, exclude the trimming of the trees; 3. Endorses the amended Marine Drive "Hump" Vegetation Management Plan as outlined in this corporate report; Motion CARRIED
2022-055 February 28, 2022	THAT Council directs staff to report back on the feasibility of bringing maintenance of the hump greenery to pre-2019 levels including compliance to new policies in place as well as budget implications. Motion CARRIED

The blackberry bushes on the Hump are currently being trimmed in areas immediately south of the fence. Council requested that the feasibility of more extensive trimming, including the trimming of tree shoots be investigated.

A delegation appeared at the Regular Council meeting on July 8, 2019, requesting that the foliage along the Hump be trimmed. Council directed staff to bring forward a corporate report outlining the level of work that can be done in regard to trimming, cutting and maintaining the vegetation growth on the Hump (Appendix A).

Staff reported back to Council on July 22, 2019, with several recommendations for maintenance of the blackberry bushes and shoots growing from tree stumps (Appendix B). Council endorsed the vegetation management plan discussed in the report and directed that staff maintain the blackberry bushes but exclude the trimming of the trees (Appendix C).

Since 2019, staff have trimmed the blackberry bushes close to the fence but not the tree shoots growing from stumps. More extensive trimming of the blackberry bushes can be done, although this is limited where they are entangled with the tree shoots.

A delegation appeared at Council on February 28, 2022 advocating for trimming of vegetation on the Hump as per practices prior to 2019. Council directed staff to report back on the feasibility of bringing Hump greenery to pre-2019 levels (Appendix D).

DISCUSSION

A maintenance plan proposing regular blackberry bushes trimming three times per year and trimming of the tree shoots every three years was discussed in 2019. It was suggested that this would allow the stumps to remain alive and yet the tree shoots would not grow to the extent that they would block views.

A review of this plan from a stump health perspective was conducted by the former Manager, Parks and is included in Appendix E. A selection from the review follows:

> *A program of cutting back vegetation every three years will not have a negative effect on the health and vigor of this plant community. Woody plants will produce 1 m – 5 m of regrowth each year after having been cut back. Allowing 2-3 years of regrowth will allow plants to continually support a healthy root system.*

Appendix E also contains opinions from GeoWest Engineering, geotechnical engineers. A selection follows:

> *The majority of the Hump is inclined at or near its angle of repose. The vegetative cover provides a vital role in maintaining its stability by way of root reinforcement and by controlling surface water and groundwater pore pressures. Deeper rooting tree species provide the greatest mechanical root reinforcement benefit, but taller growing trees can become a destabilizing windthrow hazard and would also block views from Marine Drive.*

Both of the recent professional opinions are consistent with the recommendations in the July 22, 2019 report.

The tree shoots have now grown to the extent that they cannot be easily trimmed using a tractor mounted flail mower. A project to trim the tree shoots and blackberry bushes for the first approximate 5-10 metres south of the fence could be done by a contractor using high angle slope safety equipment, chainsaws, chipper and traffic control at a cost estimated to be $25K.

The project for more extensive trimming is feasible; however, there are challenges as outlined in the following sections of this report.

FINANCIAL IMPLICATIONS

There is no provision in the Financial Plan for the $25K expenditure. If Council wishes to proceed, the work to be carried out would need to be funded from contingency or by amending the Financial Plan.

LEGAL IMPLICATIONS

There are no legal implications, but approval to enter onto the lands and carry out the work would need to be obtained from Burlington Northern Sante Fe Railway (BNSF).

COMMUNICATION AND COMMUNITY ENGAGEMENT IMPLICATIONS

As tree trimming on the Hump may be controversial, advance communication of the project would be necessary.

INTERDEPARTMENTAL INVOLVEMENT/IMPLICATIONS

The Communications department and Engineering and Municipal Operations would need to work together on the timing of the work.

CLIMATE CHANGE IMPLICATIONS

There may be some minor climate change implications with the removal of regrowing tree shoots. Also, some air and noise pollution exists with the use of chainsaws and vehicles involved with the work.

IMPLICATIONS FOR TREE PRESERVATION AND TREE CANOPY ENHANCEMENT

There would be no reduction in tree canopy as proposed removal of vegetation included in the proposal for consideration is the removal of tree shoots growing from stumps.

ALIGNMENT WITH STRATEGIC PRIORITIES

Enhanced trimming and maintenance of the blackberry bushes and tree shoots aligns with Council's strategic priority "Our Waterfront" with the objective "Attract visitors and residents to the Waterfront."

OPTIONS / RISKS / ALTERNATIVES

It is feasible to carry out more extensive vegetation trimming on the Hump, including trimming of the tree shoots, in the first 5-10 metres south of the fence subject to the financial, environmental, social and other challenges outlined in this report. The benefits of improved views would accrue to nearby residents, pedestrians and tourists.

Another option available for Council's consideration is to direct staff to continue with trimming blackberry bushes immediately south of the fence only. However, this would not address the other vegetation that will continue to block the views of some residents, pedestrians and those seated on the benches on the sidewalk along the Hump. It will also result in an unkept look which is contrary to White Rock's image as a beautiful tourist friendly City and with increased growth of tree shoots, continue to reduce the views along the Hump.

CONCLUSION

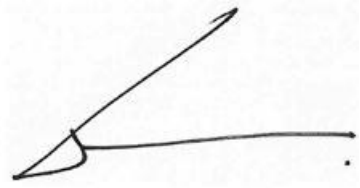
More extensive trimming of the growth south of the Hump is feasible subject to the allocation of financial resources of approximately $25K. This would improve views for residents, pedestrians and visitors and result in a more groomed appearance of the area south of the Hump

Respectfully submitted,

Jim Gordon, P.Eng.
Director of Engineering & Municipal Operations

Comments from the Chief Administrative Officer

I concur with the recommendation of this corporate report.



Guillermo Ferrero
Chief Administrative Officer

Appendix A: Excerpt 5.1.3 from Minutes of the Regular Council Meeting on July 8, 2019
Appendix B: Corporate Report to Council dated July 22, 2019, titled “Marine Drive “Hump” Vegetation Management Plan”
Appendix C: and Excerpt 6.2.8 from Minutes of Regular Council Meeting dated July 22, 2019
Appendix D: Excerpt 5.1.a from Minutes of the Regular Council Meeting on February 28, 2022
Appendix E: GeoWest Engineering Ltd. Memorandum dated April 20, 2022

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.

Appendix B

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

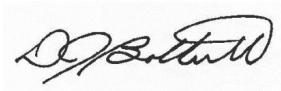
The "Hump" is situated on the waterfront between East Beach and West Beach. This area is known for its viewing potential and would need regular maintenance in order to preserve views. At an annual cost of $7,800 per year and $3,600 every 3 years, the hump vegetation can be managed to support views, slope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

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)".

Discussion ensued and the following information was provided in response to Council's questions:

- The $100K is allocated towards the demolition of the house, as well as basic grass seeding for the park
- The shrubs and trees will remain, and staff are looking into keeping the stone wall/seating area

2019-310 **It was MOVED and SECONDED**

THAT Council receives 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)."

CARRIED

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".

It was noted that Burlington Northern Santa Fe (BNSF) are content for staff to maintain the city side of the vegetation, adding that permission needs to be obtained for any work on the BNSF side.

2019-311 **It was MOVED and SECONDED**

THAT Council

1. Receives 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";
2. Directs staff to maintain the vegetation of the blackberry bushes; however, exclude the trimming of the trees;
3. Endorses the amended Marine Drive "Hump" Vegetation Management Plan as outlined in this corporate report;

CARRIED

parameters for brightness levels. A response from the Acting Director of Planning and Development Services is attached for information.

The Acting Director of Planning and Development Services read a response to the question provided by J. Arlington. The information will also be provided on the City's website.

On-Table comments were provided by P. Petrala supporting J. Arlington's concerns with the lighting features on the Foster Martin building.

Motion Number: 2022-054 It was MOVED and SECONDED

THAT Council receive for information the correspondence submitted for Question and Answer Period by February 28, 2022, including "On-Table" information provided with staff responses that are available at the time.

Motion CARRIED (6 to 0)

4.1 CHAIRPERSON CALLS FOR SPEAKERS TO QUESTION AND ANSWER PERIOD

No speakers came forward at the meeting to participate in Question and Answer Period.

5. DELEGATIONS AND PETITIONS

5.1 DELEGATIONS

5.1.a KERRY WRAY AND SHELLEY MARE

Shelley Mare and Kerry Wray attended as a delegation to advocate for the trimming of the hump, as in past City practices.

Note: There was further information provided On Table in regard to this item by the delegation.

The following discussion points were noted:

- Trimming on the slope would require permission from Burlington Northern Santa Fe (BNSF)
- Understand that trees and views are valued
- Don't want another clear cut; however trimming blackberries at the top is important

Motion Number: 2022-055 It was MOVED and SECONDED

That Council directs staff to report back on the feasibility of bringing maintenance of the hump greenery to pre-2019 levels including compliance to new policies in place as well as budget implications.

Motion CARRIED (6 to 0)

5.2 PETITIONS

None

6. PRESENTATIONS AND CORPORATE REPORTS

6.1 PRESENTATIONS

6.1.a WHITE ROCK RCMP 2021 ANNUAL REPORT

Staff Sergeant Kale Pauls, White Rock RCMP, provided a presentation regarding their 2021 Annual Report.

The following discussion point was noted:

- Opinion was asked on the impact that the One Lane Closure of Marine Drive in 2021 of Marine Drive (safety / noise) had. The Staff Sergeant noted there was not an instance he was aware of where response time was impacted.

6.1.b UNITI - BEST PRACTICES IN THE DEVELOPMENT OF AFFORDABLE AND INCLUSIVE HOUSING

Doug Tennant, Chief Executive Officer, Uniti, provided a presentation that outlined best practices in the development of affordable and inclusive housing and the need for such housing in White Rock and South Surrey.

6.2 CORPORATE REPORTS

6.2.a COVID-19 UPDATE (ON TABLE MEMO PROVIDED)

The Fire Chief provided an On Table update regarding COVID-19.

It was confirmed that free rapid tests are available in White Rock for residents aged seventy and over.

6.2.b TREE PROTECTION, CANOPY ENHANCEMENT AND MANAGEMENT ON CITY LANDS POLICY 611 - UPDATE

GeoWest Engineering Ltd.
200 · 34425 McConnell Road, Abbotsford, BC V2S 7P1
www.geowestengineering.com
info@geowestengineering.com | 604·852·9088

MEMORANDUM

Attention:	**Jim Gordon, P.Eng., City of White Rock**	Date:	April 20,2022
cc:		From:	Calum Buchan, P.Eng.
Project:	Marine Drive Hump Vegetation Management	File:	GA22-1085-00
		Sent Via:	email
Subject:	**Geotechnical Review of Vegetation Management Strategy**		

At the request of the City of White Rock (the City), GeoWest Engineering Ltd. provides herein our preliminary geotechnical comments with regard to vegetation management along the steep hillside that supports Marine Drive between Cypress Street and the White Rock Pier. This hillside is commonly referred to as the "Hump" and is predominantly located on BNSF Railway property. Aerial images taken of the Hump in late 2019 are provided below for reference.

Photo 1: Looking west across Hump to the White Rock Pier

Photo 2: Looking eastward from above top of Hump

It is understood that the City has an agreement with BNSF allowing them to enter the BNSF property to maintain the slope stability. The Hump has three metal bin wall structures constructed by the City on BNSF property that support Marine Drive, the largest of which was recently stabilized to provide enhanced resiliency against earthquake and natural hazards. GeoWest conducted the slope stability assessment, designed the repairs, and completed the engineering review of the slope remedial works. The author of this memorandum has also conducted previous geotechnical assessments of the Hump slope dating back to Circa 2009.

It is understood that the City is considering actively managing the vegetation growth on the Hump and have provided GeoWest with the attached *Character Analysis of Plant Community on Hump* document for our review from a geotechnical perspective. It is understood that cutting and mowing of vegetation is planned to maintain views from Marine Drive. The arborist that prepared the document opined that the cutting back of vegetation will not have a negative effect on the health of the vegetation.

The majority of the Hump is inclined at or near its angle of repose. The vegetative cover provides a vital role in maintaining its stability by way of root reinforcement and by controlling surface water and groundwater pore pressures. Deeper rooting tree species provide the greatest mechanical root reinforcement benefit, but taller growing trees can become a destabilizing windthrow hazard and would also block views from Marine Drive.

It is our considered opinion that vegetation management on the Hump by way of tree cutting will be beneficial for the slope stability, provided that appropriate native woody species well suited for the exposure and climate are established and maintained throughout the steep hillside area.

We trust that the information provided herein meets your immediate needs. Should you require further assistance, please contact the undersigned.

GeoWest Engineering Ltd.

Per: Calum Buchan, P.Eng., FEC
Principal Geotechnical Engineer

REVIEWED BY:
Michael Gutwein, P.Eng.
Senior Geotechnical Engineer

Attachment: *Character Analysis of Plant Community on Hump*

Character Analysis of Plant Community on Hump

The composition of the plant community on the hump includes an emergent canopy of mostly woody native pioneer species with an understory of invasive Himalayan blackberry. There are small fragmented occurrences of other native and invasive species that account for < 5% of the total plant community.

Individual species tend to be occurring in large monospecific groups that indicate site-specific soil moisture conditions. E.g. Bitter cherry growing high on the slope where it is drier and bigleaf maple growing lower on the slope where more moisture accumulates.

This plant community represents an early stage of ecological succession which is ultimately superseded by multiple stages of coniferous forest.

Primary Plant Species of Vegetation on Hump					
Species	Mature height	Growth rate from stump sprouts	Root system	Regenerates after basal pruning	Notes
Prunus emarginata, bitter cherry	<15m	<2m/season	Shallow with many lateral branches	Yes – at any stage of maturity	Indicator of moderately dry soil moisture
Alnus rubra, red alder	<40 m	<1m/season	Extensive fibrous root system	Yes – only on young trees	Indicator of high soil moisture
Acer macrophyllum, bigleaf maple	<30 m	<5m/season	Shallow but wide root system	Yes – at any stage of maturity	indicator of moderate soil moisture
Abies grandis, grand fir	<70 m	n/a	Relatively deep taproot with surface laterals	No	top dieback on single specimen – likely due to dry soil conditions
Rubus armeniacus, Himalayan blackberry	<3 m	<5m/season	Low branching density, roots up to 10 m long and 1 m deep	Yes – at any stage of maturity	Will out-compete most newly introduced plants.

Mowing Vegetation on the Hump

All of the species in this plant community are adapted to regenerate after fire or grazing events and will regenerate vigorously if cut back to < 1m in height. A program of cutting back vegetation every three years will not have a negative effect on the health and vigor of this plant community. Woody plants will produce 1 m – 5 m of regrowth each year after having been cut back. Allowing 2-3 years of regrowth will allow plants to continually support a healthy root system.

Sources:
silvics_mb.pdf (gov.bc.ca)
silvics_vb.pdf (gov.bc.ca)
https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/tree-species-selection/silvics_dr.pdf
Grand fir - Province of British Columbia (gov.bc.ca)
Himalayan_Blackberry_Factsheet_20190220.pdf (bcinvasives.ca)

General Composition of Plant Community – West Side of Hump

*Areas not indicated with a colour code are Himalyan blackberry.

General Composition of Plant Community – Top of Hump

Sources:

silvics_mb.pdf (gov.bc.ca)

silvics_vb.pdf (gov.bc.ca)

https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/tree-species-selection/silvics_dr.pdf

Grand fir - Province of British Columbia (gov.bc.ca)

Himalayan_Blackberry_Factsheet_20190220.pdf (bcinvasives.ca)

THE CORPORATION OF THE

CITY OF WHITE ROCK

CORPORATE REPORT

DATE: **May 30, 2022**

TO: **Mayor and Council**

FROM: **Jim Gordon, P.Eng., Director of Engineering & Municipal Operations**

SUBJECT: **White Rock Water Treatment Plant – Patent Applications**

RECOMMENDATION

THAT Council receive the report dated May 30, 2022, from the Director of Engineering & Municipal Operations, titled "White Rock Water Treatment Plant – Patent Applications" for consideration and direct that the Patent applications submitted on behalf of the City of White Rock at both the US and Canadian Patent Offices be discontinued.

EXECUTIVE SUMMARY

On January 13, 2020, Council approved the request to proceed with the submission of a Patent for the Water Treatment Plant (WTP) approach and design. Patent submissions were subsequently made through Patent lawyers Oyen Wiggs (OW) to both the Canadian and US Patent and Trademark offices. Appendix B is a document from the US Patent and Trademark Office rejecting the Patent Application.

This report discusses the rejection notice, costs spent to date and recommends against further expenditures.

PREVIOUS COUNCIL DIRECTION

Motion # & Meeting Date	Motion Details
2020-07 January 13, 2020	THAT Council approves the request to proceed with the submission of a Patent for the Water Treatment Plant. Motion CARRIED

INTRODUCTION/BACKGROUND

Pursuant to Council direction, staff submitted Patent Applications through OW to both the Canadian and US Patent and Trademark Offices for the water treatment processes at the City WTP. The Canadian application is filed, but a request for examination of the application was held pending the results of the US Application.

The January 13, 2020 Council report requesting approval to proceed with Patent submission is attached as Appendix A.

Attached as Appendix B is the rejection notice from the US Patent and Trademark Office. OW advises that the examiner considers that some of the application claims lack novelty and the remainder lack inventiveness as they were previously described in a 2017 Res'Eau-Waternet publication. This publication is attached as Appendix C.

DISCUSSION

Staff requested that OW study the rejection and comment on the likelihood of a successful appeal. OW advises that it is difficult to show patentability over the Res'Eau-Waternet publication because the publication discloses so much of what is claimed in the patent application. An argument could potentially be made related to the low ozone concentration being unobvious to a skilled person. OW believes this argument would have a low probability of success unless supported by a declaration from an expert. Given that it is reasonable to test the efficacy of the ozone dozing by starting with a low dose, and the cost savings of a lower dosage, it is not likely that a skilled person would overlook lower dosages.

Although an examination has not been requested from the Canadian Patent Office, it appears from the US report that the Application lacks the requirements for a Patent. OW advises that it is common to test a patent application against the US patent requirements before moving forward with examination of the Canadian application.

It is recommended that the City not make any further expenditures on this Patent Application and that staff advise OW that their services are no longer required.

FINANCIAL IMPLICATIONS

The City has spent approximately $30K to date on the Patent application process. There will be further costs of approximately $5K related to legal work done studying the rejection and considering legal arguments for an appeal.

LEGAL IMPLICATIONS

No legal implications, however, a final legal bill for services rendered by OW will be received and if there is direction to continue with an appeal, additional legal expenses will be incurred.

OPTIONS / RISKS / ALTERNATIVES

The following option for Council's consideration is that the City contests the Patent rejection by the US Patent Office through its solicitors, which will incur ongoing legal costs.

CONCLUSION

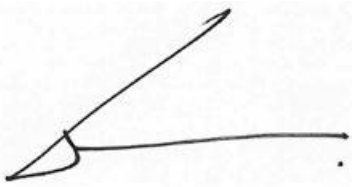
The application submitted on behalf of the City for a patent related to the approach and design of the WTP has been rejected by the US Patent Office. It appears there is a low probability of a successful appeal. It is recommended that the Patent applications at both the US and Canadian Patent Offices be discontinued.

Respectfully submitted,

Jim Gordon, P.Eng.,
Director, Engineering & Municipal Operations

Comments from the Chief Administrative Officer

I concur with the recommendation of this corporate report.



Guillermo Ferrero
Chief Administrative Officer

Appendix A: Corporate Report dated January 13, 2020, titled "Patent Submission for the White Rock Water Treatment Plant"
Appendix B: Rejection notice from the US Patent and Trademark Office dated December 20, 2021
Appendix C: 2017 Res'Eau-WaterNet publication "A Community Circle Approach to Evaluating Water Treatment Solution for the City of White Rock"

THE CORPORATION OF THE

CITY OF WHITE ROCK

CORPORATE REPORT

DATE: **January 13, 2020**

TO: **Mayor and Council**

FROM: **Dr. Saad Jasim, P.Eng., Manager, Utilities**

SUBJECT: **Patent Submission for the White Rock Water Treatment Plant**

RECOMMENDATIONS

THAT Council:

1. Receive for information the corporate report dated January 13, 2020, from the Manager, Utilities titled "Patent Submission for the White Rock Water Treatment Plant"; and
2. Approve the request to proceed with the submission of a Patent for the Water Treatment Plant.

INTRODUCTION

A patent is a legal title protecting an invention. For a technology or a system to be patented, the product or process must include a novel approach, involve an inventive step and be susceptible of industrial application. Patents grant their owner a set of rights of exclusivity over an invention. The legal protection conferred by a patent gives its owner the right to exclude others from making, using, selling, offering for sale or importing the patented invention for the term of the patent, which is usually 20 years from the filing date, and in the country or countries where the patent has been filed (and subsequently granted). This set of rights provides the patentee with a competitive advantage.

The value of individual patents has an importance due to the significance in its application. Many patents have very low value, the distribution is skewed, due to the lack of potential application in the industry.

The economic benefits of the patent system are derived from its roles in promoting innovation, and encouraging investment, economic growth, knowledge sharing and the efficient use of resources. In addition, possessing a patent may help the organization to grow by capitalizing on the market potential of its inventions.

The City of White Rock Water Treatment Plant was designed and built based on the research finding conducted at the City of White Rock in collaboration with the Reseau-WaterNet, which was introduced to the proponents for the Design Build Project. The system included specific sequence of applications that were not present in the literature surveyed.

A detailed discussion took place between Dr. Saad Jasim, Manager, Utilities, Dr. Madjid Mohseni, Scientific Director, Reseau-WaterNet, Professor at UBC, and Rob Bruent, Patent Attorney, Brunet & Co., regarding the process, its novelty and significance to the health of the

community and to the water industry were highlighted. Mr. Bruent indicated that there is a good potential for the application to be patented.

Options were discussed regarding the cost for the submission of the application. The fee for submission, and cost of filing is between $10,000-$12,000 (as quoted in May 2019). When the patent is filed, potential additional cost for applications and communication is around $30,000 over 5 years.

PAST PRACTICE / POLICY / LEGISLATION

The cost of filing a patent for the inventor is mandatory for public disclosure of the description of the technology, which makes following the design easier and facilitates future technological developments.

ANALYSIS

The economic benefits of the patent system are derived from its roles in promoting innovation, and encouraging investment, economic growth, knowledge sharing and the efficient use of resources. In addition, possessing a patent may help the organization to grow by capitalizing on the market potential of its inventions. Patents impact on economic growth of regional and national industry would happen due to potential investments from governments, local, regional and national industries to develop and expand the application of such patents. Profits generated by patent exploitation can be invested in further research and development in infrastructure, employment, which may stimulate commercial and industrial growth.

The findings in this patent application would provide significant savings on capital and operational cost to new applicants of this process.

BUDGET IMPLICATIONS

A budget of approximately $15,000 ($12,000 was the cost indicated by the lawyer in May 2019) is required for the cost of filling the Patent. Future cost when the patent is in the market is expected to be approximately $30,000 over 5 years.

RISK MANAGEMENT

The delay in submitting the Patent Application could cause obstacles due to the available information.

CONCLUSION

The submission of a patent for the design of the White Rock Water Treatment Plant would benefit the City of White Rock financially and provide a higher profile for the performance and development at the City of White Rock. The recommendation is to approve the award of $15,000 to Brunet & Co. for the Patent submission, and budget $30,000 cost over 5 years.

Respectfully submitted,

Dr. Saad Jasim, P.Eng.
Manager, Utilities

Comments from the Chief Administrative Officer:

This corporate report was prepared in response to a resolution of Council to review the possibility of obtaining a patent for the water treatment system.

It is very rare that I have a contrary view to City staff. However, this is one of those occasions. To spend $15,000 to apply for a patent and then a further $30,000 over the next five years as described in this report would not serve to benefit the City of White Rock. I believe this would be a sunk cost with very little potential for any cost recovery or return on investment. It has been my experience that local governments in British Columbia and across Canada as well as North America freely share there best practice experiences, programs, processes, policies, and bylaws to the betterment of all taxpayers. This is a practice that should continue to be supported.

What is the objective of the Patent Application? The corporate report provides the following answers, which I will provide my comments:

1. The economic benefits of the patent system are derived from its roles in promoting innovation, and encouraging investment, economic growth, knowledge sharing and the efficient use of resources.

   Local governments are continually working to improve processes. Knowledge sharing between local governments occurs regularly at the regional level and by attending conferences at the national and international level.

2. In addition, possessing a patent may help the organization to grow by capitalizing on the market potential of its inventions.

   It is my understanding that this "invention" is more of a combination of the proven process of using Ozone for oxidization and the process of using AdEdge Technologies E33 filter media for Arsenic reduction in drinking water. Potentially, there could be other jurisdictions combining these two well established processes for the same purpose. It is unclear in this corporate report how the City of White Rock will grow from the Patent Application.

3. Patents impact on economic growth of regional and national industry would happen due to potential investments from governments, local, regional and national industries to develop and expand the application of such patents.

   It is comforting to think that our Patent Application could lead to further economic growth at the regional and national level. However, I remain doubtful that this would occur as a result of our Patent Application. Further, I fail to understand how this benefits the City of White Rock and our taxpayers.

4. Profits generated by patent exploitation can be invested in further research and development in infrastructure, employment, which may stimulate commercial and industrial growth.

   I remain doubtful that our Patent Application will generate a cost recovery for the cost of the patent and associated costs over the next five years as outlined in this corporate report. This corporate report does not provide a business case on how the City would benefit or achieve results from granting licences or obtaining royalties to use our design process. Imposing our right to such revenue may come at the cost of legal litigation that would require proving that another entity used our specific design process. Further, I do not believe it would necessarily be in the interests of the taxpayer to launch legal action for patent infringement by any local government who wishes to use our particular design process with the hopes of trying to obtain some revenues from granting licences or

royalties. Again, no business case to evaluate the level of revenues against the costs that are being requested.

5. The findings in this patent application would provide significant savings on capital and operational cost to new applicants of this process.

   It is true that any organization (including academics) would benefit from the knowledge of this process. This is one reason why the City hosted students from the British Columbia Institute of Technology last year. However, the City would be able to accomplish this objective by speaking at conferences or submitting papers for publication regarding our design processes to the various utility associations such as the Canadian Water and Wastewater Association.

Unlike the private sector, the City does not need to have a patent to be used as a competitive advantage over others. We simply do not compete against other cities (with the exception of talented employees).

I am not supportive of applying for a patent. However, should the City ultimately take the position to pursue a Patent Application, I would assume that we would do so as cost sharing partners with the University of British Columbia as they were participants in the pilot project which was referenced by NAC Constructors in their Design Build proposal that the City accepted for the Water Treatment Plant.

Dan Bottrill
Chief Administrative Officer

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United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/880,495	05/21/2020	Saad JASIM	Q146 0001/DJM	7685

7200 7590 12/20/2021

OYEN, WIGGS, GREEN & MUTALA LLP
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CANADA

EXAMINER
CECIL, TERRY K

ART UNIT	PAPER NUMBER
1778	

NOTIFICATION DATE	DELIVERY MODE
12/20/2021	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mail@patentable.com

Office Action Summary	Application No. 16/880,495	Applicant(s) JASIM et al.	
	Examiner Mr. TERRY K CECIL	Art Unit 1778	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 08/07/2021.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-19 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1-19 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☑ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 05/21/2020 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☑ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☑ All b)☐ Some** c)☐ None of the:

1.☑ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date 08/07/2020.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED CORRESPONDENCE

Notice of Pre-AIA or AIA Status

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Specification

1. The disclosure is objected to because of the following:

- The use of the terms "Bayoxide" and "Greensand Plus", which are a trade name or a mark used in commerce, has been noted in this application. The term should be accompanied by the generic terminology; furthermore the term should be capitalized wherever it appears or, where appropriate, *include a proper symbol indicating use in commerce such as* ™, *SM , or* ® *following each occurrence of the term.* Although the use of trade names and marks used in commerce (i.e., trademarks, service marks, certification marks, and collective marks) are permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as commercial marks.

Appropriate correction is required.

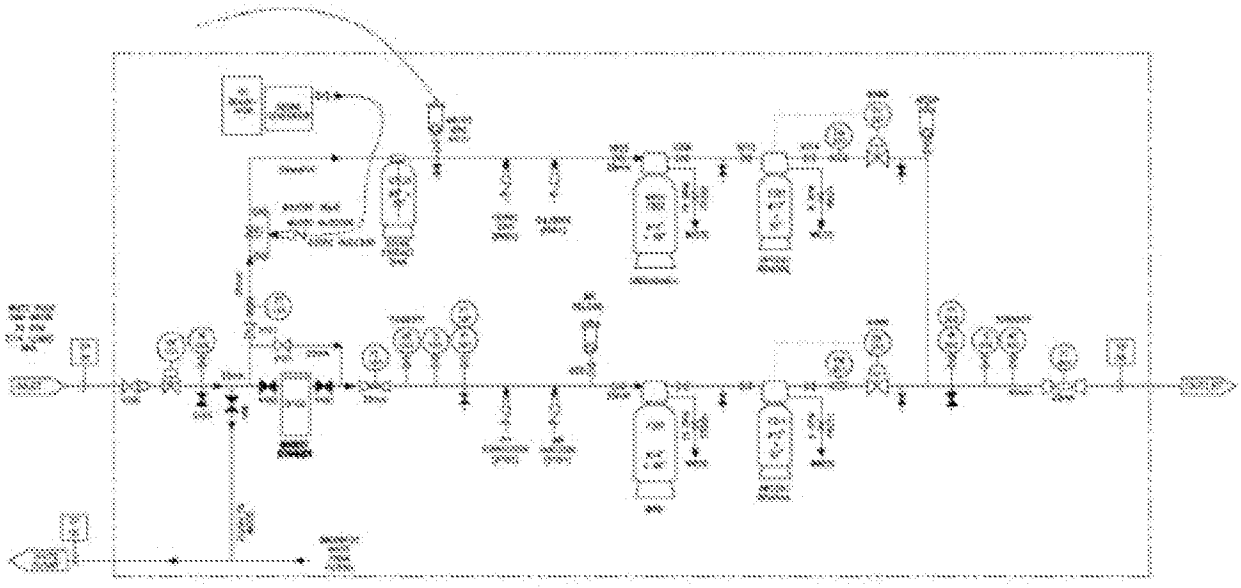
Claim Rejections - 35 USC § 102

2. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale or otherwise available to the public before the effective filing date of the claimed invention.
>
> (a)(2) the claimed invention was described in a patent issued under section 151, or in an application for patent published or deemed published under section 122(b), in which the patent or application, as the case may be, names another inventor and was effectively filed before the effective filing date of the claimed invention.

3. Claims 1, 4, 7-11, 13-15 and 17 are rejected under 35 U.S.C. 102(a)(1) as being anticipated by RESERVOIR'EAU-WATERNET, A Community Circle Approach to Evaluating Water Treatment Solution for the City of White Rock Canada 2017, hereinafter "the Waternet reference".



As deduced from e.g. figure 1.2 above, the Waternet reference teaches a method of treating water container arsenic and manganese comprising the steps of adding ozone to the water (e.g. at the Mazzei injector in the top left of the figure) at a concentration in the range of 0.2 to 1.0 (e.g. 0.5 mg/L, see section 2.4.1) to oxidize As(III) to AS(V) and Mn(II) to Mn (IV) (see sections 1.4 and 1.42); adding an iron-based coagulant (top center of the figure), e.g. Ferric Chloride (see section

2.5) ; the first filtering in manganese dioxide-coated silica sand (e.g. Greensand Plus™ , see section 1.6.1) and then filtering in ferric oxide (e.g. Bayoxide™, see section 1.8.1) [as in claims 1, 4, 7-10, and 17]. As for claim 15, Waternet teaches treated water comprising less than 0.005 mg/L of Manganese (see section 2.4.2). As for claims 13-14, Waternet teaches less than 005 or .003 mg/L arsenic in the treated water (see figure 2.25). As for claim 11, ferric chloride would inherently have a coagulating effect the phosphate, which according the Waternet is present in the untreated water (see figure 5.1, IN column).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries that are applied for establishing a background for determining obviousness under 35 U.S.C. 103 are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 2-3, 5-6, 12, 16 and 18-19 are rejected under 35 U.S.C. 103 as being unpatentable over the Waternet reference in view of ordinary skill in the art.

Claims 2-3 and 18-19: Waternet teaches the use 0.5 and 1.0 mg/L ozone concentration. Though he doesn't specify a concentration below 0.5, he does teach that oxidant demands vary based on not only the amount of metals in a sample to be oxidized but also other water quality constituents

e.g. ammonia and dissolved organic matter (section 1.4). The skilled man would also realize that the flow rate of the water being treated, as well as, ozone contact time would also play a factor in choosing the amount of ozone concentration such that ozone concentration is a result-effect variable that would be obvious. It addition, the costs associated with the production of ozone would motivate the skilled man to select the lowest ozone concentration deemed effective such that using a concentration lower that 0.5 mg/L [as in claims 2-3 and 18-19] would have been obvious given the characteristics of the untreated water and the flow parameters of the water treatment equipment.

Claims 5-6: Waternet doesn't specify using a concentration of ferric chloride to be greater than 1.2 mg/L; however, he does teach that his 1.0 mg/L ferric chloride concentration is for removing 7.5 ppb of arsenic. This is an indication that the concentration of coagulant is also a result effective variable that depends upon the concentration of Arsenic (and other metals) in the water to be treated. The skilled man would also recognize that the amount of flocculent necessary would also depend upon flow parameters of the water being treated and the resulting residence time for the flocculent to form.

Claim 12: figures 1.6 and 2.24 indicate that the amounts of Arsenic and Manganese varying depending upon the location of the wellhead and even over time such that the claimed amounts would be obvious. However, Waternet does teach well samples including amounts within the claimed ranges (see e.g. the aforementioned figures).

As for claim 16, the amount of phosphate remaining after treating is a result-effective variable depending upon the initial water characteristics, amount of coagulate added, and flow parameters of the equipment. It is also pointed out that Waternet also teaches treated water having an amount that is below detection level (see figure 5.1, column G-E) such that having less than 0.15 mg/L of phosphate would be obvious.

Other Pertinent Art

6. Applicant should also review the following germane references (abstracts):

- **CN 109879477 A June 14, 2019**

TITLE: Treating arsenic-containing waste water, by adjusting pH of waste water by adding acid or alkali agent, oxidizing trivalent arsenic to pentavalent arsenic, coagulating, adding reducing agent and removing arsenic

- **PUB-NO: CN105753218A July 13, 2016**

TITLE: Method for removing trivalent arsenic

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. TERRY K CECIL whose telephone number is (571)272-1138. The examiner can normally be reached on Normally 7:30-4:00p M-F.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If repeated attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TERRY K CECIL/
Primary Examiner, Art Unit 1778

Notice of References Cited	Application/Control No. 16/880,495	Applicant(s)/Patent Under Reexamination JASIM et al.	
	Examiner Mr. TERRY K CECIL	Art Unit 1778	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
	A					
	B					
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	G					
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	K					
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FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Abstract for CN 109879477 A (Year: 2019)
	V	Abstract for CN 105753218 A (Year: 2016)
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16880495
Filing Date	2020-05-21
First Named Inventor	JASIM, Saad
Art Unit	
Examiner Name	
Attorney Docket Number	Q146 0001/DJM

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /T.K.C/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	16880495
	Filing Date	2020-05-21
	First Named Inventor	JASIM, Saad
	Art Unit	
	Examiner Name	
	Attorney Docket Number	Q146 0001/DJM

	1	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Arsenic Treatment Technology Evaluation Handbook for Small Systems (July 2003).
	2	NICOMEL, NINA RICCI ET AL., "Technologies for Arsenic Removal from Water: Current Status and Future Perspectives," International Journal of Environmental Research and Public Health, 2016, 13, 62.
	3	RES'EAU-WATERNET, A Community Circle Approach to Evaluating Water Treatment Solution for the City of White Rock. Canada 2017.
	4	S.Y.JASIM, M. MOHSENI, "Ozone Application for Arsenic and Manganese Treatment at the City of White Rock, BC, Canada," Ozone: Science & Engineering, Canada, May 21, 2019.

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature	/TERRY K CECIL/	Date Considered	12/15/2021

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /T.K.C/

Appendix C

2017

A Community Circle Approach to Evaluating Water Treatment Solution for the City of White Rock

PREPARED FOR: CITY OF WHITE ROCK

PREPARED BY: RES'EAU-WATERNET

RES'EAU WATERNET
An NSERC Small Water System Strategic Network

UBC

WHITE ROCK
My City by the Sea!

POLYTECHNIQUE MONTRÉAL

RESEARCHERS

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Dr. Benoit Barbeau (Department of Civil and Geological Engineering, École Polytechnique de Montréal)
Dr. Saad Jasim (Engineering and Municipal Operations, City of White Rock)
Irfan Gehlen (Kerr Wood Leidal Associates Ltd)

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List of Tables and Figures

Tables

Figures

Executive Summary

This document serves as a technology assessment brief build on the pilot study evaluation of various water treatment processes for reducing manganese and arsenic level from groundwater (wells #6 and #7) at the city of White Rock through pilot study conducted by RES'EAU-WaterNET research team at University of British Colombia and Polytechnique Montréal, and in partnership collaboration with BI Pure Water, KWL, and other public and private partner organizations, from December 2016 to June 2017. The Pilot Plant consisted of two treatment trains that involved oxidation, filtration and adsorption stages. The main goal of this partnership is to assist the City of White Rock in addressing the challenges that are faced from changes in the Health Canada guideline pertain to reduction of arsenic and manganese delivering additional information that might assist the City of White Rock in planning and prioritizing its direction. The assessment of efficacy were performed on various treatment methods, where a combination of different processes and their removal efficiency were studied and compared in order to optimize their performances.

1.0 Background

1.1 Partnership with RES'EAU-WATERNET

The City of White Rock's water utility provides safe and clean drinking water to its residents. The drinking water is obtained from the Sunnyside Uplands Aquifer and six wells located throughout the City. To ensure water supplied is of the highest quality, the City of White Rock submitted a grant application to the Clean Water and Wastewater Fund (CWWF) for an arsenic and manganese water treatment project for the city's water system. Through collaboration with RES'EAU-WaterNET, the city aims to evaluate and identify technologies that are capable of providing a significant reduction of arsenic and manganese, and provide safe and high quality water that is also aesthetically acceptable for the public. The RES'EAU-WaterNET, through its Community Circle approach to problem solving has investigated the efficacy of different technologies with the aim of providing data and information towards the successful and sustainable solution to address the water quality parameters of concern.

The scope of this collaboration includes:

1. Stakeholders engagement: RES'EAU researchers will engage relevant public and private organizations to develop and implement Outreach and Awareness programs (e.g. Town Hall meetings, tours, conferences)
2. Water sampling and analysis: Over the course of the project, they will monitor changes in water quality.
3. Water research: Based on water quality results, research is conducted to develop possible water treatment options.
4. Pilot testing: Mobile water treatment plants are brought to source to engage community and operators.

The City intends to issue an RFP to contractors and consultants for the Design-build construction of a full scale water treatment plant. RES'EAU, along with Community Circle results, works to see that the community's feedback is considered during this step.

The partnership with RES'EAU-WaterNET will provide the City of White Rock access to experts and a wealth of knowledge and experience in drinking water treatment. Benefits of the partnership include:

- A network of Canada's top academic researchers with top knowledge of drinking water systems;
- Access to a seasoned team that has refined experience in outreach and public engagement activities;

- Access to leading Canadian industrial expertise through partners who understand utilities and community's perspective;
- The cumulative benefit of RES'EAU-WaterNET's knowledge sharing from international organizations with similar research and development programs; and
- Access to the Network's Mobile Water Treatment Plant, which will provide timely results and cost effective tests for potential water treatment technologies, operated on site at the Merklin Reservoir.

The partnership with RES'EAU-WaterNET will also provide an effective public and private stakeholders outreach based on scientific findings and peer reviewed articles.

1.2 Arsenic and Manganese Guidelines

Arsenic is a naturally occurring metal found in rocks and mineral deposits throughout the Earth's crust. Arsenic enters water sources when the rocks and mineral deposits that contain arsenic dissolve. In a study of arsenic in private drinking water wells commissioned by Fraser Health Authority and BC Ministry of Environment in 2008, it was concluded that arsenic is incredibly widespread throughout the Lower Mainland and deeper wells are associated with higher arsenic concentrations. In 2007, Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) lowered the maximum allowable concentration (MAC) for arsenic from 0.025 mg/L to 0.010 mg/L. As indicated in the historical data of wells tables found in section 1.3, arsenic levels in wells 1, 2, 3 and 4 have been consistently below the MAC. Arsenic levels in wells 6 and 7 have either exceeded slightly the MAC or been very close to exceeding the MAC. Each well appears to have a stabilized average concentration of arsenic that increases or decreases slightly every two months.

Manganese is a naturally occurring element found in over 100 common rocks, salts and in the soils found on the floors of lakes and oceans. There is no MAC for manganese in Canada, but there is an Aesthetic Objective (AO) set at 0.05 mg/L by Health Canada in the GCDWQ. At levels exceeding 0.15 mg/L, manganese can leave black deposits in bathtubs and toilet bowls, stain laundry and plumbing fixtures and can cause an undesirable taste in beverages. Manganese levels in well 5 have been consistently below the AO and well 2 has only had two samples above the AO. Wells 1, 3, 4, 6 and 7 have had manganese levels that exceeded the AO with almost every single sample.

1.3 Mobile Water Treatment System

The pilot plant contained a number of technologies to assess their effectiveness of treating the water from White Rock City's well water. There were three main treatment technologies investigated during this pilot study including Oxidation/Filtration, Adsorption and Biological filtration. Since the biological media did not grow enough during this pilot study, this method is not further discussed in this report. The treatment systems were contained in a 6 m trailer, shown in Figure 1.1. Source water was provided from well #6 and well #7 (Merklin street reservoir) by connecting the inlet of the pilot directly to the outlet of the well pumps. The system inside the pilot was designed to have two treatment trains running in parallel. Each train contained one filter designed for the removal of manganese followed by a second filter considered for the removal of arsenic. This design provided the ability to investigate the efficiency of each filter for the removal of either manganese or arsenic. The process flow diagram of the system is shown in Figure 1.2.

Figure 1.1 *RES'EAU mobile pilot deployed in Merklin street reservoir*

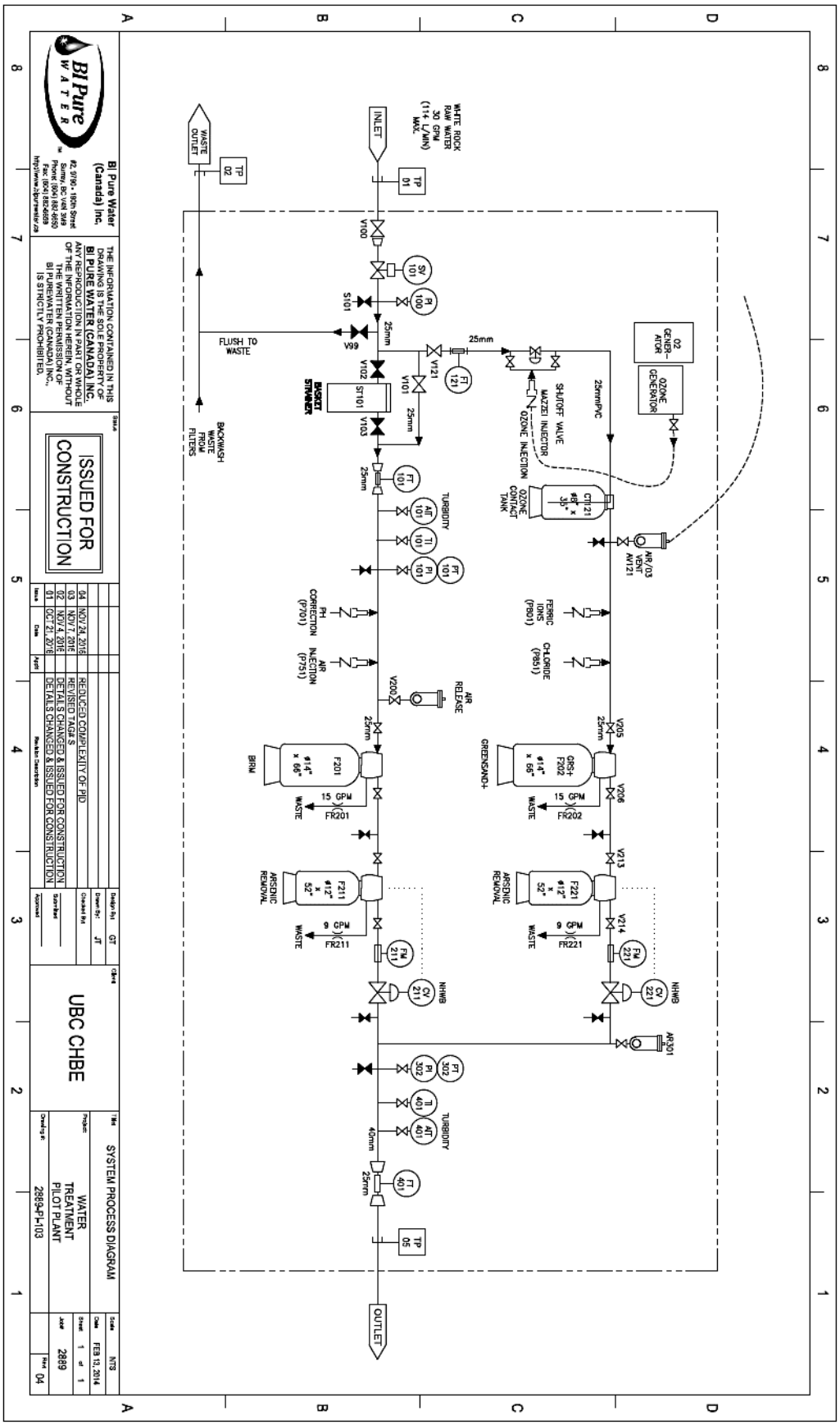


Figure 1.2 *RES'EAU mobile water treatment pilot plant process flow diagram*

1.4 Oxidation

The oxidation process turns the dissolved form of the metals into solid (precipitate) form which can then be removed through filtration. The effectiveness of various chemical oxidants for iron, manganese, and arsenic is shown in Table 1.1.

Table 1.4.1 *Relative effectiveness of various oxidants (Attached EPA report).*

Oxidant	Iron (Fe)	Manganese (Mn)	Arsenic (As)
Oxygen (aeration)	Effective	Not effective	Not effective
Chlorine	Effective	Somewhat effective	Effective
Chloramine	Not effective	Not effective	Not effective
Ozone	Effective	Effective	Effective
Chlorine dioxide	Effective	Effective	Not effective
Potassium permanganate	Effective	Effective	Effective

The stoichiometric amount of oxidant necessary to oxidize As(III), Fe(II), and Mn(II) is important when approximating chemical feed dosage in the treatment systems. It is important not to under-dose the oxidant because under-dosing can result in incomplete oxidation of these metals. Table 1.2 presents the stoichiometric relationships between relevant oxidants and Fe(II), Mn(II) and As(III). Note that the oxidant demand of Fe(II) and Mn(II) dominates relative to that of arsenic. Other water quality constituents also may have an oxidant demand (e.g., ammonia, dissolved organic matter). Thus, when determining the oxidant dose, the total oxidant demand of the source water must be determined.

Table 1.4.2 *Stoichiometry of various chemical oxidants (Attached EPA report).*

Oxidant	Iron (Fe) (mg oxidant /mg Fe)	Manganese (Mn) (mg oxidant /mg Mn)	Arsenic (As) (µg oxidant /µg As[III])
Chlorine (Cl_2)	0.64	1.29	0.95
Chloramine (NH_2Cl)	0.46	0.94	0.69
Ozone (O_3)	0.43	0.88	0.64
Chlorine dioxide (ClO_2) (1-electron transfer)	----	2.45	1.80
Chlorine dioxide (ClO_2) (5-electron transfer)	0.24	----	0.36
Potassium permanganate ($KMnO_4$)	0.94	1.92	1.40

In this project, chlorine (Sodium Hypochlorite solution 12%) and ozone were selected for the oxidation stage. Detailed information about the concentration of each oxidant and their effectiveness for the removal of manganese and arsenic are provided in next sections.

1.4.1 Chlorine

Chlorine has long been used as the disinfectant of choice for most drinking water supplies. The oxidizing power of chlorine is not only effective for metals in the water, but also for many other contaminants found in raw water, both organic and inorganic. Chlorine also effectively oxidizes As(III), Fe(II) and Mn(II). The simple oxidation reactions between chlorine and arsenic, iron, and manganese are as follows:

$$NaOCl + H_3AsO_3 \rightarrow H_2AsO_4^- + Na^+ + Cl^- + H^+$$
$$HOCl + 5H_2O + 2Fe^{2+} \rightarrow 2Fe(OH)_{3(s)} + Cl^- + 5H^+$$
$$HOCl + H_2O + Mn^{2+} \rightarrow MnO_{2(s)} + Cl^- + 3H^+$$

Oxidation of As(III), Fe(II), and Mn(II) by chlorine occurs fairly rapidly in pH ranges of 6.5-8.0. Water with manganese requires 1.29 mg/L of chlorine (as Cl_2) to oxidize 1.0 mg/L of manganese. Arsenic typically is present at microgram levels, so negligible amounts of additional oxidant are required. It is common practice to use the stoichiometric value plus 10% when establishing initial dosages.

In recent years, the use of chlorine gas has come under increased scrutiny for safety reasons; sodium hypochlorite and calcium hypochlorite are two common alternatives, especially in smaller plants. Sodium hypochlorite is delivered in bulk by tankers or in smaller quantities such as carboys and 5-gallon cartons. It is pumped directly into the raw water stream to oxidize soluble iron, manganese and arsenic. Calcium hypochlorite, on the other hand, is provided in a dry form and is typically used in low-flow applications. It can be provided in tablet form for use in automatic feed equipment or in a dry powder. Degradation occurs over time. It is the most expensive of the three forms of chlorine and can lead to scale formation in hard waters.

1.4.2 Ozone

Ozone (O_3) has been shown to effectively oxidize iron and manganese at the same time removing arsenic and other metals to below detection limits. An ozone generator can be used to produce ozone, which can then be dispensed into the water stream to convert Fe(II) to Fe(III) and As(III) to As(V). It is also a potential disinfectant, but unlike chlorine, ozone does not impart a lasting residual to treated water. Research has shown that the effectiveness of ozonation can be significantly affected by the presence of organic matter and sulfide (S^{2-}) (Ghurye and Clifford, 2001 and 2004). The simple oxidation reactions between ozone and arsenic, iron, and manganese are as follows:

$$O_3 + H_3AsO_3 \rightarrow H_2AsO_4^- + O_2 + H^+ \ (@pH\ 6.5)$$
$$O_3 + H_3AsO_3 \rightarrow HAsO_4^{2-} + O_2 + 2H^+ \ (@pH\ 8.5)$$
$$O_3 + 5H_2O + 2Fe^{2+} \rightarrow 2Fe(OH)_{3(s)} + O_2 + 4H^+$$
$$O_3 + H_2O + Mn^{2+} \rightarrow MnO_{2(s)} + O_2 + 2H^+$$

1.5 Arsenic Speciation

The species and valence state of inorganic arsenic depend on the oxidation-reduction conditions and pH of water. In general, arsenite, the reduced, trivalent form [As(III)], is found in groundwater (assuming anaerobic conditions); and arsenate, the oxidized, pentavalent form [As(V)], is found in surface water (assuming aerobic conditions). This rule, however, does not always hold true for groundwater. Some groundwaters have been found to contain only As(III), others with only As(V), and still others with a combination of both As(III) and As(V). Arsenate exists in four forms in aqueous solution, depending on pH: H_3AsO_4, $H_2AsO_4^-$, $HAsO_4^{2-}$, and AsO_4^{3-}. Similarly, arsenite exits in five forms: $H_4AsO_3^+$, H_3AsO_3, $H_2AsO_3^-$, $HAsO_3^{2-}$ and AsO_3^{3-}.

The result of arsenic speciation for different wells in City of White Rock is shown in Figure 1.3. As it can be seen, arsenate is more than arsenite for all the wells except well #7. The more recent results (24-Oct-16 and 25-Jan-17) indicate that arsenite and arsenate have almost the same concentration in well #7.

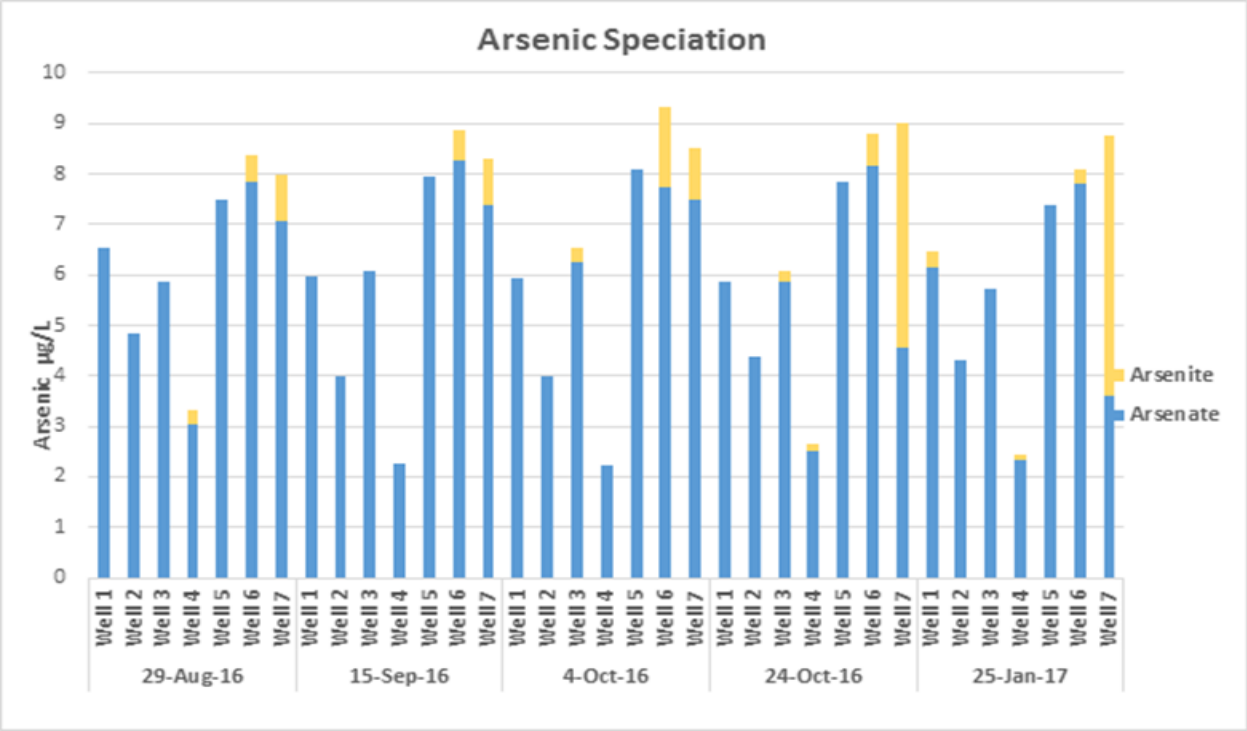


Figure 1.3 *Arsenic speciation results for different wells.*

1.6 Filtration

After the oxidation step (with or without a detention or settling tank), the source water is filtered through a filter media in either a pressure vessel or a gravity filter to remove the solids formed as a result of oxidation. The filtration media in the systems may consist of sand, sand and coal anthracite (dual media), or proprietary/patented products, such as Pyrolox, Filox-R, Birm,

GreensandPlus and Mangazur (Biological media). Some media, such as GreensandPlus, have the ability to both oxidize and filter iron and manganese effectively and at the same time. GreensandPlus, pyrolusite, Birm, or any medium coated with manganese dioxide has the capacity to oxidize iron and manganese and filter the insoluble precipitates with the filter bed. These media also have some, but limited, capacity for As(III) oxidation and arsenic adsorption.

1.6.1 GreensandPlus

GreensandPlus is a black filter media used for removing soluble iron, manganese, hydrogen sulfide, arsenic and radium from groundwater supplies. The manganese dioxide coated surface of GreensandPlus acts as a catalyst in the oxidation reduction reaction of iron and manganese. The silica sand core of GreensandPlus allows it to withstand waters that are low in silica, total dissolved solid (TDS), and hardness without breakdown. GreensandPlus is effective at higher operating temperatures and higher differential pressures than standard manganese greensand. Tolerance to higher differential pressure can provide for longer run times between backwashes and a greater margin of safety. GreensnadPlus is available in a 18 × 60 mesh with an effective size of 0.30-0.35 mm and a specific gravity of 2.4. To be effective, it must be used in water with a pH range of 6.2-8.5. Filter loading rates should be between 4.9-29.4 m/h (2-12 gpm/ft^2) with a bed depth of 30 inches. The combination of a strong oxidant and GreensandPlus filtration media for iron and manganese removal is commonly referred to as the “Manganese GreensandPlus Process.” Either potassium permanganate or chlorine can be used to effectively regenerate GreensandPlus filters. It can be used in Catalytic Oxidation (CO) or Intermittent Regeneration (IR) applications and requires no changes in backwash rate or times or chemical feeds. Manufacturer information is available at http://www.inversand.com. Figures 1.4 and 1.5 provide information for normal service pressure drops and backwash bed expansion characteristics for GreensandPlus filter.

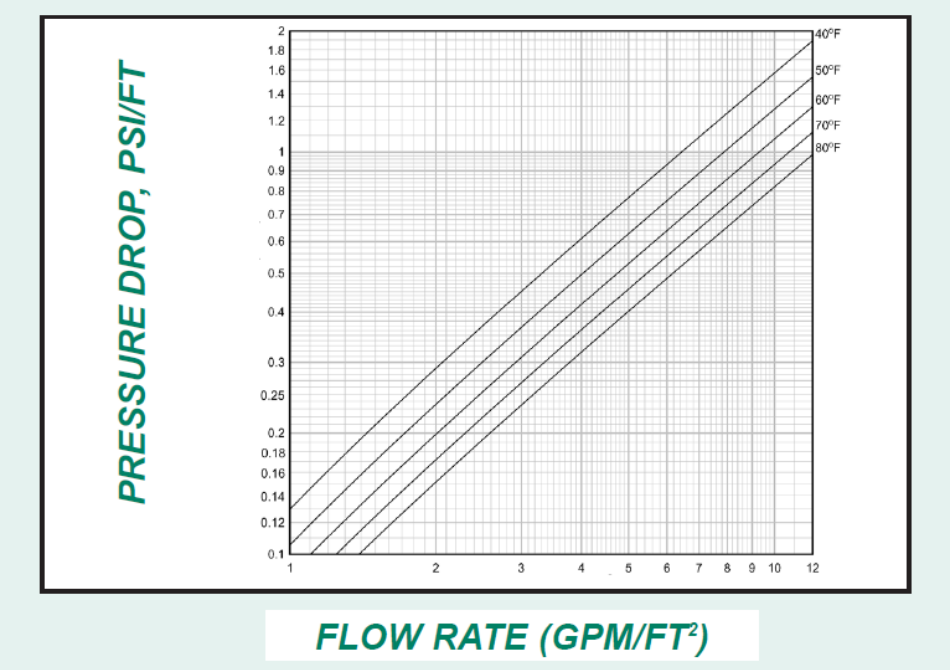


Figure 1.4 *Service Flow Clean Bed Pressure Drop through GreensandPlus Media (Source: Inversand Company)*

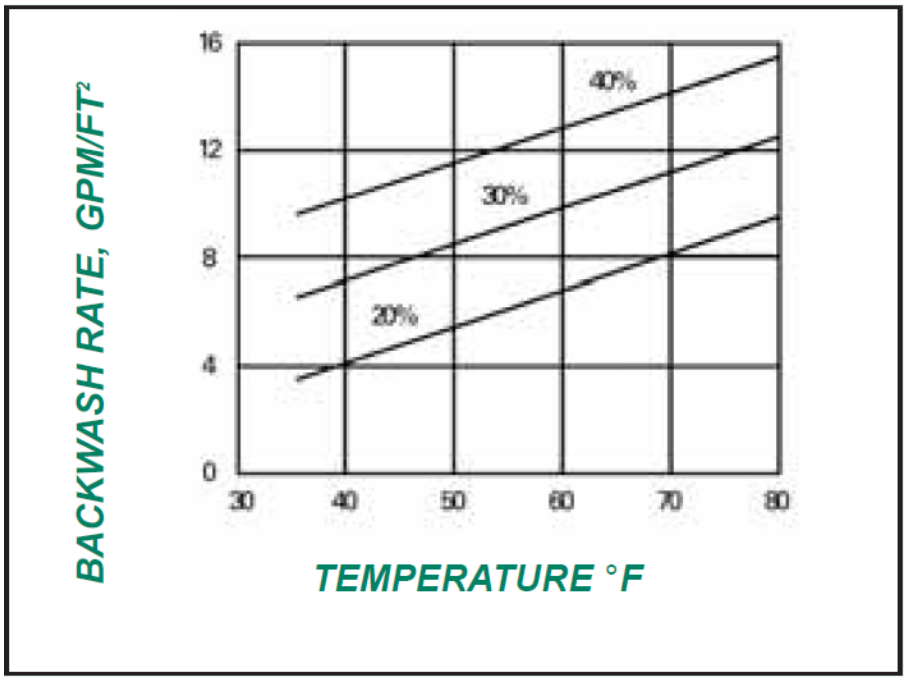


Figure 1.5 *Backwash Bed Expansion Characteristics for GreensandPlus Media (Source: Inversand Company)*

1.7 Solid Oxidizing Filtration Media

Two media that are for filtration use in iron and manganese removal are Pyrolusite and Birm. Pyrolusite is manganese dioxide in a granular form that can be used within a pressure vessel for filtration. Birm, on the other hand, is a manufactured material that begins with a base material coated with manganese dioxide. In this project, Birm was selected as the solid oxidizing filtration media to be tested for the removal of manganese and arsenic.

1.7.1 Birm

Birm is an acronym that stands for the "Burgess Iron Removal Method" and is a proprietary product manufactured by the Clack Corporation in Wisconsin. Typical applications have been point-of-use treatment, but it has been used in municipal treatment plants. Birm is produced by impregnating manganous salts to near saturation on aluminum silicate sand, a base material. The manganous ions then are oxidized to a solid form of manganese oxide with potassium permanganate. This process is similar to that used to manufacture manganese greensand. The manufacturer indicates that the presence of dissolved oxygen is necessary for Birm to function as an oxidizing media. Birm is available in a 10 × 40 mesh with an effective size of 0.48 mm and a specific gravity of 2.0. To be effective, it must be used in water with a pH range of 6.8-9.0. Alkalinity should be greater than two times the combined sulfate and chloride concentration. Injection of compressed air ahead of the media to maintain a dissolved oxygen content of at least 15% of the iron content may be required, especially for source water with iron at concentrations of 3 mg/L or greater. The dissolved oxygen oxidizes iron with Birm media serving as a catalyst that enhances the reaction between dissolved oxygen and dissolved iron and manganese in the water. Filter loading rates should be between 8.5-12.2 m/h (3.5-5.0 gpm/ft^2) with a bed depth of 30-36 inches. Chlorination greatly reduces Birm's effectiveness and at high concentrations can deplete the catalytic coating. Polyphosphates can coat the media, thus reducing its effectiveness for iron removal. Manufacturer information is available at www.clackcorp.com. No chemical addition or regeneration is required for Birm. Backwash rates should be controlled in the range of 24.4-29.4 m/h (10-12 gpm/ft^2) in order to achieve suitable bed expansion of approximately 30% for cleaning. An excessively high backwashing rate and air scour should be avoided to minimize attrition loss. Underdrains may include a gravel support bed or may be of the gravel-less type. Figures 1.6 and 1.7 provide information for normal service pressure drops and backwash bed expansion characteristics for Birm.

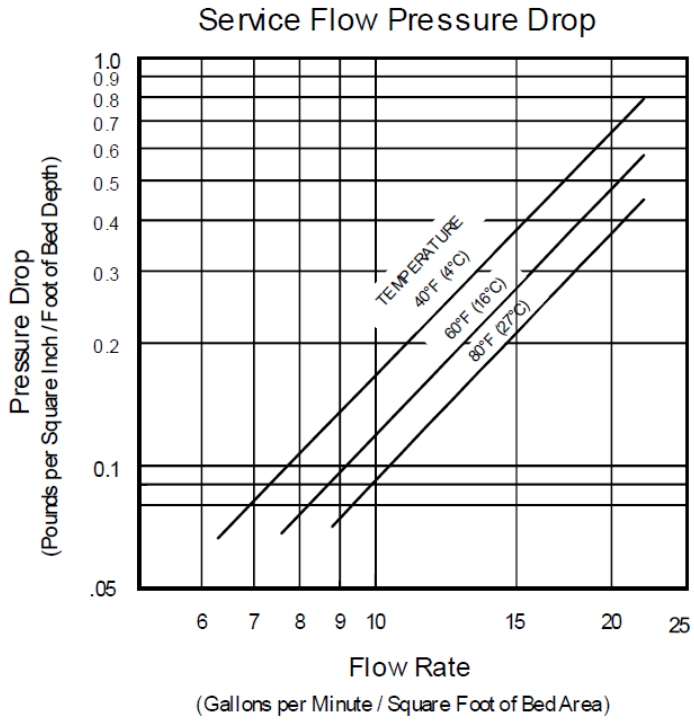


Figure 1.6 *Service Flow Pressure Drop through Birm Media (Source: Clack Corporation)*

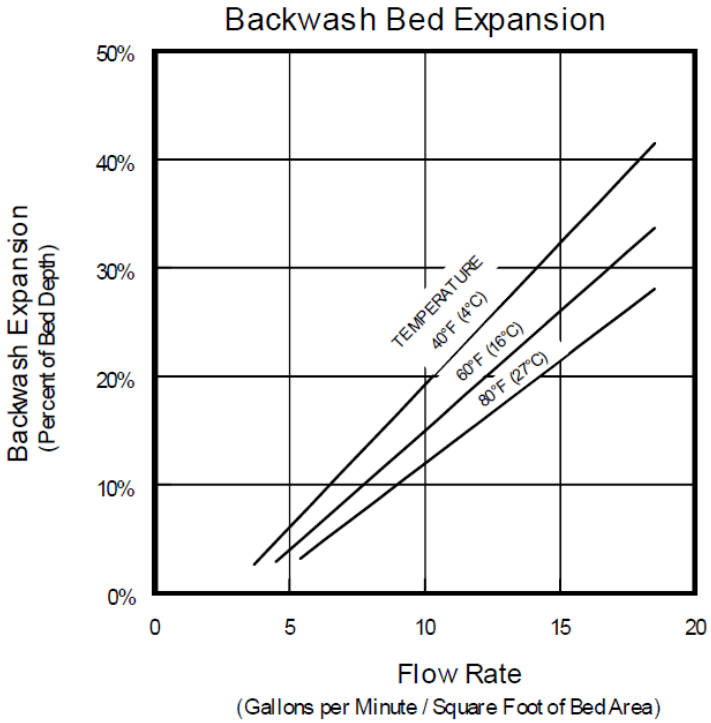


Figure 1.7 *Backwash Bed Expansion Characteristics for Birm (Source: Clack Corporation)*

1.8 Granular adsorptive media

Newly developed adsorptive media for arsenic removal consist primarily of iron-based materials or iron-modified activated alumina products. Some of these materials are not capable of regeneration and, thus, are used solely on a replacement basis (throwaway). Some of these media, mainly the iron-based products, have demonstrated arsenic removal capacities that exceed that of activated alumina particularly at pH above the optimum pH 5.5 level for alumina treatment. The adsorptive capacity of these new materials also is affected by pH; however, their pH sensitivity does not resemble that of activated alumina. The benefit of pH adjustment may come more from the elimination of competition for adsorptive site by ions such as silica and phosphate. Consequently, these materials can be employed economically on a spent media replacement basis without the incorporation of pH adjustment chemicals and equipment.

1.8.1 E33 Bayoxide

AdEdge Technologies' Bayoxide® E33 media is the adsorptive media for arsenic reduction that reduces total arsenic, including both arsenic (III) and arsenic (V). It is an iron-based granular adsorption media. The E33 media can be discarded when spent and requires no chemicals or regeneration. It can be effective for the removal of arsenic in the range of 10 to 100 µg/L. Its expected life bed volumes based on the manufacturer data sheet is from 15000 to 125000 bed volumes depending on the water quality. Its empty bed contact time is typically around 3 minutes. Manufacturer information is available in: https://www.adedgetech.com.

1.9 Biological filtration process-Mangazur

Mangazur is the name for the biological filtration process for the removal of manganese, and potentially arsenic from groundwater sources. During the process, bacteria attach to the Biolite filter media; designed specifically for biological removal of metals. Biolite media acts as a support for bacteria, enables high-rate filtration, and does not require periodic replacement or regeneration. The bacteria remain in the media even after backwashing, allowing continual operation for indefinite time periods. Based on manufacturer data sheet, the media requires less water for backwashing compared to other filters, higher metals retention on the Biolite media allows longer filters runs, it needs very low operating costs and due to rapid biological oxidation rates, Mangazur systems are designed at filtration rates up to 20 gpm/ft^2 (50 m/h). Manufacturer information is available in: www.degremont-technologies.com

1.10 Sampling

The water samples (both the raw water and after each treatment stage) were analyzed for various parameters. The on-site analyses included free chlorine, total chlorine, pH and

turbidity measurements. The off-site analyses included measurements for metals (Arsenic, Manganese and Iron) and anions (Fluoride, Chloride, Bromide, Nitrite, Nitrate, Sulfate and Phosphate). Water samples were collected from the pilot plant facility (refer to sampling locations in Figure 1.8) and delivered to the Exova Lab, Surrey, BC for filter effluent and backwash water metal analysis and to University of British Columbia (UBC) for both anion and metal analyses. The metal effluent testing was switched to be done only at UBC after two weeks. No significant difference was observed between the two labs' results.

An ion chromatograph was used for the analysis of different anions. The instrument was programed to test three different injections for each sample. The IC value for each anion presented in this study is the average of the three injections.

Metal analysis was conducted by an inductively coupled plasma (ICP) system coupled with mass spectrometry (ICP-MS). The instrument was set to analyze the metal content of five different injections from each sample. The concentration reported for each metal in this study is the average value of five injections.

For both IC and ICP-MS analysis, the CV value (coefficient of variation) of the analysis (three injections in IC and five injections in ICP-MS) was calculated to ensure it was less than 5% for each sample. This method was useful to ensure for each sample the results of the instrument were repeatable.

Samples were collected using 250mL pre-cleaned bottles (acid washed) for metal analysis and 250mL laboratory-grade bottles IC analysis. Samples were transported in coolers with ice packs and taken to the corresponding laboratories for the analyses.

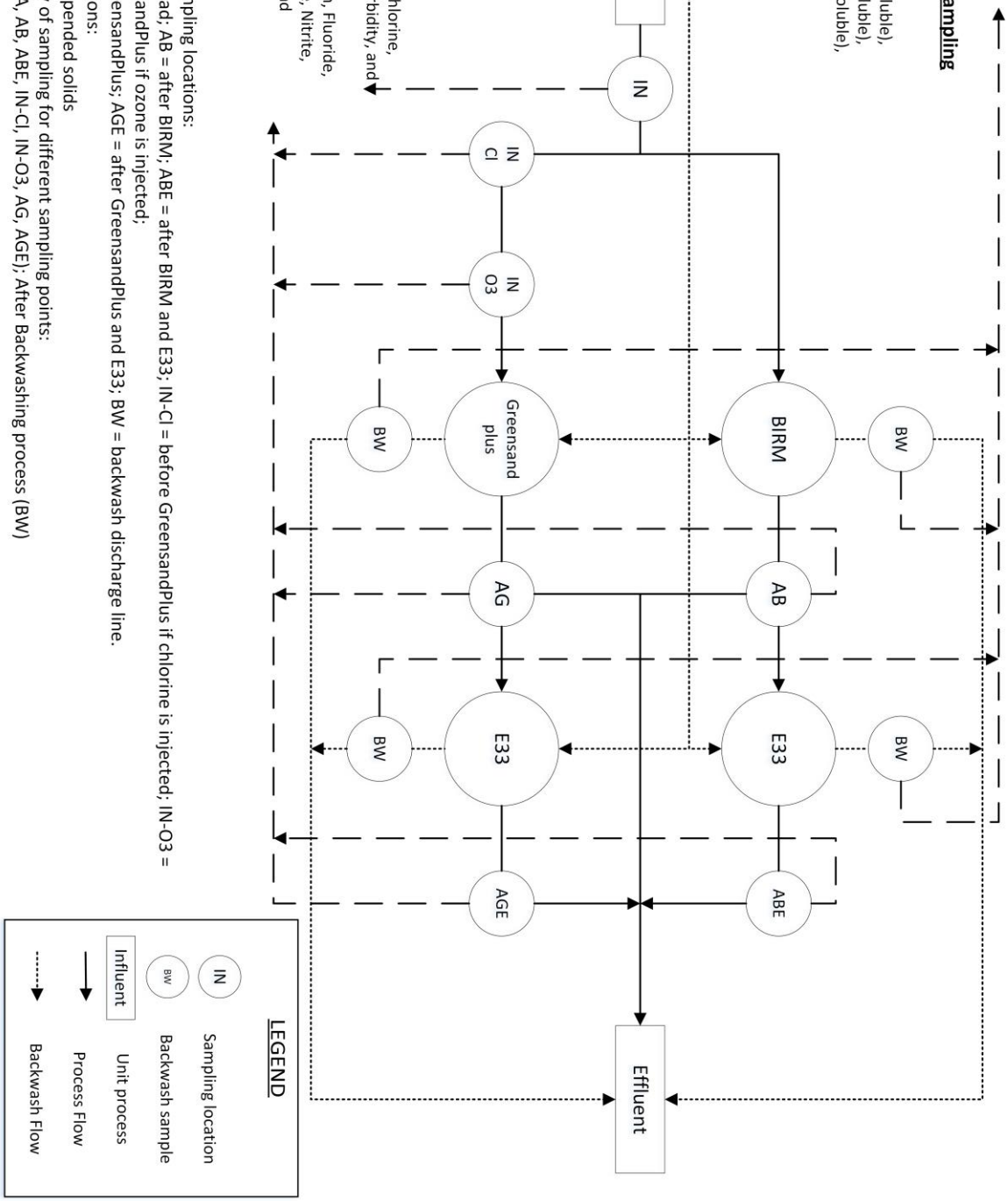


Figure 1.8 Process flow diagram and sampling location

2.0 Results and Discussion

In this chapter, we present the results and findings related to the performance of each technology and the implications associated with such results on the overall treatment process.

2.1 Preliminary performance evaluation of Birm, GreensandPlus and E33 Bayoxide

During the first two weeks of the pilot operation, the system was tested for its general performance for the removal of arsenic and manganese. This section highlights the experimental procedure and the results of the preliminary tests on the efficacy of the treatment systems (Birm, GreensandPlus, and E33) for the removal of manganese and arsenic.

The system was started to operate on Wednesday December 14, 2016. The flowrate for each treatment train, Birm followed by E33 Bayoxide in train 1, and Greensand Plus followed by E33 Bayoxide in train 2, was adjusted to the around 18 L/min. The filtration rate for either Birm or GreensandPlus was around 10m/h and for E33 Bayoxide was around 15 m/h. The detailed information related to each of the filters is provided in Table 2.1. On three different days (Friday December 16, Monday December 19 and Wednesday December 21, 2016), samples from the sampling locations of the system (Figure 1.8) were collected and analyzed for both on-site and off-site measurements.

The concentrations of manganese and arsenic at different sampling locations are shown in Figures 2.1 and 2.2, respectively. At the inlet (raw water), the manganese concentration varied between 116 µg/L and 141 µg/L and the inlet arsenic concentration was between 9.5 µg/L and 10.1 µg/L on different sampling dates. Both Birm and GreensandPlus filters showed high efficiency in terms of Mn removal (brining the outlet concentration to less than 10µg/L); however, they were ineffective at reducing the concentration of arsenic. The Bayoxide E33 adsorptive media after either Birm or GreensandPlus reduced the concentration of arsenic to below 2µg/L.

Table 2.1.1 *Design features of the manganese and arsenic Removal system at RES'EAU mobile pilot*

Design Parameter	Value	Remarks
Pretreatment (Manganese Removal)		
No. of Vessels	2	-
Configuration	Parallel	-
Vessel size (in)	14 D * 65 H	1.07 ft^2 cross section area
Depth of Birm Media (in)	~33.6	Quantity of Birm ÷ cross section area of the vessel
Quantity of Birm Media (ft^3)	3	
Birm Hydraulic Loading Rate (gpm/ft^2)	3.5-5	Data sheet
Depth of GreensandPlus Media (in)	~28	Quantity of GreensandPlus÷ cross section area of the vessel
Quantity of GreensandPlus Media (ft^3)	2.5	(0.5 ft^3 Anthracite)
GreensandPlus Hydraulic Loading Rate (gpm/ft^2)	2-12	Data sheet
Clean Bed Pressure Drop (psi)	4.6	-
under bedding	Gravel	1/4-in × 1/8-in
Bed Expansion For Birm/GreensandPlus (%)	40	Data sheet
Backwash Rate (gpm/ft^2)	11-12	Data sheet: 10-12 (Birm); 12-16 (GreensandPlus)
Backwash Duration (min)	14	-
Greensand Plus Design Backwash Frequency (day)	2-24	calculation
Birm Design Backwash Frequency (day)	periodically	Data sheet
Adsorption (Arsenic removal)		
No. of Vessels	2	-
Configuration	Parallel	-
Vessel size (in)	12 D * 52 H	0.79 ft^2 cross section area
Type of Media	E33 Bayoxide	-
Quantity of Media (ft^3)	2	-
Media Bed Depth (in)	30	-
Maximum Hydraulic Loading Rate (gpm/ft^2)	7.6	Data sheet
Maximum Flow Rate (gpm)	6	Data sheet
Maximum Empty Bed Contact Time (EBCT) (min)	4.2	-
Clean Bed Pressure Drop (psi)	4.6	-
Under bedding	Gravel	1/4-in × 1/8-in
Backwash Rate (gpm/ft^2)	5	Data sheet
Backwash Duration (min)	14	-
Bed Expansion (%)	40	Data sheet
Backwash cycles (per month)	2 ×	Data sheet
Expected life bed volumes (with pretreatment)	15000 to 125000	Data sheet

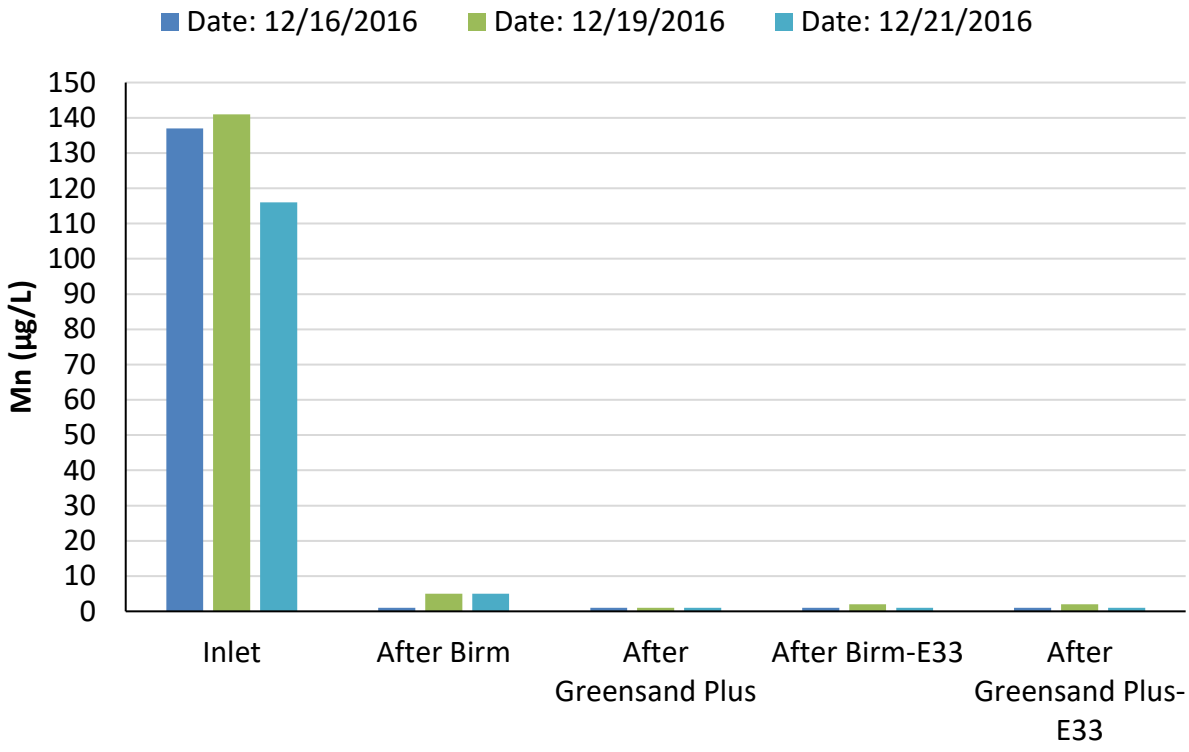


Figure 2.1 *Concentration of manganese at different sampling locations and different sampling dates.*

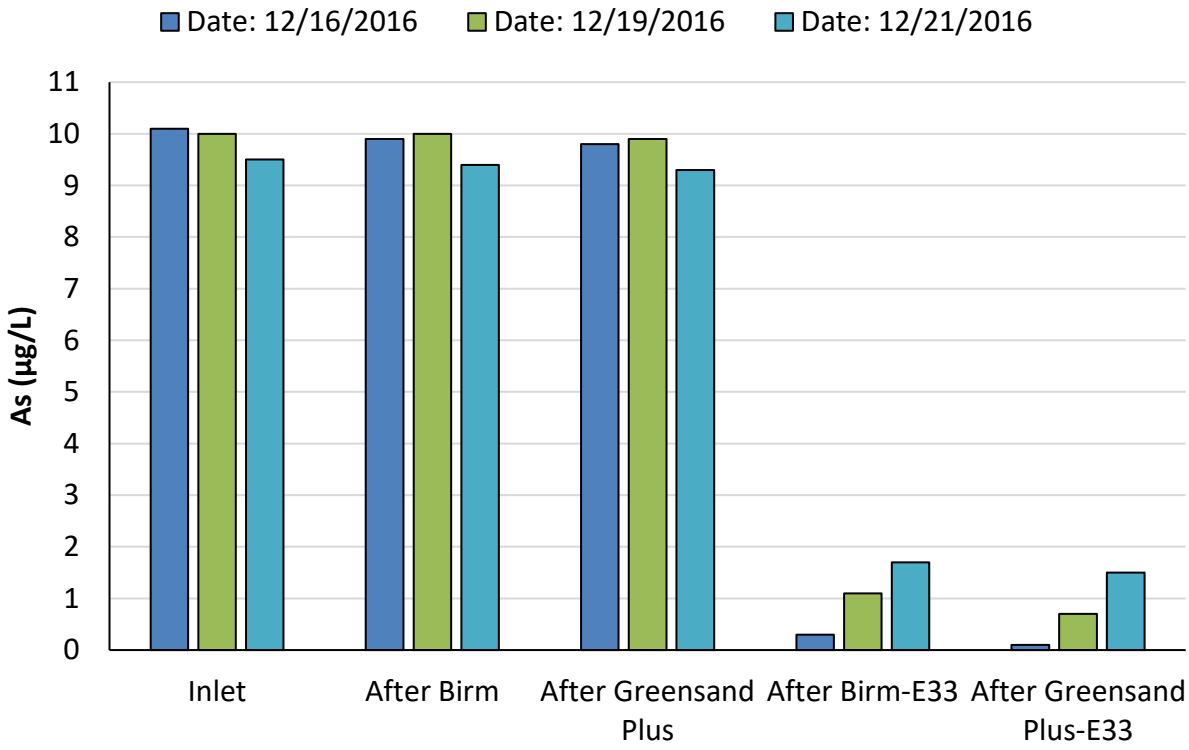


Figure 2.2 *Concentration of arsenic at different sampling locations and different sampling dates.*

2.2 Long-term efficacy evaluation

The results of preliminary tests conducted during the month of December 2016 confirmed the efficacy of GreensandPlus and Birm at removing manganese, and that of E33 Bayoxide at removing arsenic in the White Rock city's groundwater. The pilot system was operated again between January and February 2017, to further evaluate the performances of various units and assess the long-term operational indicators, e.g., pressure drop. Experimental procedure and the results of this set of experiments are highlighted in this section.

The system was started to operate on Thursday January 19, 2017. The filers were backwashed thoroughly before starting the experiment. Based on the manufacturer data sheet, the adsorptive media could not be regenerated; however, it was backwashed the same as other filters to check if there is a possibility of removing its arsenic content. The flowrate for each treatment train, Birm followed by E33 Bayoxide and Greensand Plus followed by E33 Bayoxide, was adjusted to the desired value (around 10m/h for Birm or GreensandPlus and around 15m/h for E33 Bayoxide). The operational parameters are provided in details in Table 2.1. A total of 8 water samples were collected from different stages on different days between January 23 and February 10, 2017. At the end of the experiment on February 10, 2017, the system was backwashed again and samples were collected from backwash water.

2.2.1 Long-term efficacy evaluation-manganese removal through Birm and GreensandPlus

The concentrations of manganese before and after Birm and GreensandPlus on different sampling dates are presented on Figures 2.3 and 2.4, respectively. As it can be seen in Figure 2.3, manganese concentration in the outlet stream of Birm increased gradually, eventually reaching above the Aesthetic Objective (50 µg/L) after nearly 300 cumulative volumes. On the other hand, GreensandPlus performed well consistently, with the outlet manganese concentration being below 2µg/L throughout the operation (up to around 550 cumulative volumes). it is concluded that GreensandPlus outperformed Birm by providing consistent and effective removal of manganese.

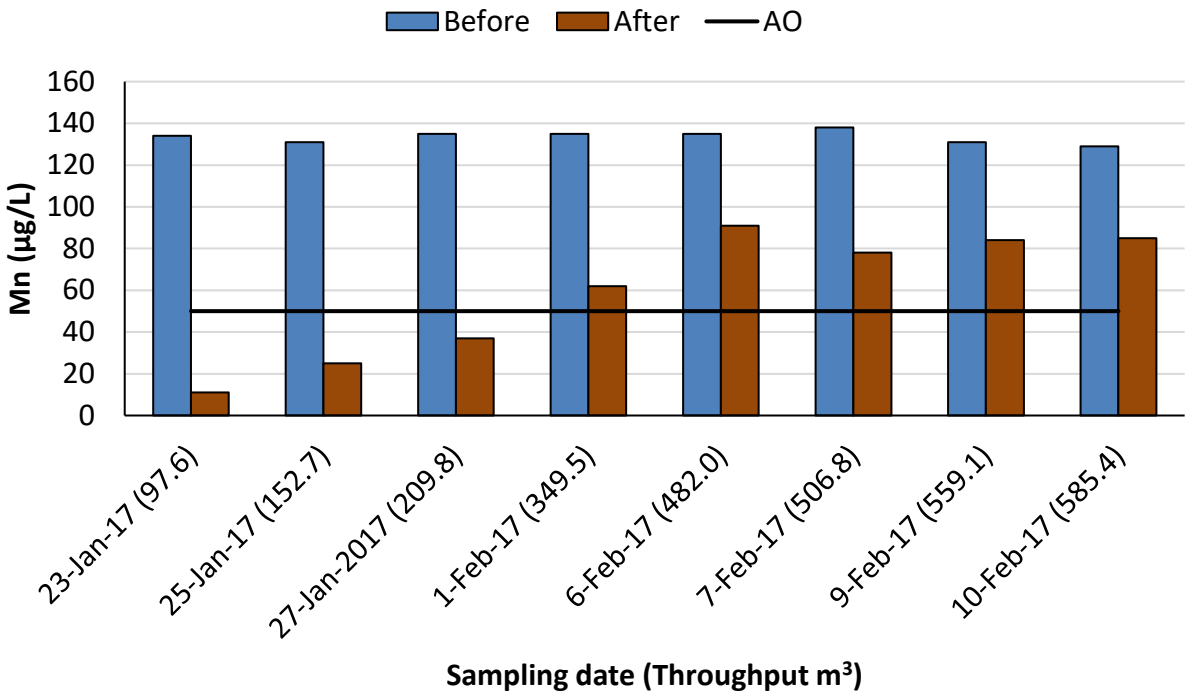


Figure 2.3 *Manganese removal through Birm filter at different sampling dates; values in the brackets represent the cumulative throughput volume of the water.*

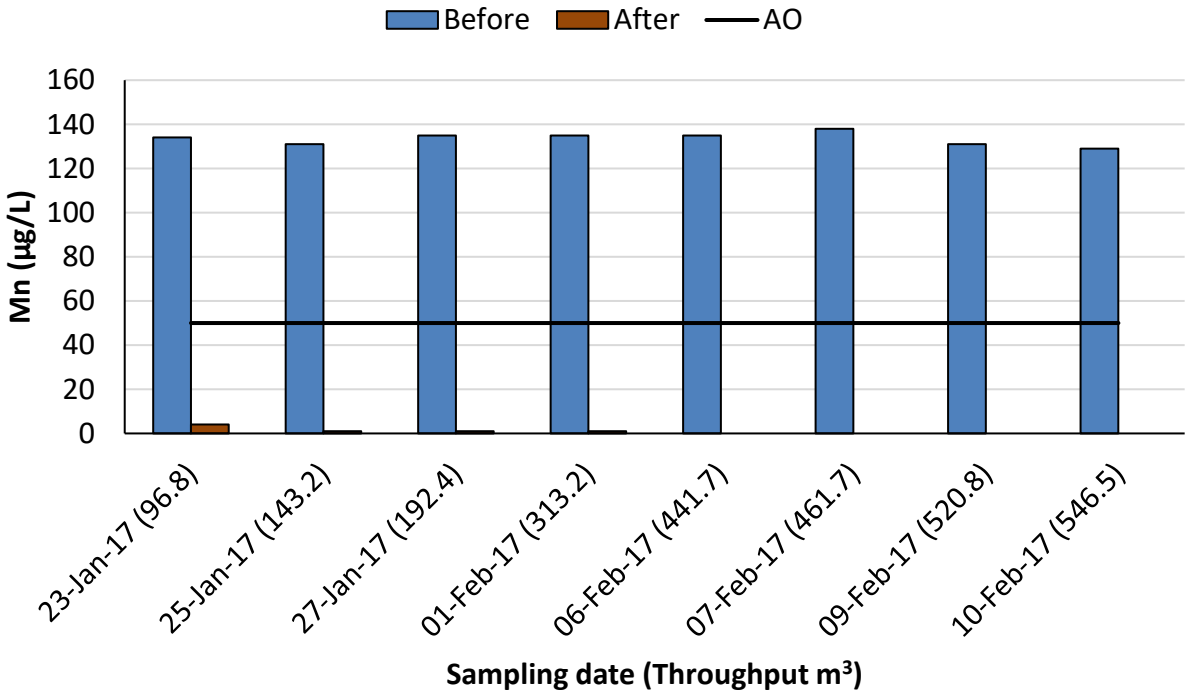


Figure 2.4 *Manganese removal through GreensandPlus filter at different sampling dates; values in the brackets represent the cumulative throughput volume of the water.*

2.2.2 Long-term efficacy evaluation-arsenic removal through E33 Bayoxide

The concentration of arsenic before and after the E33 Bayoxide adsorptive media after Birm and GreensandPlus are shown in Figures 2.5 and 2.6, respectively. It must be noted that the calculated cumulative bed volumes for these medias are based on the start date of the pilot operation (on December 16, 2016). As it is shown in Figures 2.5 and 2.6, after around 12000 cumulative bed volumes, the arsenic concentration after both adsorptive media (after Birm and after GreensandPlus) reached to 5µg/L. Although manganese concentration after Birm and before E33 Bayoxide passed the Aesthetic Objective (50µg/L) between 12000 and 16000 cumulative bed volumes, the arsenic removal efficiency of this media was similar to that after GreensdandPlus. Based on Figures 2.5 and 2.6, it can be predicted that after around 24000 cumulative bed volumes, the arsenic concentration in the E33 adsorptive media treated water will reach to around 10 µg/L (i.e., equivalent to the inlet concentration and the MAC).

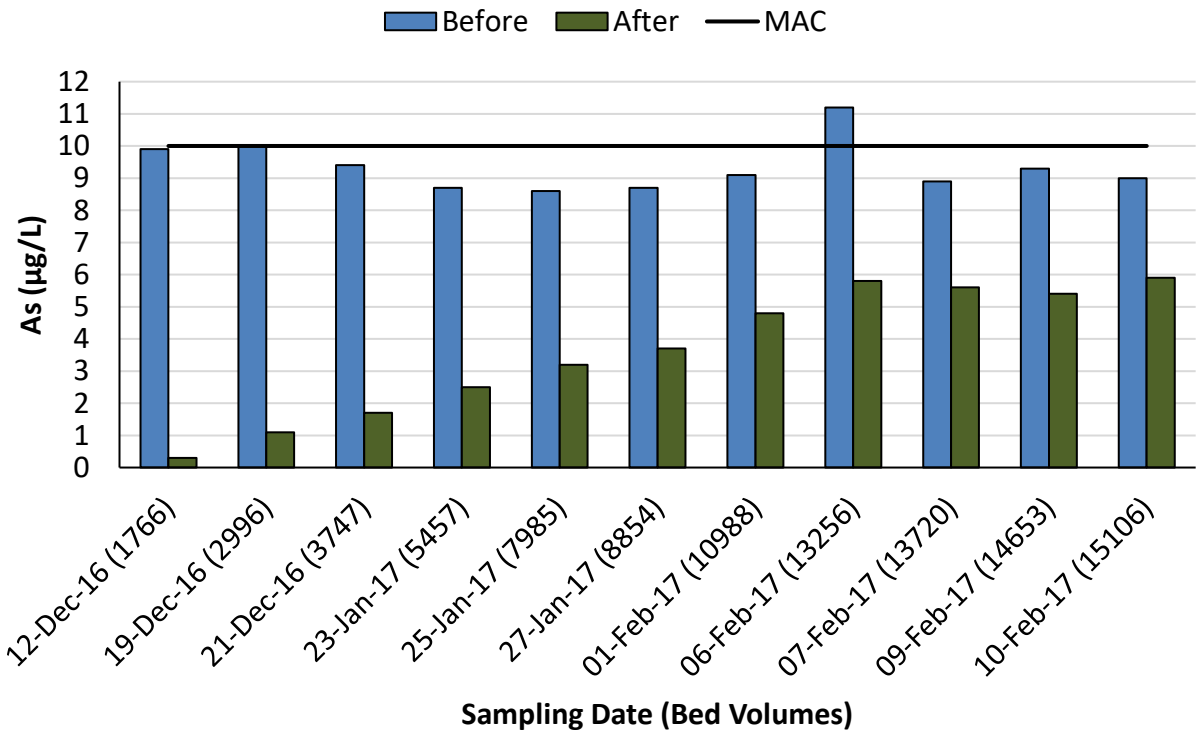


Figure 2.5 *Arsenic removal through E33 Bayoxide adsorptive media (After Birm) at different sampling dates; values in the brackets represent the Bed Volumes.*

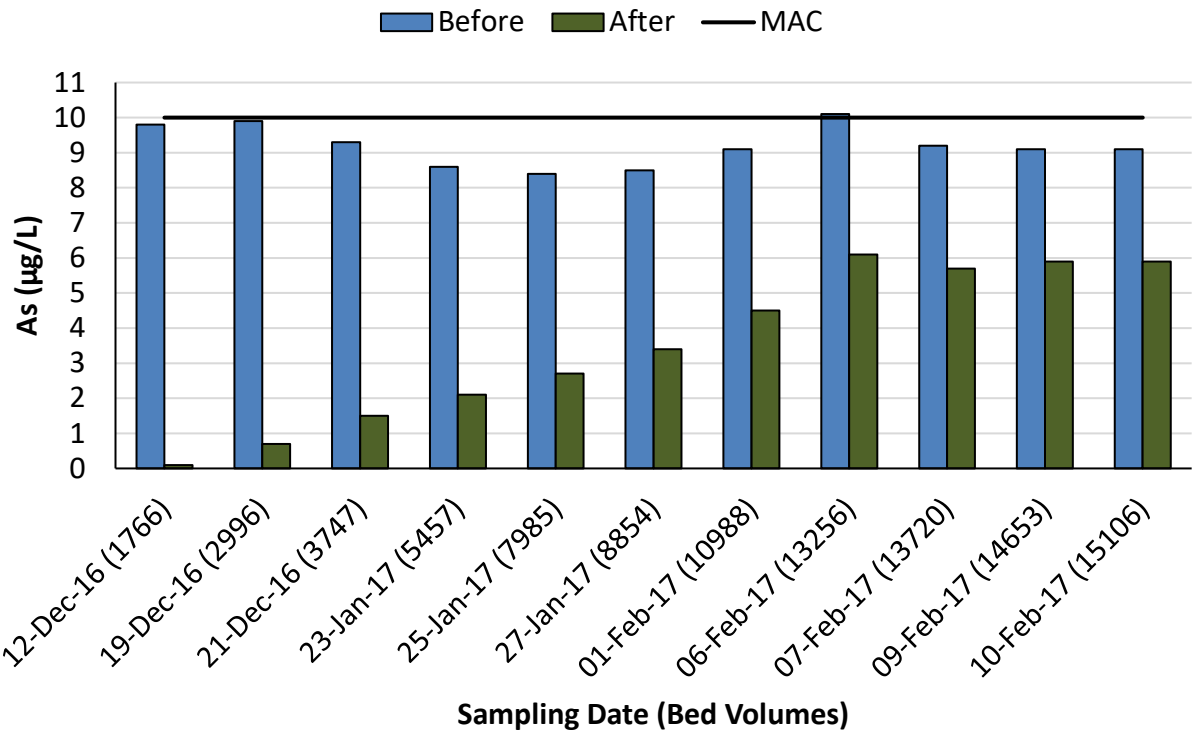


Figure 2.6 *Arsenic removal through E33 Bayoxide adsorptive media (After GreensandPlus filter) at different sampling dates; values in the brackets represent the Bed Volumes.*

2.2.3 Long-term efficacy evaluation-Manganese removal through E33 Bayoxide

Figure 2.7 shows the performance of E33 Bayoxide adsorptive media when it is introduced to high levels of manganese. As it is shown, this media is able to remove some levels of manganese, even though it is not considered for manganese removal in the industry. This feature can be considered useful because if there is any residual manganese in the water in case of breakthrough in the manganese removal filter, E33 can adsorb that along with arsenic adsorption.

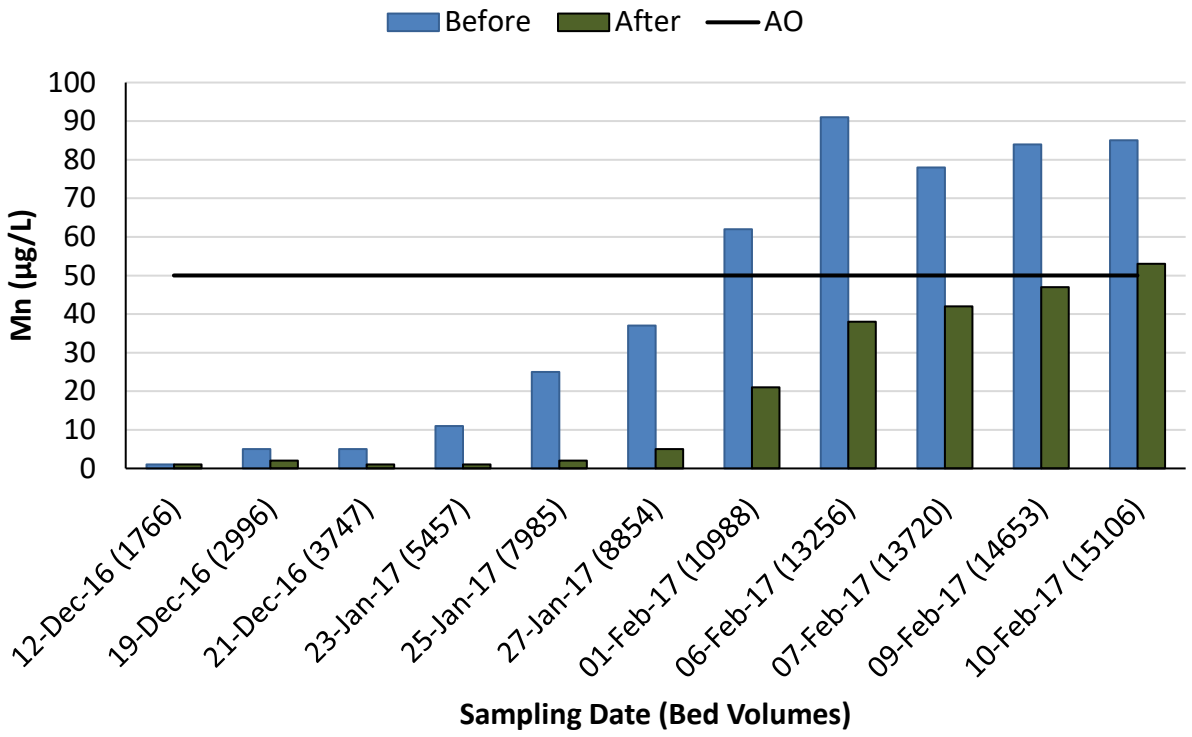
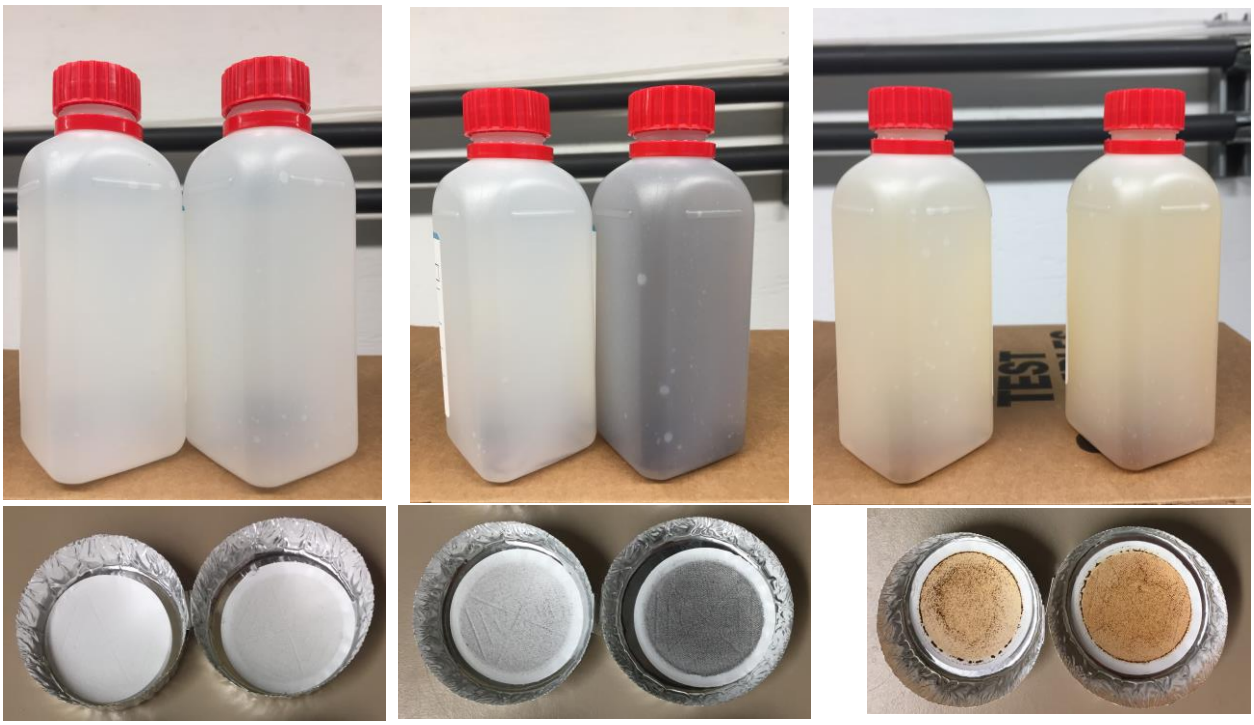


Figure 2.7 *Manganese removal through E33 Bayoxide adsorptive media (After Birm) at different sampling date; values in the brackets represent the Bed Volumes.*

2.2.4 Long-term efficacy evaluation-Backwash water quality

The total suspended solids and the manganese levels in the backwash water for January 19, 2017 and February 10, 2017 are available in Table 2.2 and Table 2.3, respectively. Comparing these results indicates that 10 minutes is not enough for the backwash and the water quality does not reach that of the feed water. In addition, for the E33 Bayoxide, backwashing did not remove the adsorbed arsenic on the media confirming the fact that these media cannot be regenerated at least through backwash cycle.



a *b* *c*

Figure 2.8 *Backwash water samples and TSS test results (Thursday January 19, 2017): a) Left: Birm-after 2min, Right: Birm-after 10min, b) Left: GreensandPlus-after 2min, Right: GreensandPlus-after 10min, c) Left: Birm-E33-after 4min Right: GreensandPlus-E33-after 4min.*

Table 2.2.1 *Analytical data for backwash water samples (Thursday January 19, 2017)*

Media	Birm				GreensandPlus				Birm-E33				GreensandPlus-E33			
Time (min)	As (mg/L)	Mn (mg/L)	Fe (mg/L)	TSS (mg/L)	As (mg/L)	Mn (mg/L)	Fe (mg/L)	TSS(mg/L)	As (mg/L)	Mn (mg/L)	Fe (mg/L)	TSS (mg/L)	As (mg/L)	Mn (mg/L)	Fe (mg/L)	TSS (mg/L)
2	0.01	0.04	0.02	0	0.01	2.06	0.09	5.5	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-		0.01	0.2	31.3	127.1	0.01	0.3	51.9	108.0
10	0.01	1.75	0.22	10	0.01	10.6	0.56	29.0	-	-	-	-	-	-	-	-
Guideline*	**1**	**5**	**10**	**600**	**1**	**5**	**10**	**600**	**1**	**5**	**10**	**600**	**1**	**5**	**10**	**600**

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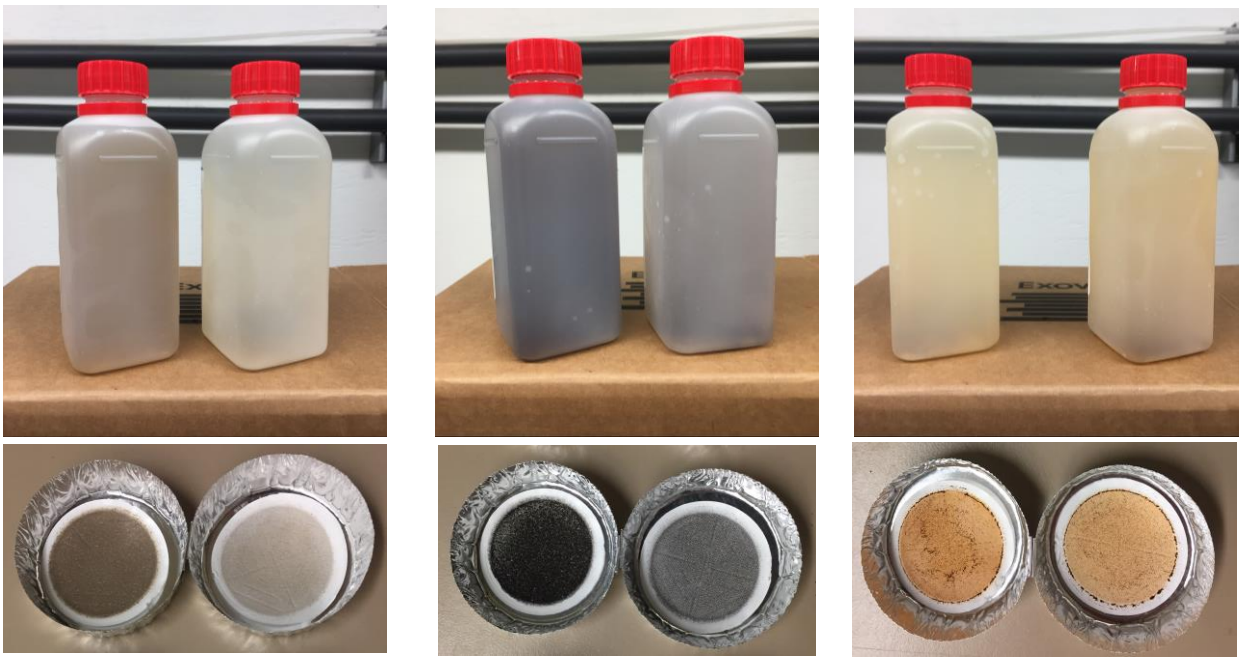

a *b* *c*

Figure 2.9 *Backwash water samples and TSS test results (Friday February 10th 2017): a) Left: Birm-after 5min, Right: Birm-after 10min, b) Left: GreensandPlus-after 5min, Right: GreensandPlus-after 10min, c) Left: Birm-E33-after 4min Right: GreensandPlus-E33-after 4min.*

Table 2.2.2 *Analytical data for backwash water samples (Friday February 10, 2017)*

Media	Birm				GreensandPlus				Birm-E33				GreensandPlus-E33			
Time (min)	As (mg/L)	Mn (mg/L)	Fe (mg/L)	TSS (mg/L)	As (mg/L)	Mn (mg/L)	Fe (mg/L)	TSS(mg/L)	As (mg/L)	Mn (mg/L)	Fe (mg/L)	TSS (mg/L)	As (mg/L)	Mn (mg/L)	Fe (mg/L)	TSS (mg/L)
4	-	-	-	-	-	-	-	-	0.01	0.35	3.62	63.0	0.01	0.1	5.96	85.0
5	0.01	3.02	2.1	73.0	0.01	5.43	0.17	57.0	-	-	-	-	-	-	-	-
10	0.01	0.92	0.46	22.0	0.01	2.1	0.08	20.0	-	-	-	-	-	-	-	-
Guideline*	**1**	**5**	**10**	**600**	**1**	**5**	**10**	**600**	**1**	**5**	**10**	**600**	**1**	**5**	**10**	**600**

**Greater Vancouver sewerage and drainage district sewer use bylaw no. 299, 2007*

2.3 High filtration rate-GreensandPlus filter

The experiments conducted during the month of February 2017 showed that GreensandPlus provided better manganese removal efficiency than Birm did. So, it was decided to further evaluate the performance of GreensandPlus at higher flowrates. The experimental procedure and the results of this set of experiments are presented in this section.

The system was started to operate on Monday February 20, 2017. In order to provide the maximum possible flowrate through the GreensandPlus filter, the inlet valve for the second train (i.e., Birm filter) was closed and the water was directed into the GreensandPlus filter line. The pressure values before and after the filter were recorded and used to evaluate the pressure differential change in the system during the operation. A total of eight water samples were collected before and after the filter on different days between February 21 and March 3, 2017. The flow rate was adjusted to around 35 L/min (20 m/h filtration rate) and the free chlorine concentration after filter was monitored to be between 0.5 to 1 mg/L.

At the end of the experiment on March 3, 2017, the system was backwashed and the backwash samples were collected at different times for detailed analyses. The flowrate for the backwash was adjusted between 44 and 48 L/min to ensure the suspension of the bed could happen inside the filter. The chlorine dosing pump was stopped and feed water was used for the backwash.

2.3.1 High filtration rate-GreensandPlus filter-Long term evaluation

The pressure drop and the flowrate in the GreensandPlus filter line are presented in Figures 2.10 and 2.11, respectively. The pressure differential increased by about 6psi psi during the experiment (Figure 2.10), while the flowrate decreased by around 10 LPM in the same period of time (Figure 2.11). This means that the pressure build up in the filter would affect the adjusted flowrate for the filter when it is running at high flow rates.

The manganese concentration in the outlet of GreensandPlus filter was consistently below 1 µg/L throughout the operation, up to around 415 m^3 cumulative volumes (Figure 2.12). This means that the GreensandPlus filter performs efficiently even at high flowrates (i.e., up to 20 m/h bed velocity). In other words, decreasing the retention time in the filter would not affect the efficiency of the filter for the removal of manganese.

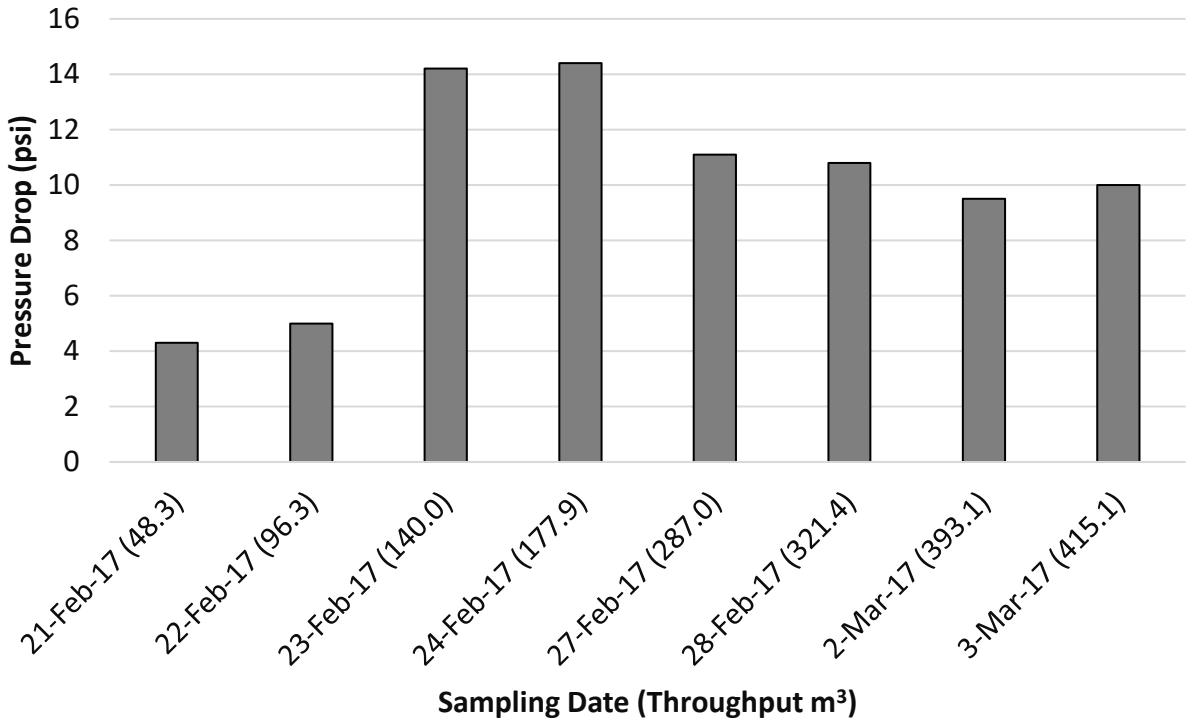

Figure 2.10 *Pressure drop across the GreensandPlus filter at different sampling dates; values in the brackets represent the cumulative throughput volume of the water.*

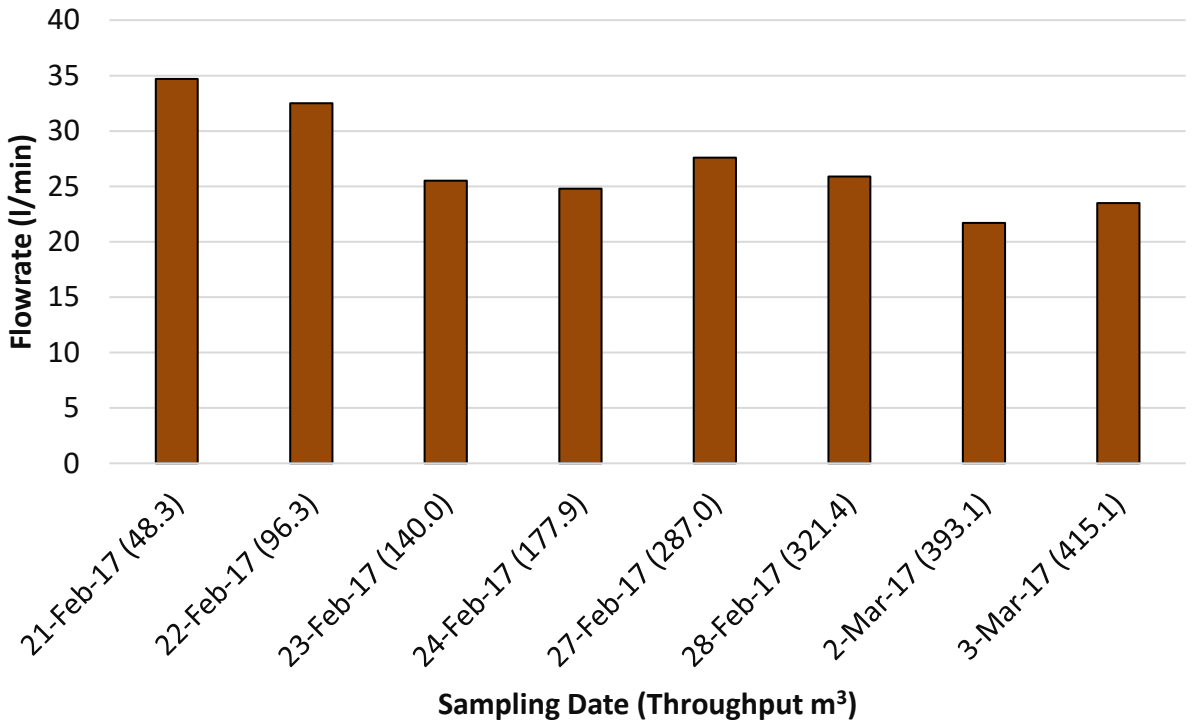

Figure 2.11 *Flow rate in GreensandPlus filter at different sampling dates; values in the brackets represent the cumulative throughput volume of the water.*

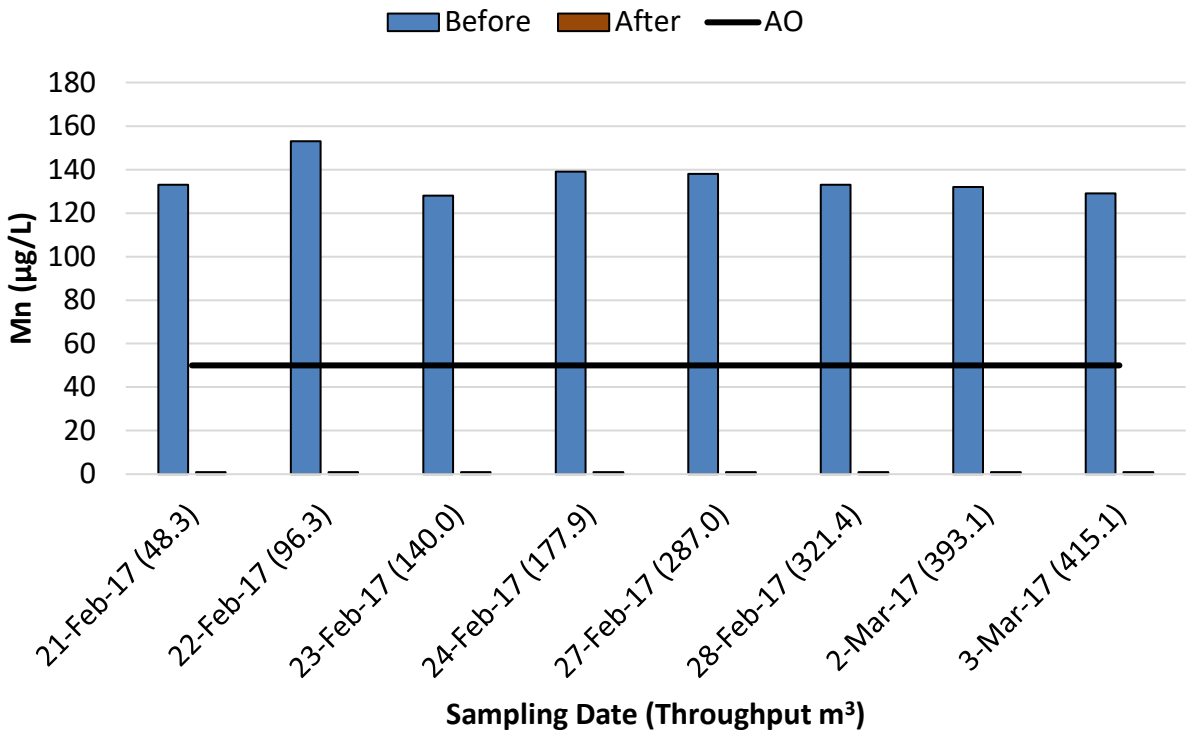

Figure 2.12 *Manganese removal through GreensandPlus filter at high flowrate at different sampling dates; values in the brackets represent the cumulative throughput volume of the water.*

2.3.2 High filtration rate-Back wash water quality

The total suspended solids and the manganese levels in the backwash water are shown in Figures 2.14 and 2.15, respectively (January and February data are included). For the January 19, 2017, backwash water, the samples were collected after 2min and 10min. Comparing these two samples showed an increase in both TSS and manganese levels; however, for the February 10, 2017, backwash water, the water sample taken after 5min did not follow the same trend. It was higher in both TSS and manganese level than 10-min sample. The results of March 3, 2017, backwash water showed the same trend as February 10, 2017, data. Based on the results, it can be concluded that the peak value for manganese and TSS concentrations in the GreensandPlus backwash water happens within 10-15 minutes from the start of the process and after around 25 to 30 minutes, the backwash water quality reaches that of the feed water.

5min *10min* *15min* *20min* *25min* *30min*

Figure 2.13 *Backwash water samples and Total Suspended Solids test results at different times.*

Table 2.3.1 *Analytical data for backwash water samples.*

Time (min)	Free Chlorine (mg/L)	Total Chlorine (mg/L)	As (mg/L)	Mn (mg/L)	Fe (mg/L)	TSS (mg/L)
0 (Raw water)	0	0	0.0093	0.129	0.004	0
5	>2.2	>2.2	0.0168	22.5	2.1	48
10	>2.2	>2.2	0.0110	6.83	0.548	13
15	1.43	>2.2	0.0093	3.08	0.263	4
20	1.14	1.76	0.0094	2.64	0.191	3
25	0.78	1.24	0.0091	1.40	0.104	1
30	0.77	1.42	0.0090	1.56	0.103	2
Average	-	-	0.011	6.22	0.48	12
Guideline*	-	-	**1**	**5**	**10**	**600**

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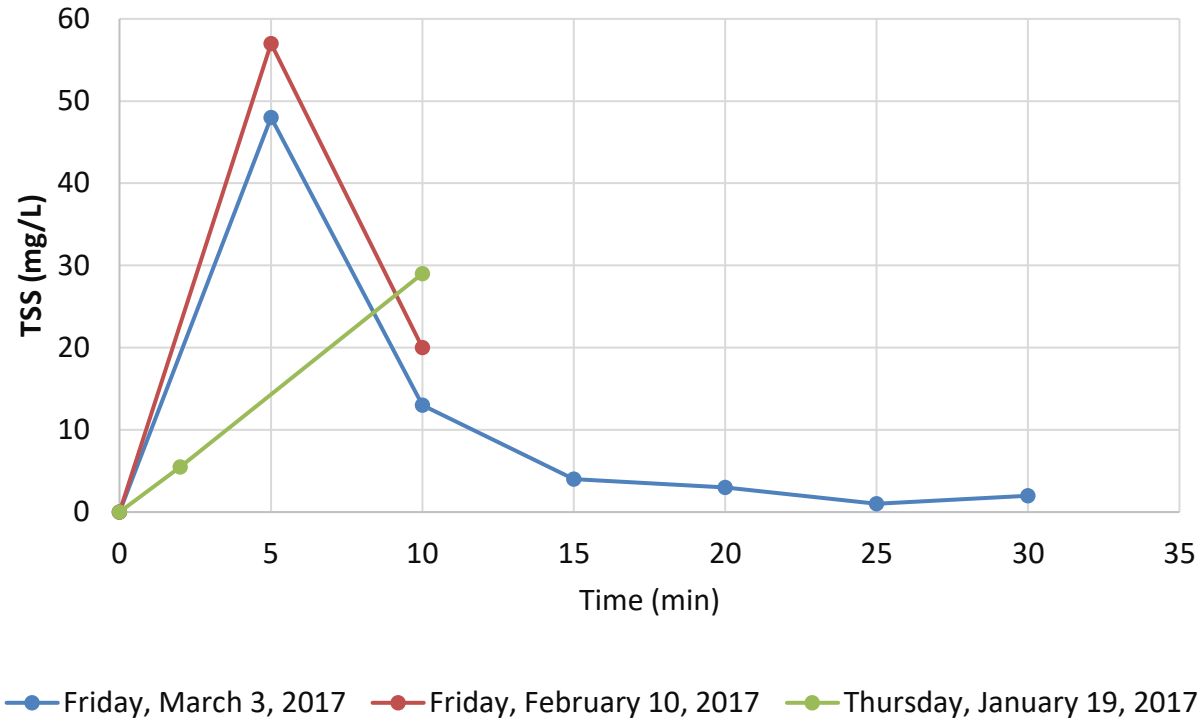

Figure 2.14 *Total suspended solids in backwash water versus time.*

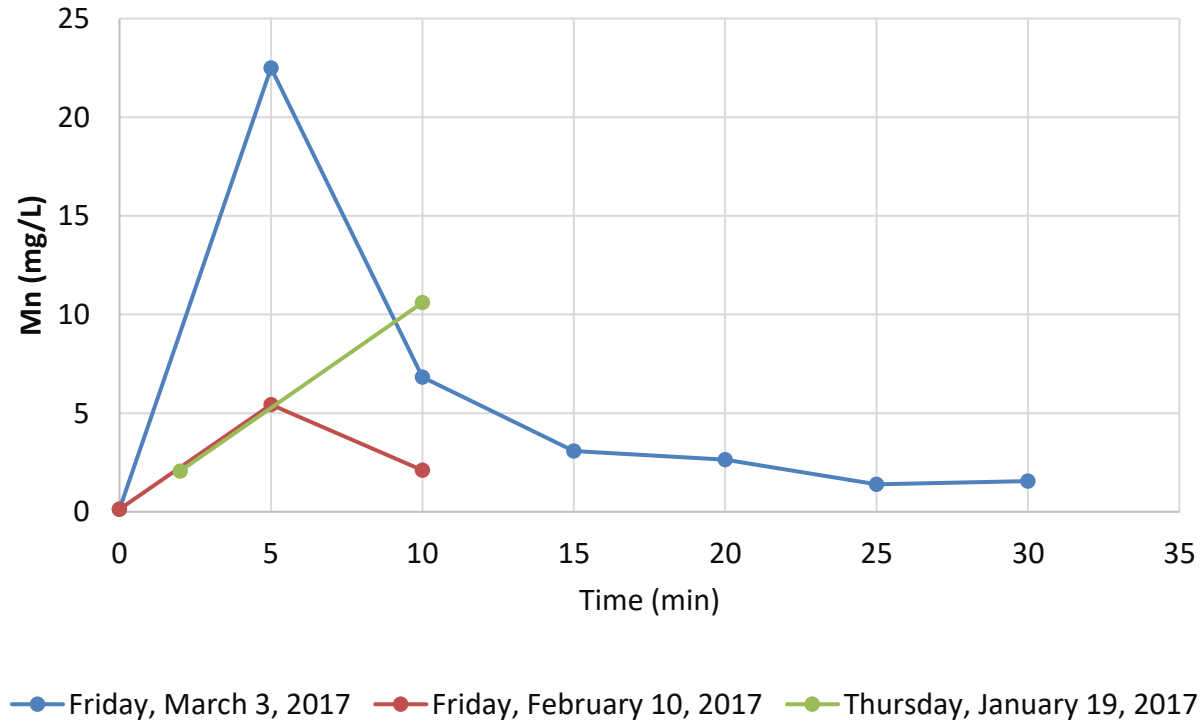

Figure 2.15 *Manganese concentrations in backwash water versus time.*

2.4 Ozone oxidation

Results of the experiments, conducted in February and March 2017, showed that adding sodium hypochlorite as an oxidant followed by GreensandPlus filter would effectively remove manganese from water; however, this combination did not have a significant impact on the arsenic concentration. Considering the fact that ozone is a stronger oxidant, it was evaluated to investigate its efficacy at converting As (III) to As (V), and thereby removing arsenic in the GreensandPlus filter. The experimental procedure and the results of this set of experiments are presented in this section.

The system was started on Thursday March 30, 2017. During the first three days, March 30-April 1, 2017, different system configurations were tested to establish reliable experimental conditions and stable injection of ozone to the system. Upon reaching stable ozone injection and concentration in the water, the filter was backwashed on Thursday April 6, 2017. The main experiment started on April 7, 2017. Two ozone concentrations, 0.5mg/L and 1mg/L, were applied over the course the experiment to assess their impacts on both manganese and arsenic removal through the GreensandPlus filter. The pressure differential across the filter was measured right before and after the filter by reading the corresponding pressure monitors. A total of thirty water samples were collected before and after the filter on different days between March 30 and April 27, 2017. To compare ozone injection result with that of chlorine injection, the system flow rate was adjusted to 18 L/min over the course of experiment.

At the end of the experiment on April 27, 2017, the system was backwashed and the backwash samples were collected at different times for detailed analyses. The flowrate was set between 44 and 48 L/min and the source water was used for the backwash.

2.4.1 Ozone oxidation- arsenic speciation

To evaluate the effect of ozone on oxidation of arsenic, samples were collected before and after ozone injection on different days. The results are shown in Figure 2.16. For well #6, arsenite As(III) was oxidized completely to arsenate As(V) using 0.5mg/L of ozone. In addition, increasing the concentration to 1mg/L did not have any significant impact on the conversion of As(III) to As(V) for this well. More tests for Well #7 which has more As(III) concentration is in progress.

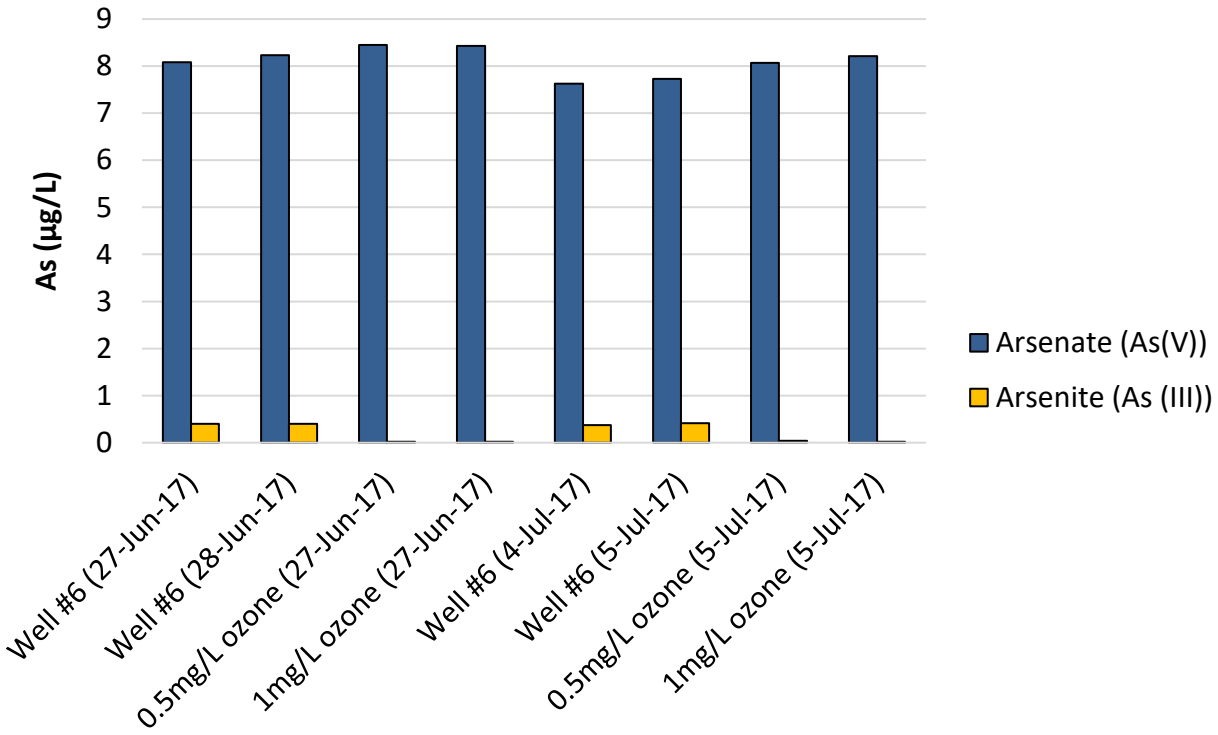

Figure 2.16 *Oxidation of As (III) to As (V) by ozone.*

2.4.2 Ozone oxidation - long-term evaluation

The pressure drop data in the GreensandPlus filter are presented in Figure 2.17. As this graph shows, the pressure differential across the filter increased by about 4.2 psi over the course of the experiment. It started from 2.8 psi considered as the clean bed head loss and reached 7 psi after treating 67.1m^3 cumulative volume of water.

The concentration of manganese in the outlet of the GreensandPlus filter was consistently below 5µg/L throughout the operation (Figure 2.18); however, arsenic concentration did not change significantly after filtration (Figure 2.19), indicating that application of ozone up to 1mg/L did not have any impact on the removal of arsenic in the GreensandPlus filter.

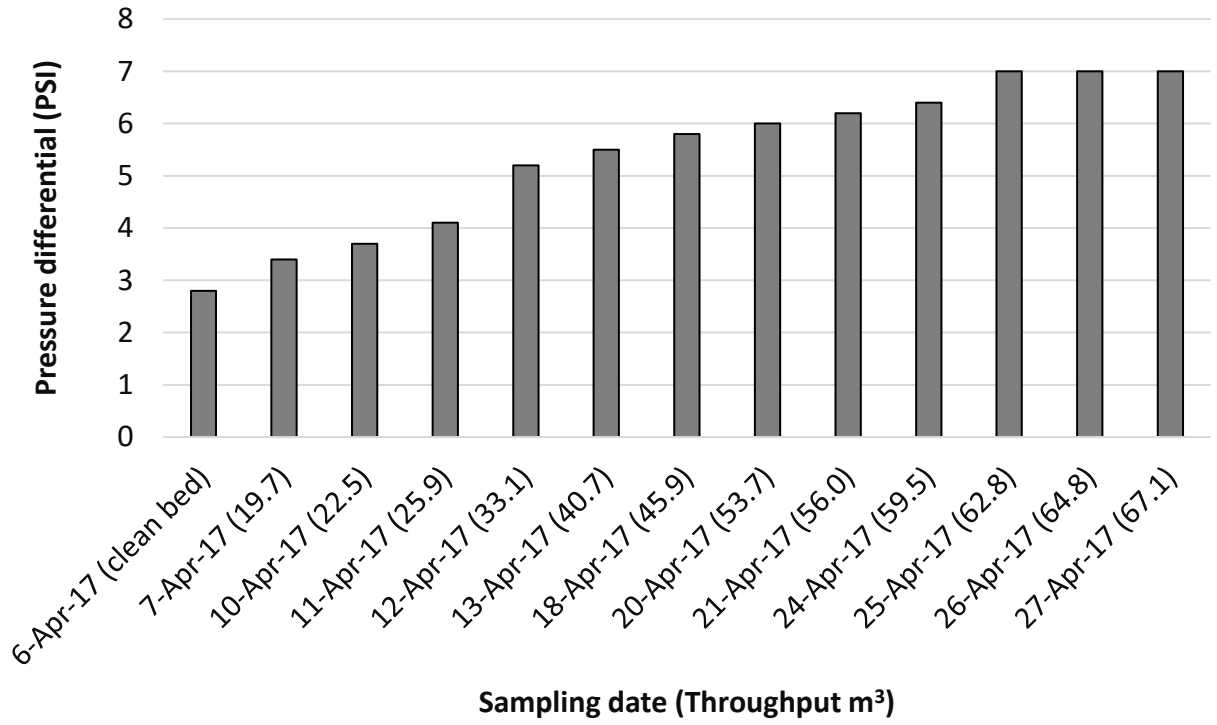

Figure 2.17 *Pressure drop across the GreensandPlus filter at different sampling dates; values in the brackets represent the cumulative throughput volume of the water.*

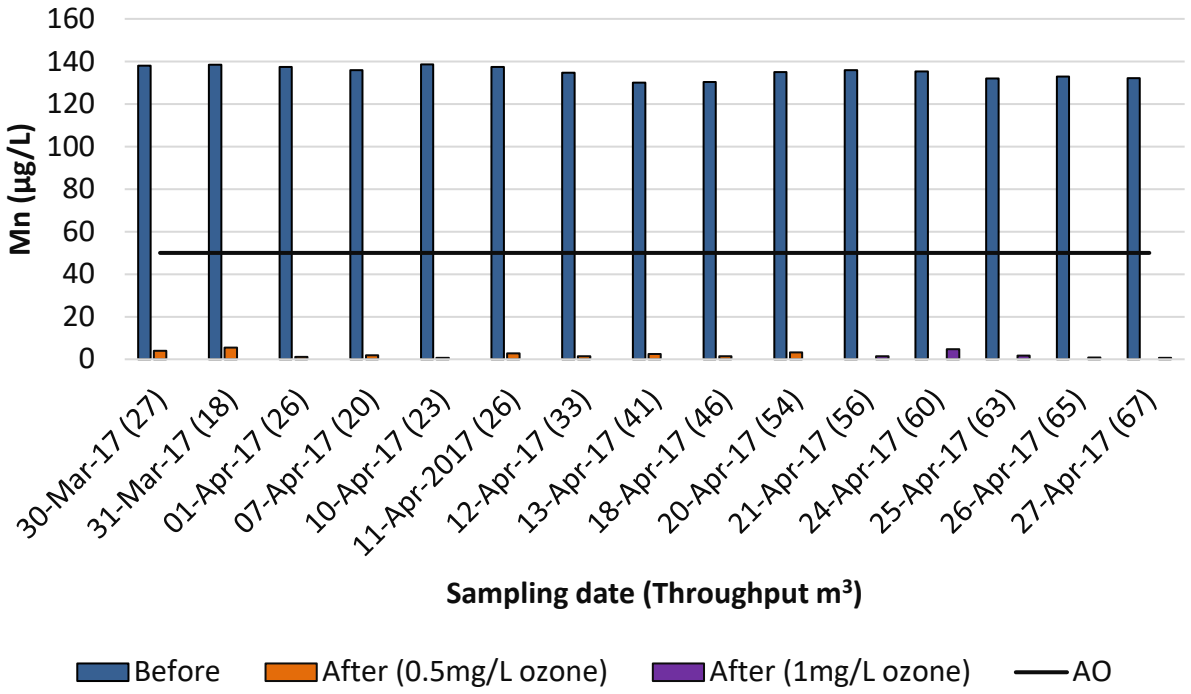

Figure 2.18 *Manganese concentrations before and after GreensandPlus at different sampling dates; values in the brackets represent the cumulative throughput volume of the water.*

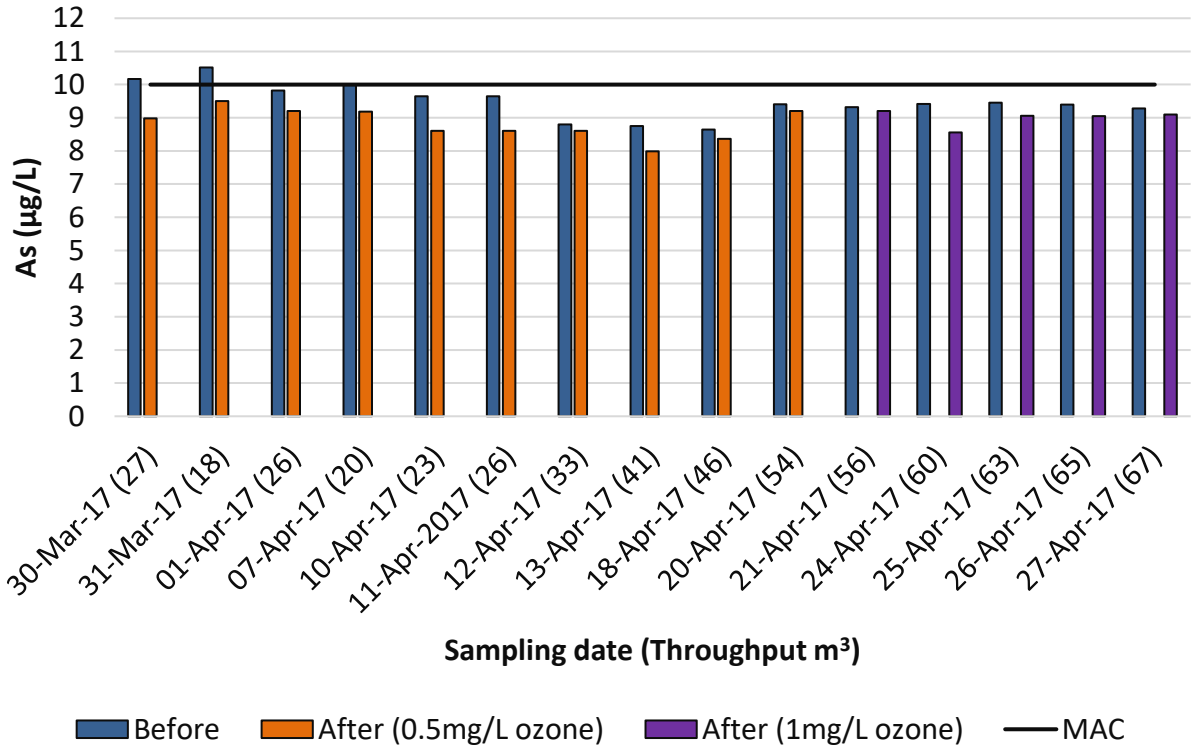

Figure 2.19 *Arsenic concentrations before and after GreensandPlus at different sampling dates; values in the brackets represent the cumulative throughput volume of the water.*

2.4.3 Ozone oxidation-Backwash water quality

The total suspended solids and the manganese levels in the backwash water are shown in Figures 2.21 and 2.22, respectively. As it can be seen in both figures, 30min backwash period was not enough to bring the water quality back to that of the feed water. In addition, the average manganese level in the backwash water was 17.23 mg/L (Table 2.5) which is above the standard level. This means that the filter is holding more of the precipitants during the operation.

Start 3min 5min 8min 10min 15min 20min 25min 30min

Figure 2.20 *Backwash water samples and Total Suspended Solids test results at different times, after ozonation study.*

Table 2.4.1 *Analytical data for backwash water samples, after ozonation study.*

Time (min)	As (mg/L)	Mn (mg/L)	Fe (mg/L)	TSS (mg/L)
0	0.13	53	3.3	12
3	0.055	29	1.2	59
5	0.059	30	1.3	60
8	0.049	27	1.1	55
10	0.0450	24	0.97	44
15	0.026	12	0.48	23
20	0.019	7.3	0.31	8
25	0.018	6.20	0.27	9
30	0.0150	4.4	0.18	6
Average	0.04	17.23	0.77	27.40
Guideline*	**1**	**5**	**10**	**600**

**Greater Vancouver sewerage and drainage district sewer use bylaw no. 299, 2007*

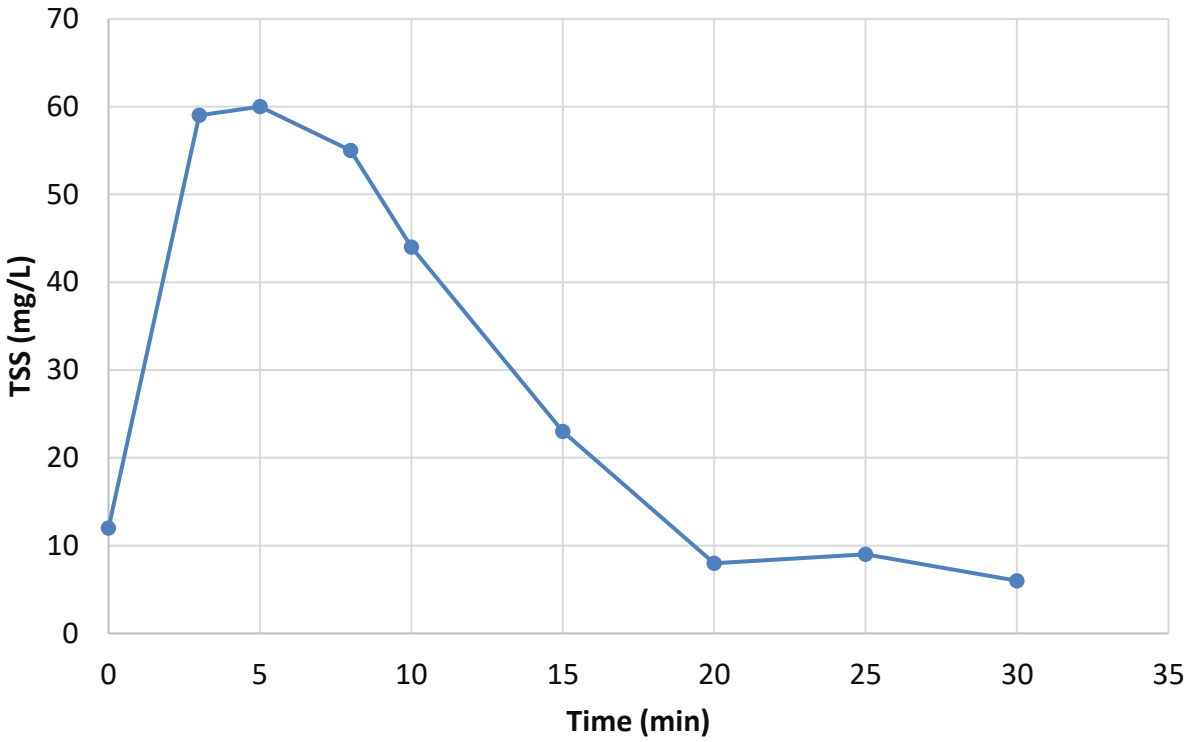

Figure 2.21 *Total suspended solids in the backwash water versus time, after ozonation study.*

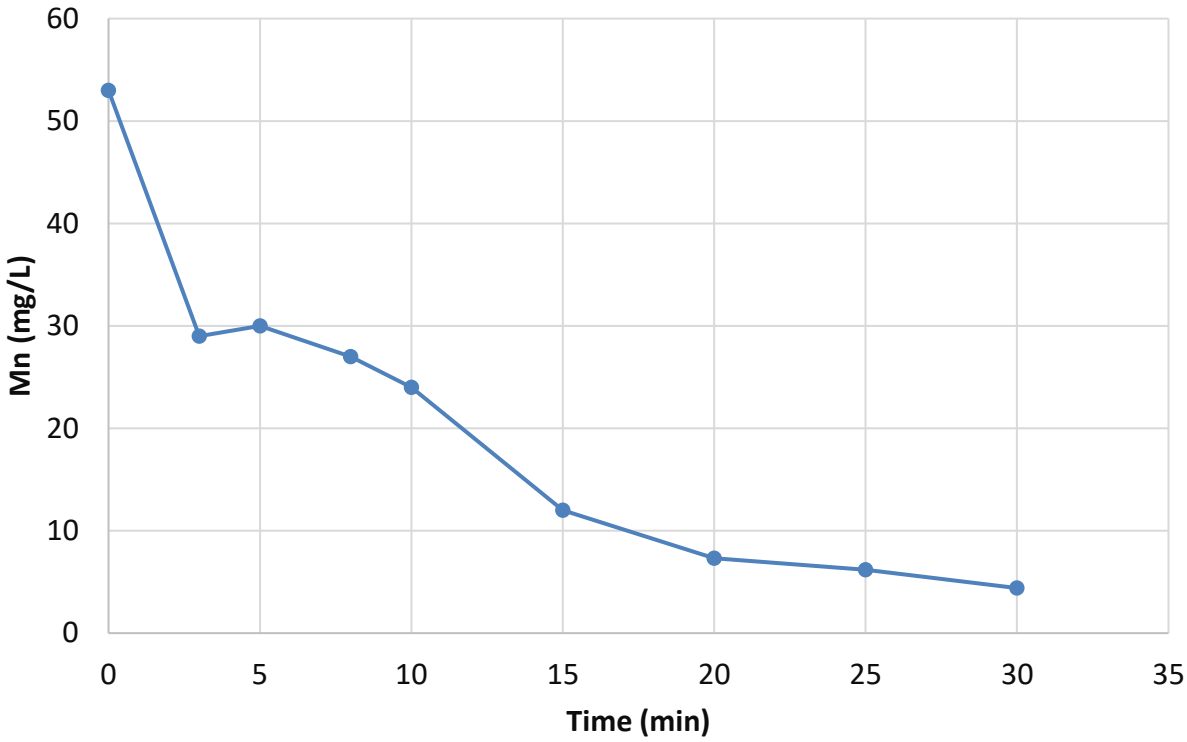

Figure 2.22 *Manganese concentrations in the backwash water versus time, after ozonation study.*

2.5 Iron injection

The results of the experiments, conducted in December 2016 to March 2017, showed that GreensandPlus filter effectively removes manganese from water; however, it does not have a significant impact on the arsenic concentration. From previous studies in the field, it is known that the coagulation process using iron could potentially improve the arsenic removal in the GreensandPlus filter. Therefore, it was decided to investigate the efficacy of the ferric chloride injection at removing arsenic in the GreensandPlus filter. The experimental procedure and the results of this set of experiments are presented in this part.

The filter configuration was changed on Monday May 8, 2017. The height of the GreensandPlus media was decreased to 20 inches. Around 12inches of the anthracite was added on top of the filter. Two different stock solution of ferric chloride, 1000ppm and 10000ppm, were prepared in the lab by dissolving ferric chloride hexahydrate in DI water. By using these stock solutions and changing the flow rate of the dosing pump, ferric chloride was injected at different concentrations before the filter.

Preliminary tests were conducted on Monday May 10, 2017, and on three different days the week after, May 16-18, 2017, to determine the concentration of iron that could potentially provide maximum arsenic removal from water. For each injection, the pumping rate was adjusted and after running the filter for around 45 minutes, two samples, one before and one after the filter, were collected. Manganese, arsenic and iron concentrations of each sample were tested in the lab. After evaluating these preliminary results, 1ppm of iron was selected for continuous injection and further testing.

Prior to conducting the experiment with 1ppm iron, the filter was backwashed on Wednesday May 31, 2017. Continuous experiment was then started and samples were collected between Thursday June 1 and Saturday June 3, 2017. The pressure differential across the filter was measured before and after the filter by reading the corresponding pressure gages. The system flow rate was set to 18 L/min and the chlorine concentration after the filter was adjusted to 0.5 to 1 mg/L free chlorine.

At the end of the experiment on Saturday June 3, 2017, the system was backwashed and the backwash water samples were collected at different times for detailed analyses.

The Jar test was performed in the pilot to evaluate the effect of flocculation on the removal of arsenic in the presence of manganese in water. The water sample with a volume of 500mL was collected after the iron injection point in the pipeline. It was mixed at lowest possible mixing rate of the stirrer (60 rpm). After different mixing time, 5min, 10min and 20min, 50mL of the sample was filtered through the 0.45µm filter. The experiment was repeated three times and the samples were analyzed for manganese, arsenic and iron concentration.

2.5.1 Iron injection-Preliminary test

The iron, manganese and arsenic concentrations before and after the filter for each injection experiment are presented in Figures 2.23, 2.24 and 2.25, respectively. The main purpose of the iron injection was to evaluate its impact on the removal of arsenic; however, the concentration of iron was also tested after the filter to ensure it did not go beyond the iron MAC level (300ppb). As Figure 2.23 shows, the iron level in the effluent was always below 50ppb, even when 3ppm of iron was injected before the filter. In addition, the manganese removal performance of the filter did not change with this level of iron injected (Figure 2.24). Arsenic removal efficiency of the filter was also evaluated for each injection (Figure 2.25). As it is shown, increasing the concentration of iron to more than 1ppm did not have any impact on the arsenic removal (Figure 2.26). Hence, it was determined that 1ppm of iron would be sufficient to remove 7.5 ppb of arsenic.

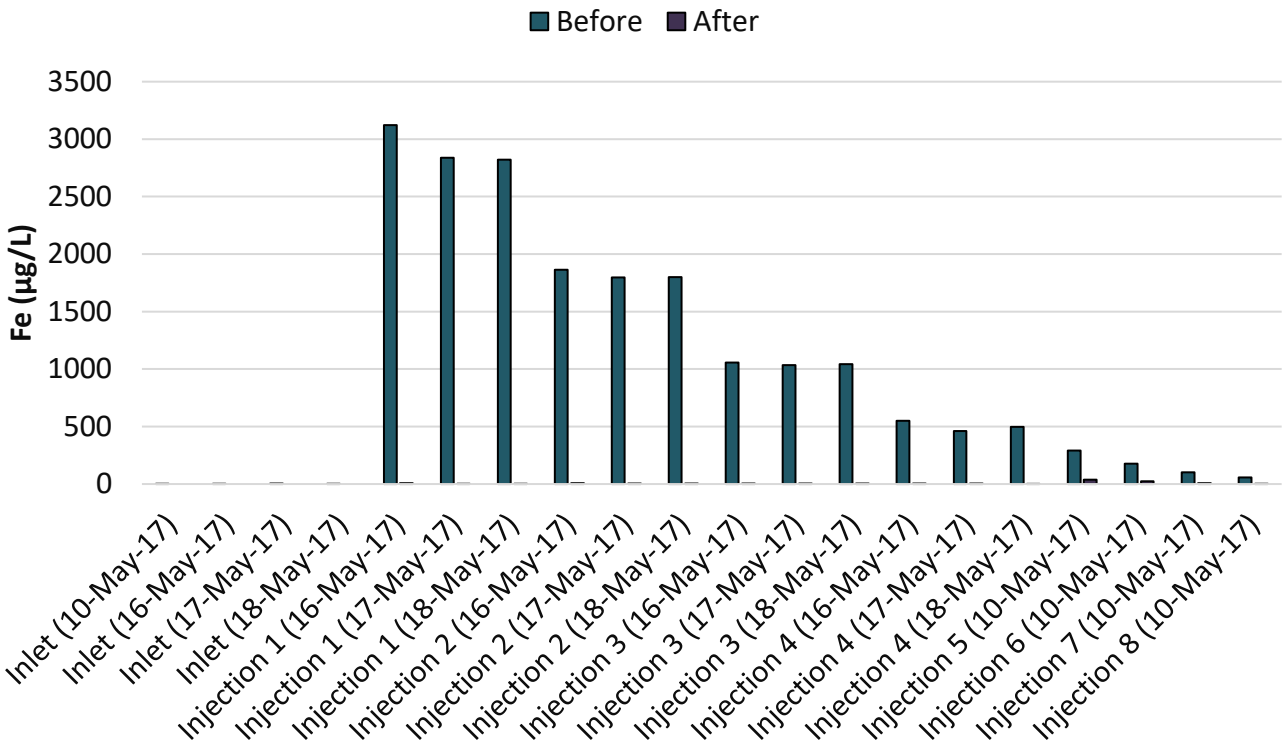

Figure 2.23 *Iron concentration before and after the filter at different injections and dates.*

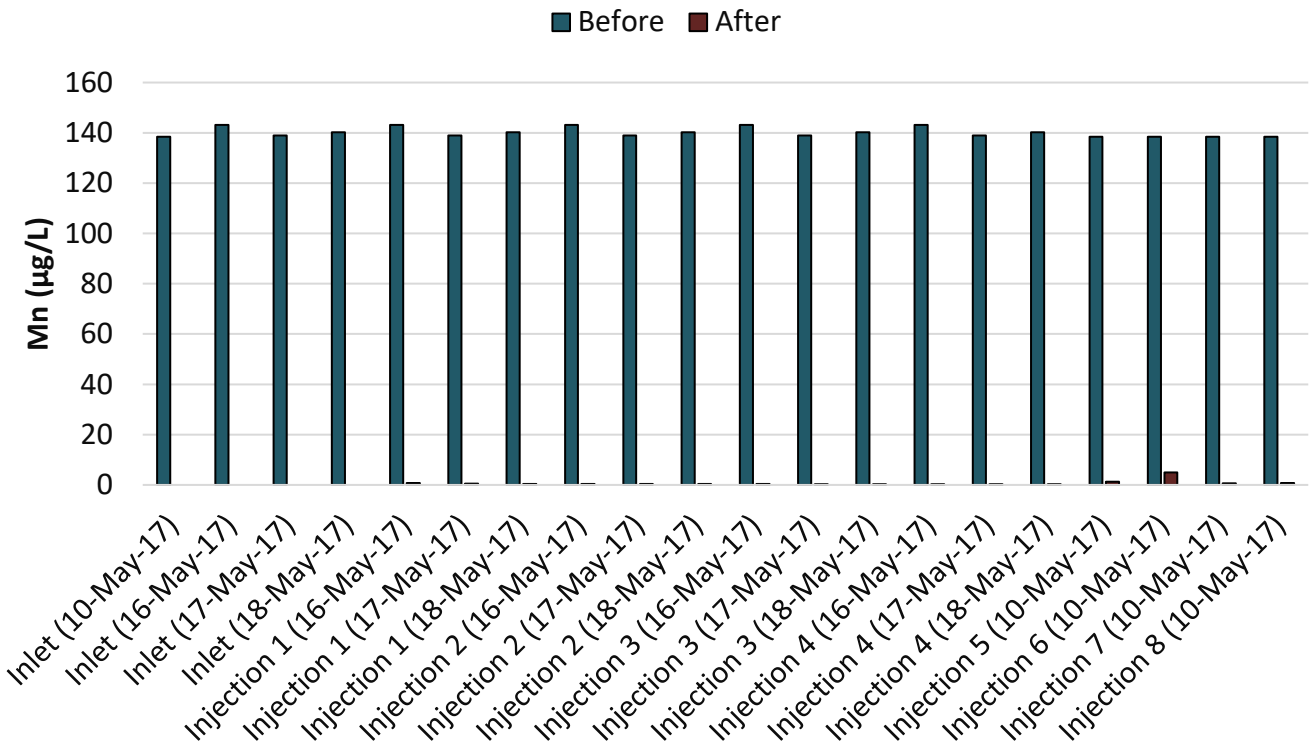

Figure 2.24 *Manganese concentration before and after the filter at different injections and dates.*

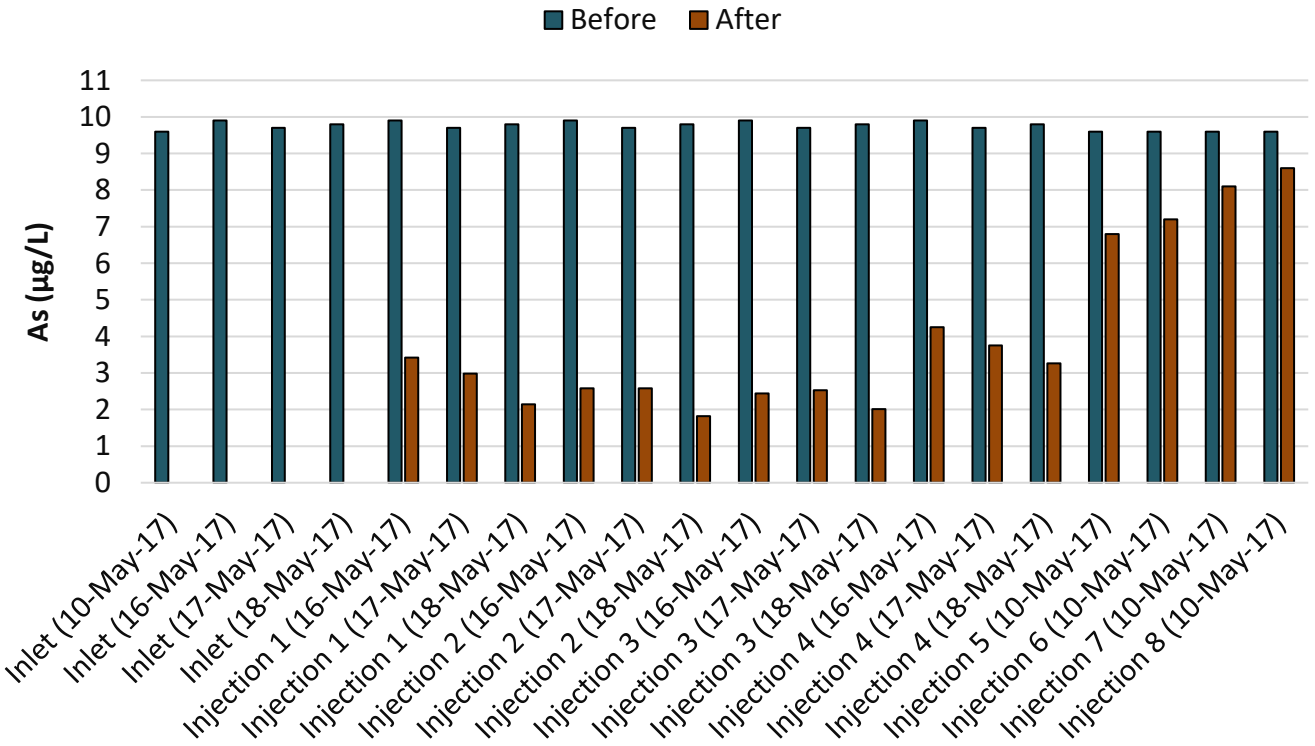

Figure 2.25 *Arsenic concentration before and after the filter at different injections and dates.*

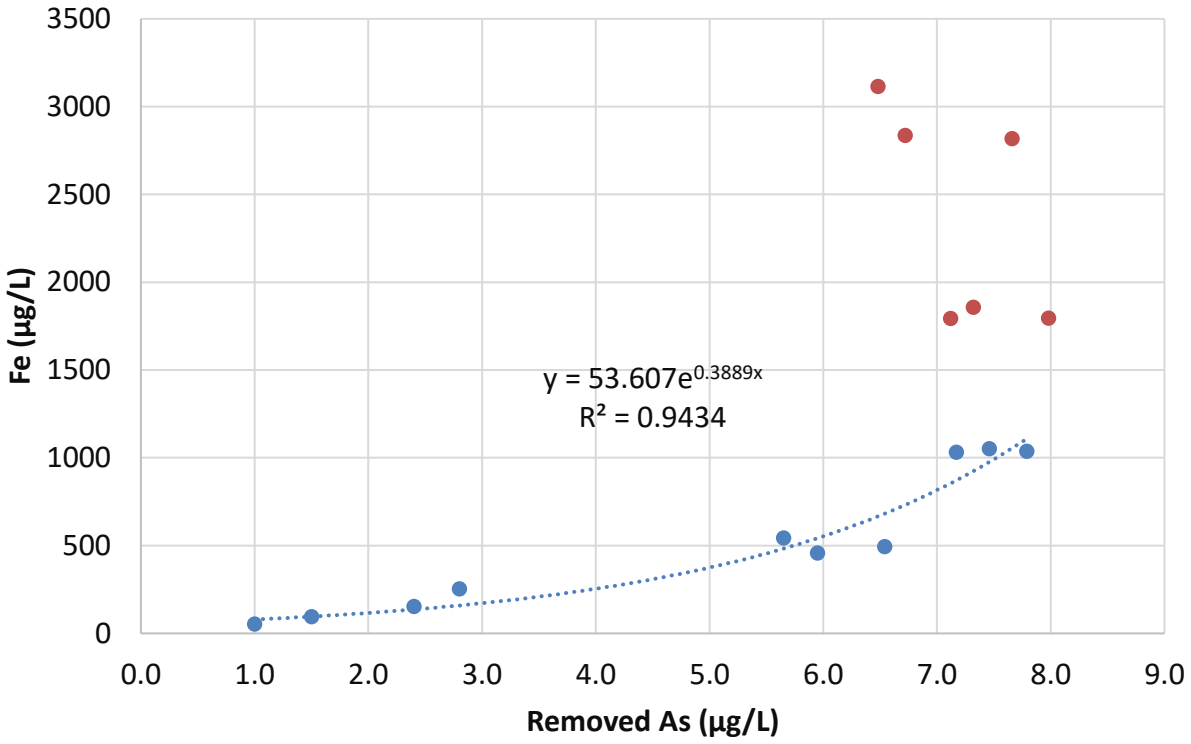

Figure 2.26 *Experimental data obtained on the required iron concentration for the removal of arsenic.*

2.5.2 Iron injection - Continuous injection of 1ppm iron

The pressure drop data in the GreensandPlus filter during continuous injection of iron is presented in Figure 2.27. The pressure differential across the filter increased by about 6psi over the course of the experiment (i.e., over three days). It started from 2.4psi, considered as the clean bed headloss, and reached 7.9psi after treating 71.7m^3 cumulative volume of water.

The concentration of manganese in the outlet of the GreensandPlus filter was consistently below 5µg/L throughout the operation (Figure 2.28); however, outlet concentration of arsenic increased from 4.4µg/L to 7.2µg/L (Figure 2.29). In addition, iron concentration in the effluent increased from 61µg/L to 524µg/L (Figure 2.30). Comparing the results to that of the preliminary test, it was concluded that at constant injection of iron, the performance of the filter in terms of removing arsenic decreased. In addition, accumulation of iron inside the filter did not enhance the arsenic removal efficiency of the filter.

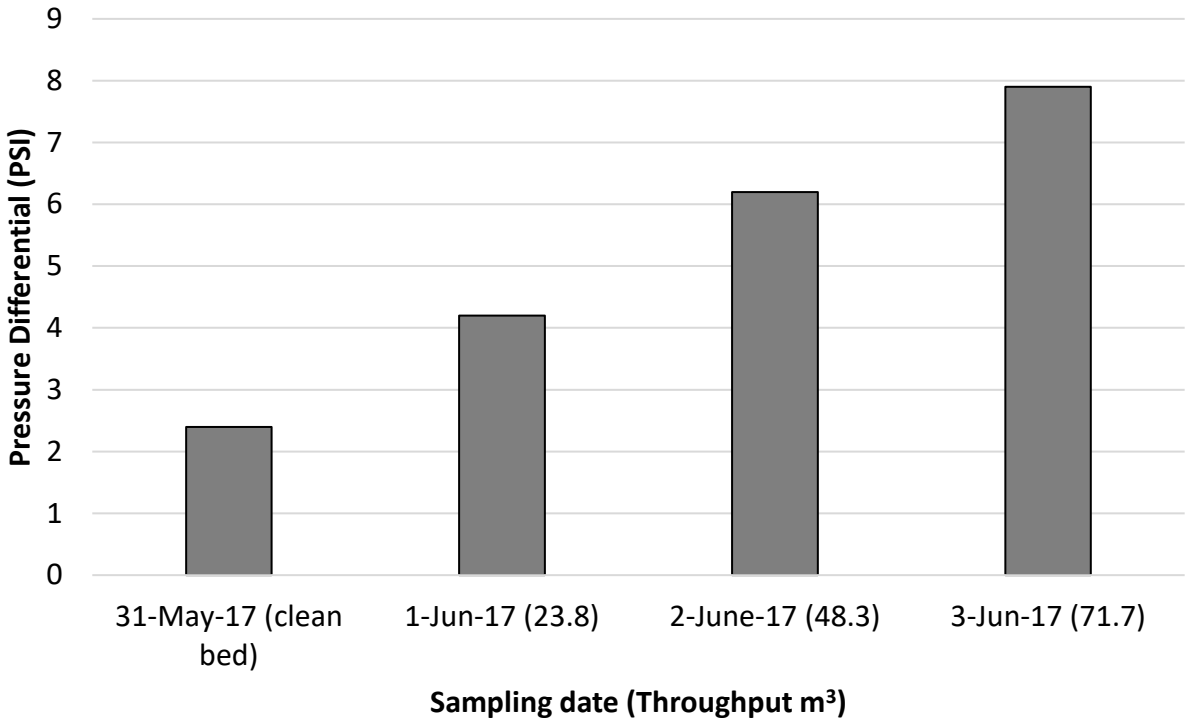

Figure 2.27 *Pressure drop across the filter at different sampling dates; values in the brackets represent the cumulative throughput volume of the water.*

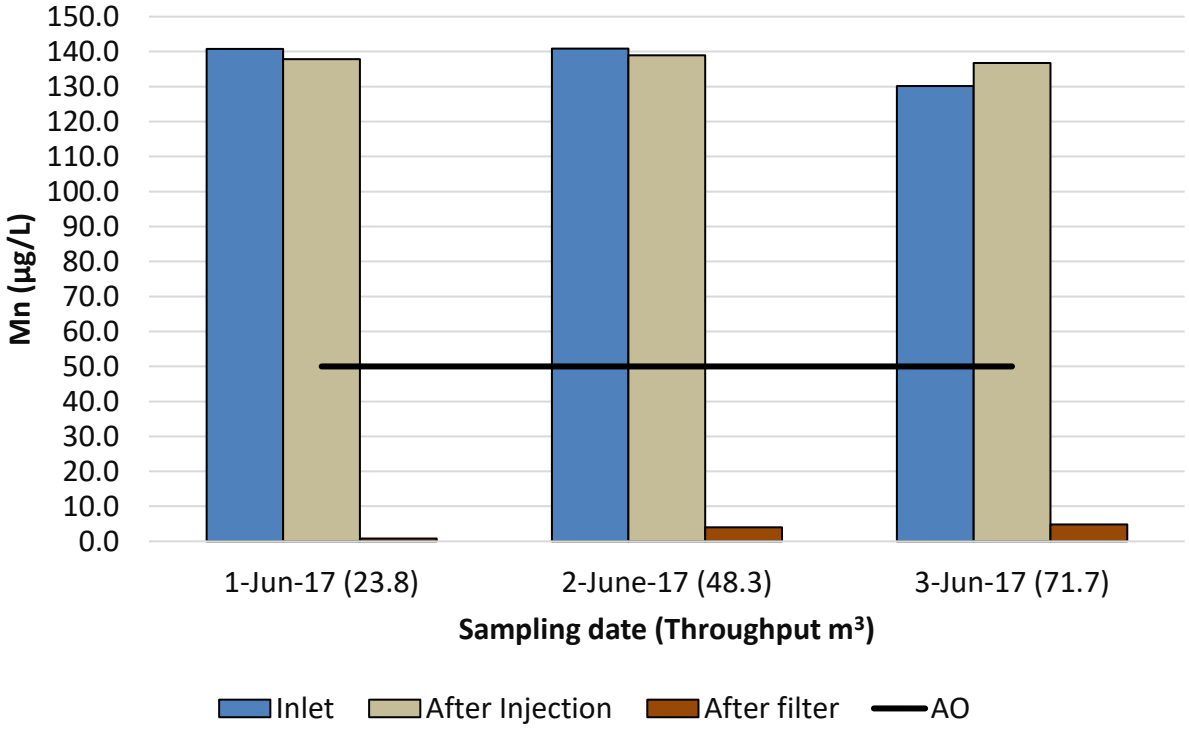

Figure 2.28 *Manganese concentrations before and after filter at different sampling date; values in the brackets represent the cumulative throughput volume of the water.*

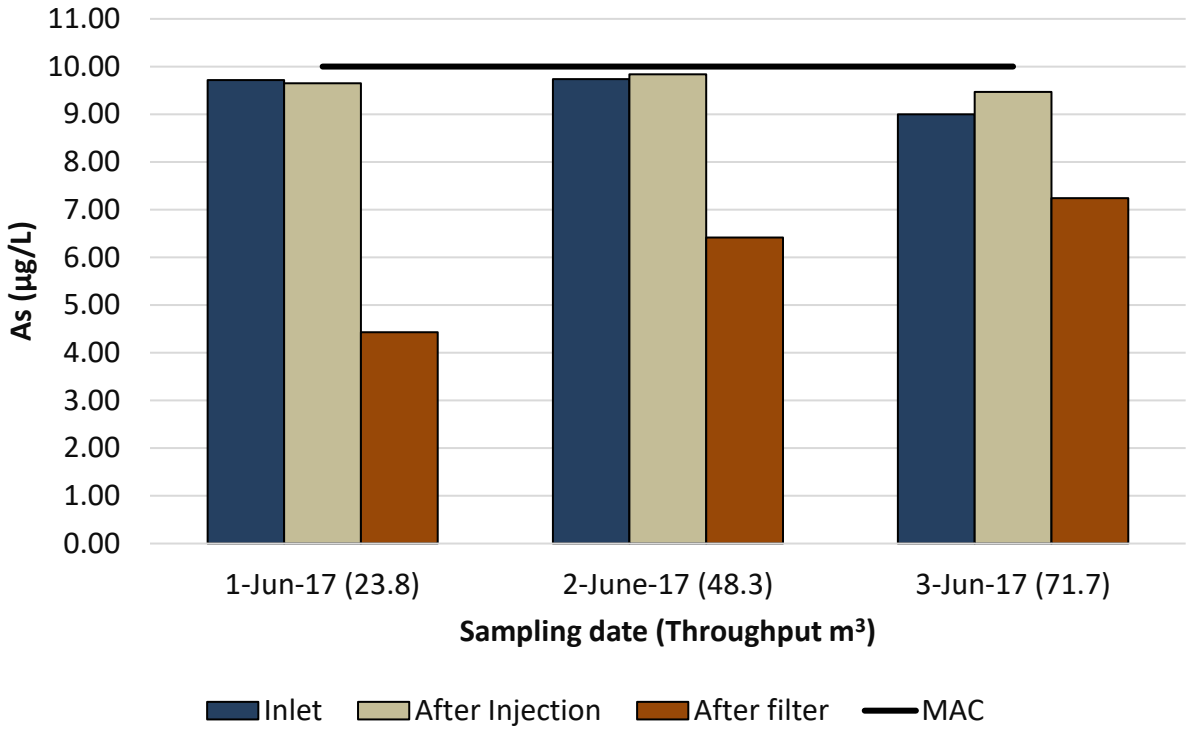

Figure 2.29 *Arsenic concentrations before and after at different sampling dates; values in the brackets represent the cumulative throughput volume of the water.*

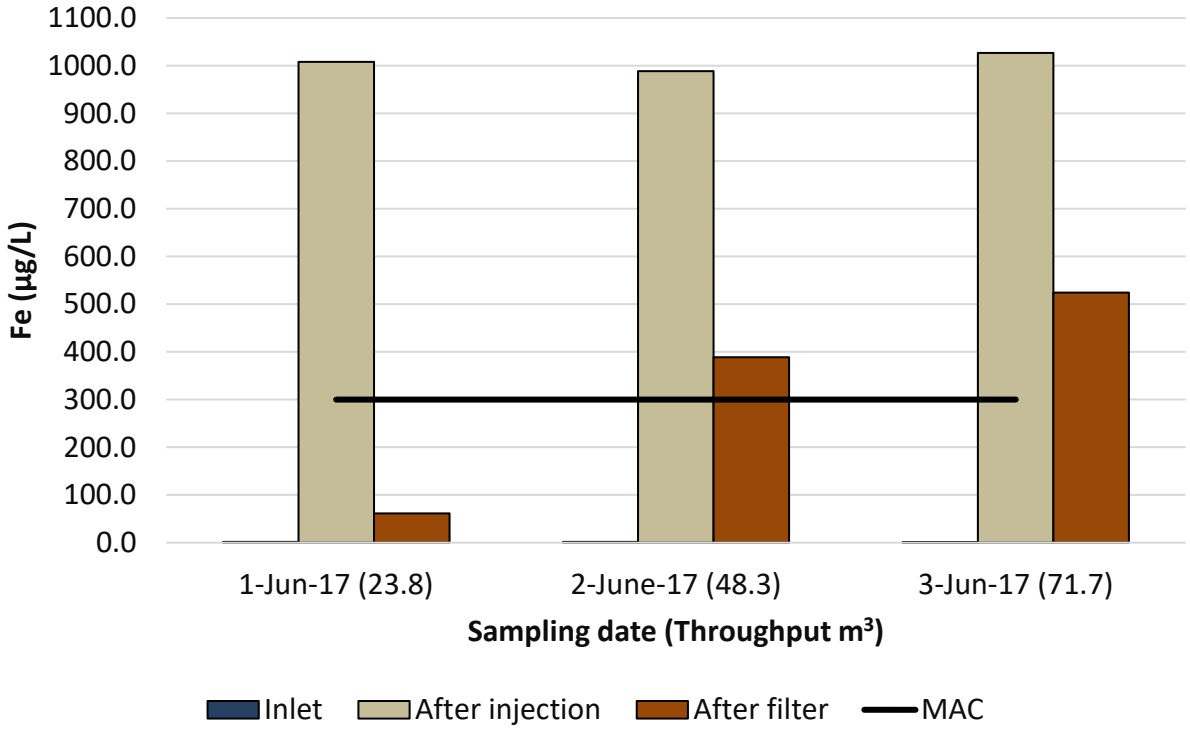

Figure 2.30 *Iron concentrations before and after at different sampling dates; values in the brackets represent the cumulative throughput volume of the water.*

2.5.3 Iron injection-Backwash water quality

The total suspended solids, manganese, arsenic and iron concertation in the backwash water are shown in Figures 2.32 to 2.35, respectively. The average level of TSS and each metal during the 30 minute backwash were calculated (Table 2.6). Iron concentration (70.4mg/L) was found to be the only parameter exceeding the guideline (10mg/L).

Start *5min* *10min* *15min* *20min* *25min* *30min*

Figure 2.31 *Backwash water samples and Total Suspended Solids test results at different times, after iron injection study.*

Table 2.5.1 *Analytical data for backwash water samples, after iron injection study.*

Time (min)	As (mg/L)	Mn (mg/L)	Fe (mg/L)	TSS (mg/L)	Chlorine (mg/L)
0	0.014	0.16	2.4	1	0.59
5	1.5	11	300	720	0.28
10	0.41	3.2	93	206	0.22
15	0.1	0.69	21	34	0.35
20	0.027	0.19	4.8	8	0.12
25	0.013	0.20	1.4	3	0.07
30	0.016	0.22	1.9	2	0.16
Average	0.34	2.58	70.39	162.08	0.24
Guideline*	**1**	**5**	**10**	**600**	-

**Greater Vancouver sewerage and drainage district sewer use bylaw no. 299, 2007*

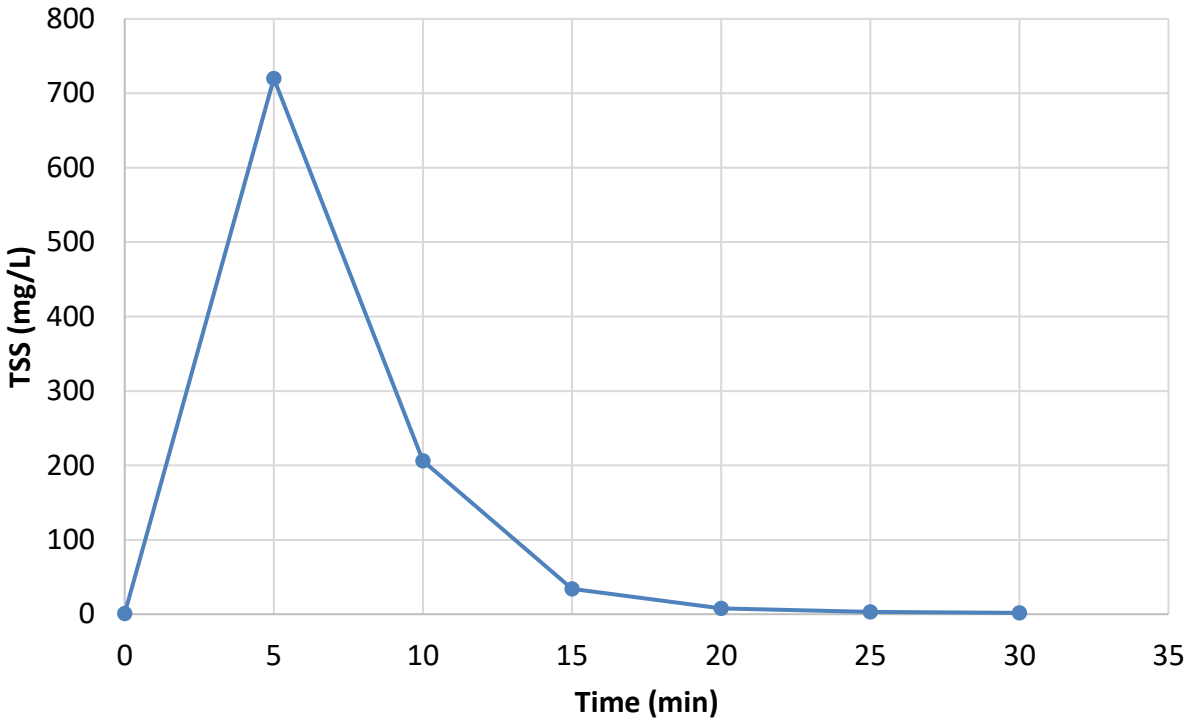

Figure 2.32 *Total suspended solids in backwash water versus time, after iron injection study.*

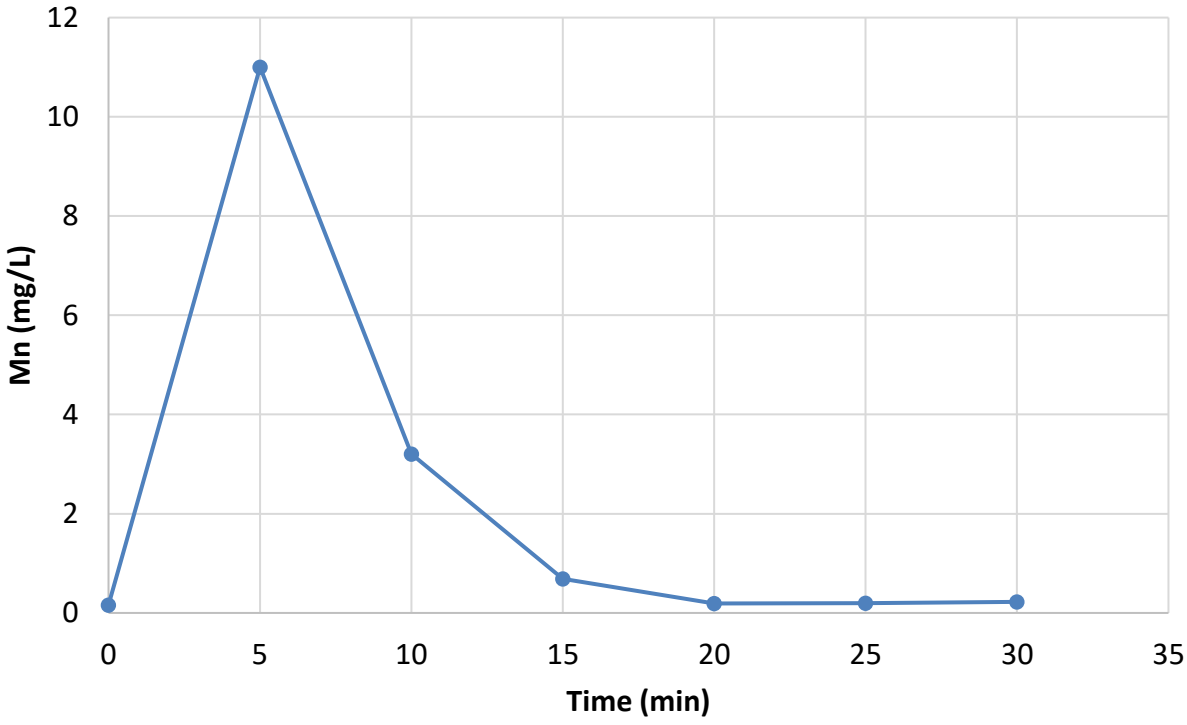

Figure 2.33 *Manganese concentrations in backwash water versus time, after iron injection study.*

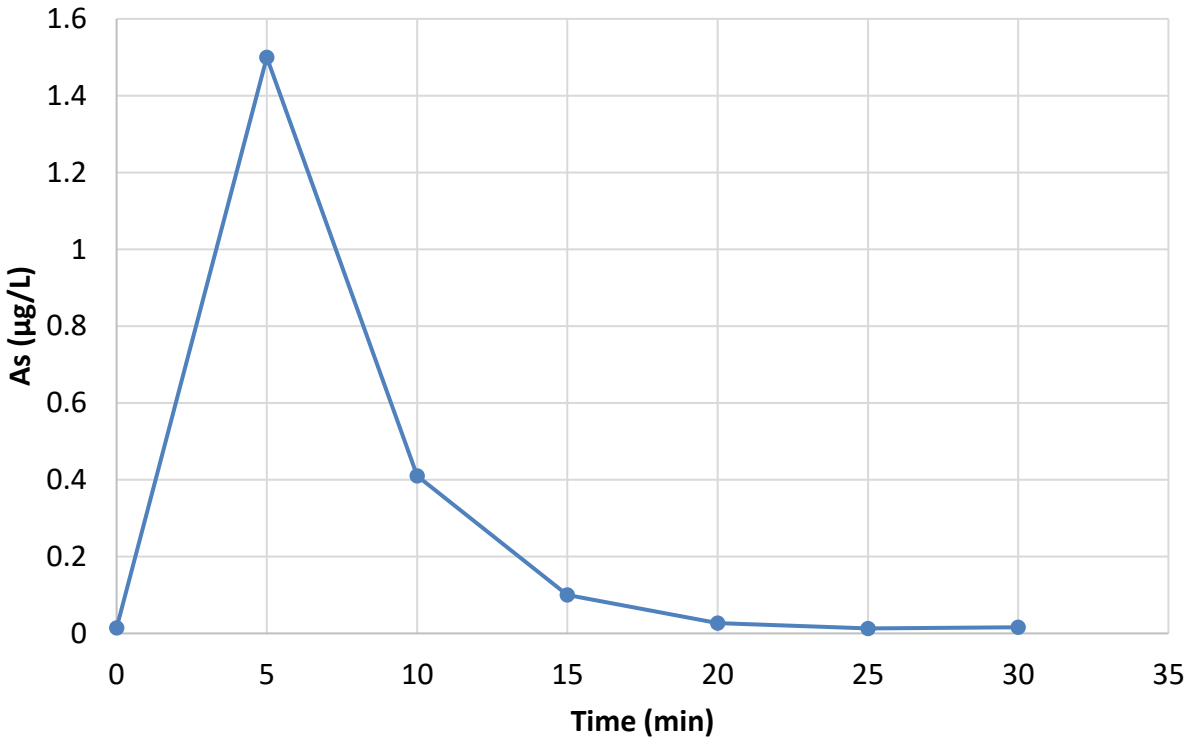

Figure 2.34 *Arsenic concentrations in backwash water versus time, after iron injection study.*

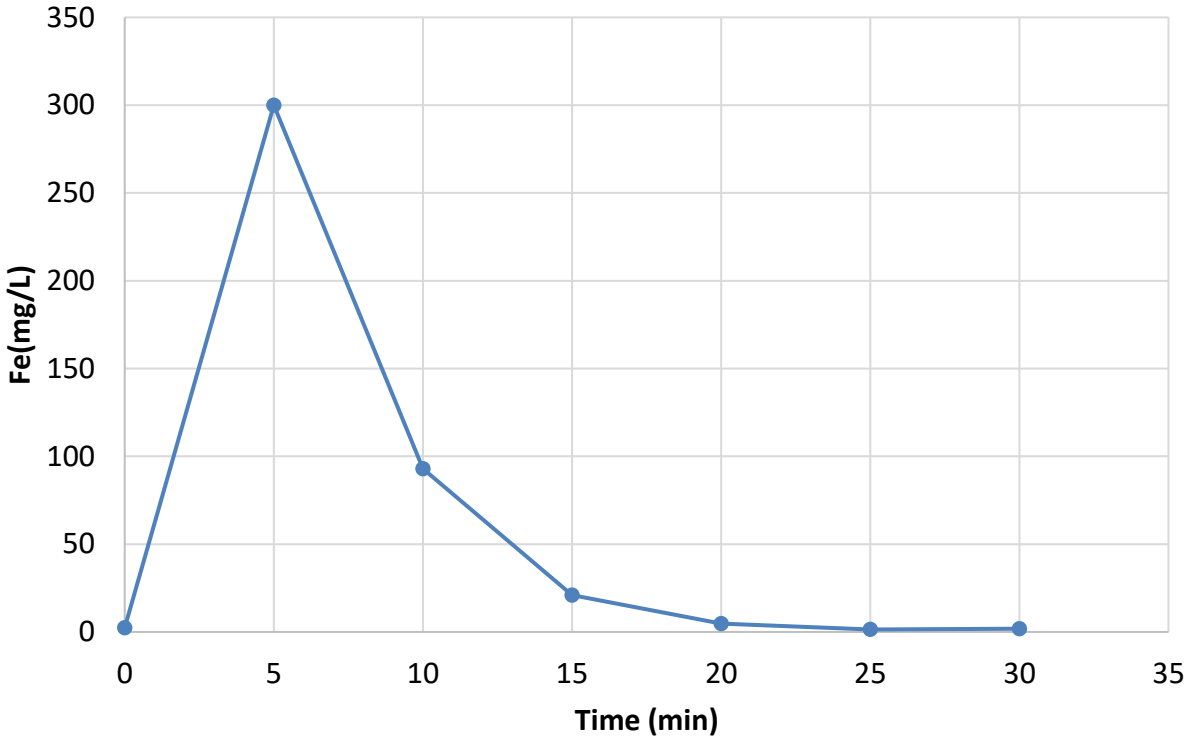

Figure 2.35 *Iron concentrations in backwash water versus time, after iron injection study.*

2.5.4 Iron injection-Jar test

The results of the Jar test are shown in Figures 2.36-2.38. After 5min of flocculation with iron, the arsenic level decreased from 9µg/L to 6µg/L, with no significance change observed beyond that time (Figure 2.36). The manganese level decreased with more flocculation time, from around 142µg/L to 87µg/L after 20 minutes, meaning that flocculation with iron can be effective for the removal of manganese as well (Figure 2.37). Considering the main purpose of this experiment which was to evaluate the effect of flocculation time on the removal of arsenic, it can be concluded that 5minute residence time (i.e., flocculation) would be sufficient if 1ppm of iron is used for coagulation.

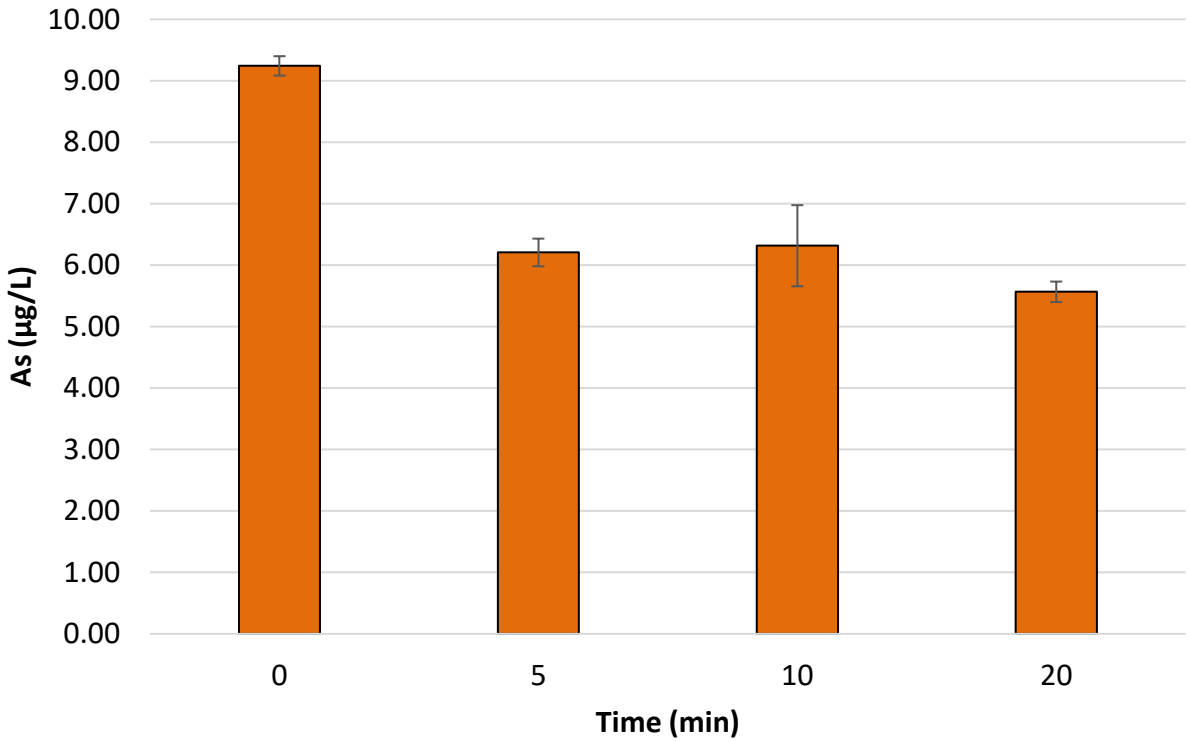

Figure 2.36 *Arsenic concentration at different flocculation time.*

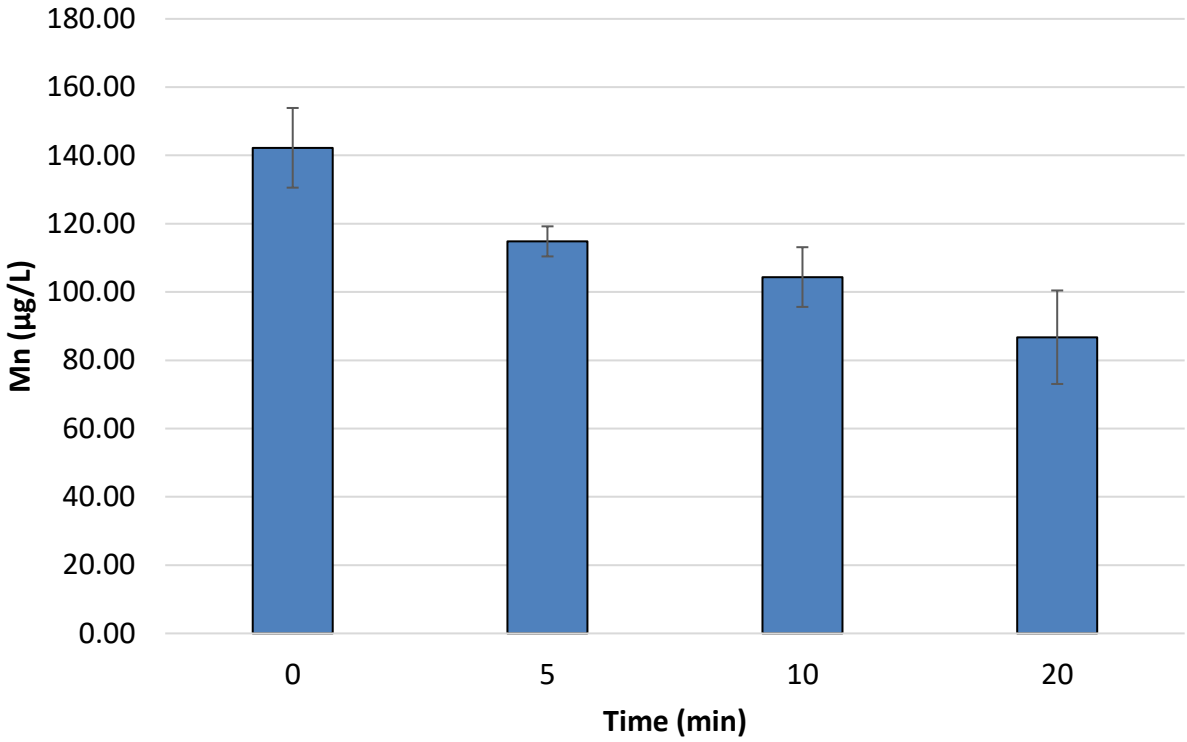

Figure 2.37 *Manganese concentration at different flocculation time.*

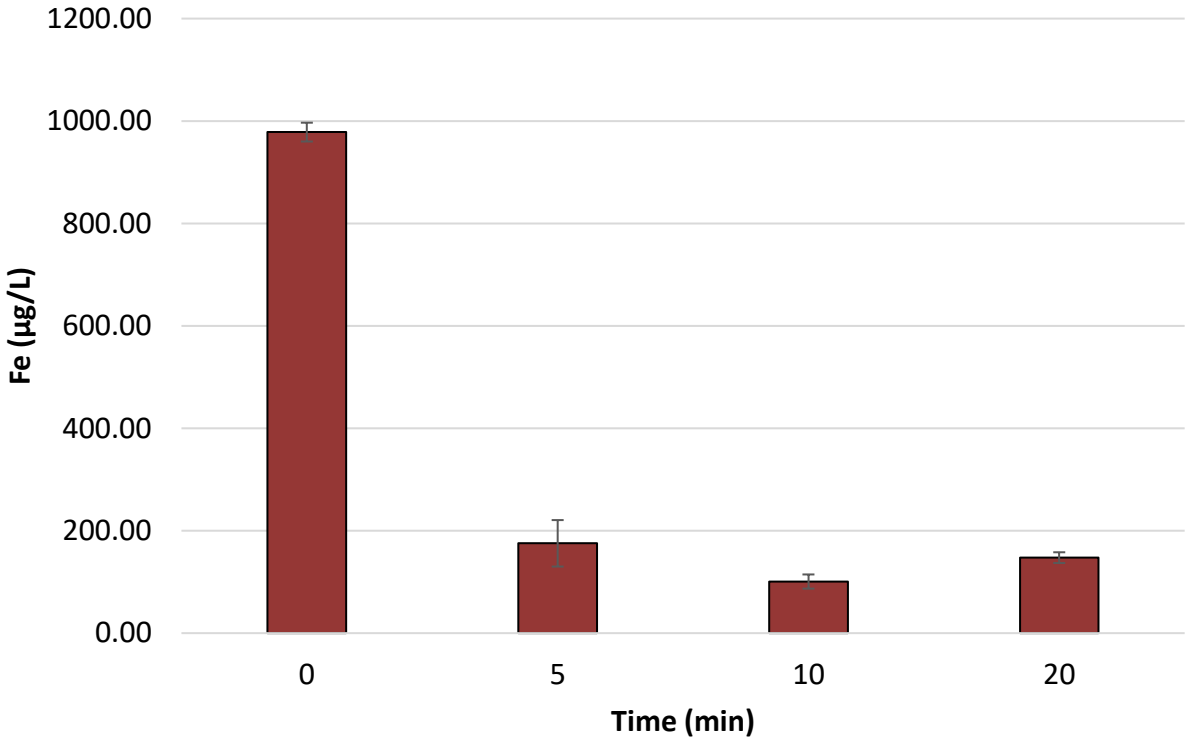

Figure 2.38 *Iron concentration at different flocculation time.*

2.6 Mangazur

The filter media was received on Monday April 3, 2017 and it started to operate on Tuesday April 4, 2017. The flowrate was adjusted to 16.5 L/min and the dissolved oxygen (DO) was set to around 8mg/L by injecting air before the filter. The water has been running through the filter since the installation date. The following tables include the most recent sampling results before and after the media. Since there is no significant change of concentration through the filter, the acclimation of the filter has not happened yet and more time is needed for the media to become active.

Table 2.6.1 *Manganese concentration before and after the biological filter.*

Before	After	Date
138.18	137.46	17-Jun-17 (Saturday)
138.03	133.95	19-Jun-17 (Monday)
133.34	132.39	20-Jun-17 (Tuesday)
132.11	130.87	21-Jun-17 (Wednesday)
131.47	130.57	22-Jun-17 (Thursday)
130.08	129.15	23-Jun-17 (Friday)
129.58	129.09	24-Jun-17 (Saturday)
136.77	135.11	27-Jun-17 (Tuesday)
135.53	136.18	4-Jul-17 (Tuesday)
134.56	134.11	7-Jul-17 (Friday)
135.28	131.14	10-Jul-17 (Monday)

Table 2.6.2 *Arsenic concentration before and after the biological filter.*

Before	After	Date
9.25	9.48	17-Jun-17 (Saturday)
9.33	9.21	19-Jun-17 (Monday)
9.12	8.80	20-Jun-17 (Tuesday)
9.19	8.94	21-Jun-17 (Wednesday)
9.00	9.06	22-Jun-17 (Thursday)
8.96	8.97	23-Jun-17 (Friday)
8.89	8.93	24-Jun-17 (Saturday)
9.22	8.85	27-Jun-17 (Tuesday)
9.29	9.06	4-Jul-17 (Tuesday)
8.89	9.21	7-Jul-17 (Friday)
9.19	8.71	10-Jul-17 (Monday)

3.0 Conclusions and Future Work

This report summarizes the results of a pilot study, which was a collaboration between the City of White Rock, RES'EAU-WaterNET, University of British Columbia, and Ecole Polytechnique de Montreal. The overall goal of the study was to assess a number of water treatment processes and determine the extent to which they can effectively remove manganese and arsenic from the City's water supplies. The study was conducted from December 2016 to June 2017 using a pilot plant facility, consisting of two treatment trains that involved oxidation, filtration and adsorption stages. Source water was provided from the City's well #6 and Well #7 with manganese level of around 130-140µg/L and arsenic level of around 10µg/L. Highlights of the results obtained from the study are as follows:

- Injecting around 0.5-1mg/L of chlorine as an oxidant followed by GreensandPlus filter could consistently decrease manganese level to below 4µg/L. In addition, increasing the filtration rate from 10m/h to 20m/h did not have any impact on the performance of the GreensandPlus filter in terms of the removal of manganese. At both conditions, no significant change was observed in arsenic concentration before and after the filter.
- Adsorptive media, E33 Bayoxide, removed arsenic effectively during the experiment; however, the concentration of arsenic in the outlet increased gradually, reaching 5µg/L after around 12000 bed volumes. It was estimated that after 25000-30000 bed volumes, the E33 Bayoxide media will be fully exhausted and the complete breakthrough will take place. Presence of manganese did not have any significant impact on the performance of the adsorptive media. Moreover, E33 Bayoxide showed around 30-40% manganese removal over the experiment.
- Ozone demonstrated to be as efficient as chlorine in removing Mn through the GreensandPlus filter. Injecting ozone at 0.5mg/L to 1mg/L, resulted in Mn concentration to decrease below 5 µg/L in the outlet of the GreensandPlus filter.
- Adding ozone before the GreensandPlus filter had very small (statistically insignificant) impact on the removal of arsenic. About 1µg/L decrease in arsenic concentration was observed through the GreensandPlus filter when ozone are injected in the water. This was independent of the ozone dosage, as increasing dosage from 0.5mg/L to 1mg/L did not have any impact on the performance of the filter for the removal of arsenic.
- Self-oxidizing media such as Birm could remove manganese from water; however, after treating certain volume of the water (around 350m3 cumulative volume of water in this study) the manganese level after the filter reached to the aesthetic objective. In addition, arsenic could not be removed effectively through the filter.
- Preliminary tests showed that injecting iron up to around 1mg/L could improve the arsenic removal through the filter; however, increasing the iron concentration to more than 1mg/L would not change the arsenic removal through the filter.

- Continuous injection of 1mg/L iron before the filter decreased the arsenic level to around 4µg/L in the water; however, the performance of the filter was not stable over the course of the experiment. Iron level after the filter reached over the MAC level and consequently the final arsenic level after filter reached to around 7µg/L.

The following experiments should be considered as part of the future work for this project:

- Increasing chlorine concentration to more than 1.5mg/L before injecting iron to determine if it can have any impact on arsenic removal through GreensandPlus filter.
- Adding ozone before the injection of iron and chlorine to the system and evaluating the performance of the GreensandPlus filter for the removal of arsenic.
- For well #6, arsenite As(III) was oxidized completely to arsenate As(V) using 0.5mg/L of ozone. In addition, increasing the concentration to 1mg/L did not have any significant impact on the conversion of As(III) to As(V) for this well. More tests for Well #7 which has more As(III) concentration is in progress.
- Continue collecting samples from biological media

3.1 Limitation

RES'EAU-WaterNET is a research program, funded by the Natural Sciences and Engineering Research Council (NSERC) of Canada and many private and public partner organizations, working towards solutions for small, rural and First Nations communities to improve the quality of their drinking water. RES'EAU-WaterNET does not act as an engineering consulting firm and therefore does not provide professional engineering services. Therefore, preparation and release of this report is not for the final detail design or construction purposes of a new water treatment plant. RES'EAU recommends the City to retain a third party engineering firm which can use the contents of this report towards the detailed design of a new drinking water treatment facility. Research professionals from RES'EAU group will be happy to assist the community in coordinating efforts and communications to develop an integrated approach to address the City's drinking water issues.

3.2 Closure

The Conclusions of this document represent the information available at the time of its completion and as appropriate for the project scope of work. No warranty, express or implied, is made. The report was prepared by personnel with experience in the field covered and conducted in a manner consistent with level and skills ordinarily exercised by researchers practicing under similar conditions. Additional consultations and work by third parties are required to finalize and complete the detail design and construction of a new water treatment plant.

4.0 References

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- Guidelines for Canadian Drinking Water Quality: Guideline Technical Document – Manganese https://www.canada.ca/en/health-canada/services/publications/healthy-living/guidelines-canadian-drinking-water-quality-guideline-technical-document-manganese.html
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- Guidelines for Canadian Drinking Water Quality: Guideline Technical Document – Iron https://www.canada.ca/en/health-canada/services/publications/healthy-living/guidelines-canadian-drinking-water-quality-guideline-technical-document-iron.html
- Greater Vancouver sewerage and drainage district sewer use bylaw no. 299, 2007

5.0 Appendix

Figure 5.1 *System operational and analytical data at sampling dates*

Sampling Date		12/16/2016					12/19/2016					12/21/2016				
Sampling Location		In	B	B-E	G	G-E	In	B	B-E	G	G-E	In	B	B-E	G	G-E
Parameters	Unites															
Flowrate	L/min	35.4	18.4	18.4	17	17	36.2	17.9	17.9	18.3	18.3	34.7	17.2	17.2	17.5	17.5
Throughput	m^3	-	102.61	102.61	100	100	-	178.28	178.28	169.68	169.68	-	220.71	220.71	212.2	212.2
Bed volumes		-	-	1812	-	1766	-	-	3148	-	2996	-	-	3897	-	3747
Filtration rate	m/h	-	11.08	15.01	10.25	13.88	-	10.78	14.62	11.03	14.93	-	10.37	14.03	10.54	10.27
Pressure drop	psi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH		7.04	7.13	7.24	7.18	7.16	7.03	7.10	7.01	7.04	7.20	6.93	7.06	7.10	7.13	7.10
Temperature	°C	11.8	11.8	12.4	12.3	11.3	14.8	14.3	14.7	14.3	14.7	11.6	12.4	12.5	11.8	11.6
Free chlorine	mg/L	-	-	-	1.03	0.78	-	-	-	0.66	0.38	-	-	-	0.82	0.59
Total chlorine	mg/L	-	-	-	1.49	1.00	-	-	-	1.1	0.63	-	-	-	1.12	0.76
As (Total)	mg/L	0.0101	0.0099	0.0003	0.0098	0.0001	0.0100	0.0100	0.0011	0.0099	0.0007	0.0095	0.0094	0.0017	0.0093	0.0015
Mn (Total)	mg/L	0.137	0.001	<0.001	<0.001	0.001	0.141	0.005	0.002	<0.001	0.002	0.116	0.005	<0.001	<0.001	<0.001
Fe (Total)	mg/L	0.004	<0.004	<0.004	0.027	0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Fluoride	mg/L	0.27	0.22	0.24	0.30	0.24	0.26	0.24	0.24	0.22	0.23	0.21	0.18	0.22	0.19	0.21
Chloride	mg/L	16.02	15.91	16.14	18.51	18.80	17.97	17.91	17.93	20.01	20.00	10.33	10.19	10.29	12.31	12.37
Nitrite	mg/L	BDL*	BDL	BDL	0.20	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nitrate	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Bromide	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Phosphate	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Sulfate	mg/L	19.13	19.06	19.18	19.14	19.09	20.45	20.56	20.34	20.53	20.46	15.00	15.03	15.16	14.96	15.25
Turbidity	NTU	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04

BDL*: Below Detection Limit

Figure 5.1 *(continued) System operational and analytical data at sampling dates.*

Sampling Date		01/23/2017					01/25/2017					01/27/2017				
Sampling Location		In	B	B-E	G	G-E	In	B	B-E	G	G-E	In	B	B-E	G	G-E
Parameters	Unites															
Flowrate	L/min	38	19.2	19.2	18.8	18.8	37.2	19.6	19.6	17.6	17.6	38.2	18.7	18.7	19.5	19.5
Throughput	m^3	-	97.56	318.27	96.84	309.04	-	152.71	470.98	143.19	452.23	-	209.77	528.04	192.41	501.45
Bed volumes		-	-	5619.8	-	5456.8	-	-	8316	-	7985	-	-	9324	-	8854
Filtration rate	m/h	-	11.57	15.67	11.33	15.34	-	11.81	16.00	10.60	14.36	-	11.27	15.26	11.75	15.91
Pressure drop	psi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH		7.4	7.44	7.00	7.62	7.06	6.79	6.85	6.98	7.13	7.46	6.97	7.15	7.34	7.48	7.67
Temperature	°C	11.6	11.9	11.6	11.8	11.8	11.1	11.6	11.7	11.3	11.3	10.8	11.2	11.2	11.2	11.0
Free chlorine	mg/L	-	-	-	0.96	0.53	-	-	-	0.78	0.60	-	-	-	0.61	0.35
Total chlorine	mg/L	-	-	-	1.36	0.82	-	-	-	1.12	0.79	-	-	-	0.83	0.73
As (Total)	mg/L	0.0087	0.0087	0.0025	0.0086	0.0021	0.0086	0.0086	0.0032	0.0084	0.0027	0.0085	0.0087	0.0037	0.0085	0.0034
Mn (Total)	mg/L	0.134	0.011	<0.001	0.004	0.004	0.131	0.025	0.002	<0.001	<0.001	0.135	0.037	0.005	<0.001	<0.001
Fe (Total)	mg/L	<0.004	<0.004	<0.004	<0.004	<0.004	0.008	<0.004	0.005	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Fluoride	mg/L	0.26	0.21	0.38	0.25	0.26	0.38	0.37	0.27	0.27	0.27	0.29	0.27	0.25	0.26	0.26
Chloride	mg/L	78.71	21.28	25.79	59.21	42.43	16.70	16.83	17.92	19.20	19.08	17.44	17.18	17.17	19.12	18.78
Nitrite	mg/L	BDL(c)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nitrate	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Bromide	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Phosphate	mg/L	1.40	1.24	1.10	1.38	0.94	1.27	1.27	0.96	1.23	0.95	1.28	1.25	1.01	1.21	0.99
Sulfate	mg/L	19.27	19.37	19.58	19.32	19.49	19.64	19.78	19.71	19.77	19.68	19.37	19.49	19.52	19.41	19.53
Turbidity	NTU	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04

Figure 5.1 *(continued) System operational and analytical data at sampling dates*

Sampling Date		02/01/2017					02/06/2017					02/07/2017				
Sampling Location		In	B	B-E	G	G-E	In	B	B-E	G	G-E	In	B	B-E	G	G-E
Parameters	Unites															
Flowrate	L/min	36.6	18.7	18.7	17.9	17.9	37.7	18.3	18.3	19.4	19.4	36.9	18.1	18.1	18.8	18.8
Throughput	m^3	-	349.49	667.76	313.24	622.28	-	482.04	800.31	441.69	750.73	-	506.78	825.05	467.97	777.01
Bed volumes		-	-	11791	-	10988	-	-	14131	-	13256	-	-	14568	-	13720
Filtration rate	m/h	-	11.27	15.26	10.78	15.91	-	11.03	14.93	11.69	15.83	-	10.90	14.77	11.33	15.34
Pressure drop	psi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH		6.98	6.90	6.85	6.99	7.40	7.42	7.60	7.81	7.83	7.86	7.56	7.71	7.79	7.88	7.98
Temperature	°C	11.7	11.4	11.8	11.2	11.9	10.7	11.1	10.9	11	11.2	10.8	11	10.9	10.9	11.2
Free chlorine	mg/L	-	-	-	0.66	0.55	-	-	-	0.22	0.1	-	-	-	0.46	0.35
Total chlorine	mg/L	-	-	-	1.19	0.96	-	-	-	0.94	0.89	-	-	-	1.17	0.84
As (Total)	mg/L	0.0092	0.0091	0.0048	0.0091	0.0045	0.0099	0.0112	0.0058	0.0101	0.0061	0.0094	0.0089	0.0056	0.0092	0.0057
Mn (Total)	mg/L	0.135	0.062	0.021	<0.001	<0.001	0.135	0.091	0.038	0.000	0.000	0.138	0.078	0.042	0.000	0.000
Fe (Total)	mg/L	0.006	0.004	<0.004	<0.004	<0.004	0.005	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Fluoride	mg/L	0.27	0.27	0.26	0.25	0.31	0.26	0.32	0.37	0.25	0.25	0.26	0.25	0.25	0.25	0.26
Chloride	mg/L	18.60	17.51	17.75	19.56	19.60	17.25	17.38	17.41	18.62	18.64	17.36	17.25	17.17	19.28	19.27
Nitrite	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nitrate	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Bromide	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Phosphate	mg/L	1.22	1.23	1.09	1.20	1.07	1.22	1.24	1.11	1.24	1.14	1.26	1.25	1.15	1.21	1.15
Sulfate	mg/L	19.56	19.24	19.40	19.39	19.43	20.48	20.55	20.70	20.48	20.58	20.53	20.36	20.28	20.20	20.39
Turbidity	NTU	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04

Figure 5.1 *(continued) System operational and analytical data at sampling dates*

Sampling Date		02/09/2017					02/10/2017					2/21/2017		2/22/2017		2/23/2017	
Sampling Location		In	B	B-E	G	G-E	In	B	B-E	G	G-E	In	G	In	G	In	G
Parameters	Unites																
Flowrate	L/min	35.8	17.9	17.9	17.9	17.9	35.4	18	18	17.4	17.4	34.7	34.7	32.5	32.5	25.5	25.5
Throughput	m^3	-	559.08	877.35	520.83	829.87	-	585.39	903.66	546.48	855.52	-	48.25	-	96.29	-	139.98
Bed volumes		-	-	15492	-	14653	-	-	15956	-	15106	-	-	-	-	-	-
Filtration rate	m/h	-	10.78	14.61	10.78	14.61	-	10.84	14.69	10.48	14.20	-	20.91	-	19.58	-	15.36
Pressure drop	psi	-	-	-	-	-	-	-	-	-	-	-		-		-	
pH		7.55	7.70	7.74	7.86	7.92	7.66	7.91	7.97	7.94	8.02	6.86	7.10	7.10	7.42	7.31	7.79
Temperature	°C	11.2	10.9	10.9	10.9	10.9	10.5	11	11.3	11.4	11.7	11.3	11.1	11.3	10.5	11.5	10.9
Free chlorine	mg/L	-	-	-	0.51	0.19	-	-	-	0.5	0.2	-	0.19	-	0.86	-	1.31
Total chlorine	mg/L	-	-	-	1.19	0.82	-	-	-	1.21	0.79	-	0.96	-	1.57	-	1.96
As (Total)	mg/L	0.0094	0.0093	0.0054	0.0091	0.0059	0.0092	0.0090	0.0059	0.0091	0.0059	0.0094	0.0090	0.0106	0.0093	0.0091	0.0091
Mn (Total)	mg/L	0.131	0.084	0.047	0.000	0.000	0.129	0.085	0.053	0.000	0.000	0.133	<0.001	0.153	<0.001	0.128	<0.001
Fe (Total)	mg/L	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Fluoride	mg/L	0.27	0.27	0.25	0.26	0.26	0.26	0.28	0.25	0.25	0.25	0.26	0.25	0.25	0.25	0.25	0.25
Chloride	mg/L	16.76	16.91	16.96	19.20	19.13	16.80	16.87	16.88	19.11	19.09	16.41	17.34	16.37	20.24	16.43	19.60
Nitrite	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nitrate	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Bromide	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Phosphate	mg/L	1.23	1.21	1.16	1.28	1.16	1.21	1.22	1.16	1.24	1.14	1.20	1.19	1.20	1.21	1.21	1.20
Sulfate	mg/L	20.22	20.20	20.26	20.18	20.11	20.16	20.08	20.19	20.10	20.11	20.10	20.11	20.07	20.18	20.09	20.00
Turbidity	NTU	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.07	0.07	0.05	0.05	0.04

Figure 5.1 *(continued) System operational and analytical data at sampling dates*

Sampling Date		2/24/2017		2/27/2017		2/28/2017		3/2/2017		3/3/2017	
Sampling Location		In	G	In	G	In	G	In	G	In	G
Parameters	Unites										
Flowrate	L/min	24.8	24.8	27.6	27.6	25.9	25.9	21.7	21.7	23.5	23.5
Throughput	m^3	-	177.88	-	286.95	-	321.35	-	393.06	-	415.07
Bed volumes		-	-	-	-	-	-	-	-	-	-
Filtration rate	m/h	-	14.94	-	16.63	-	15.60	-	13.07	-	14.16
Pressure drop	psi	-		-		-		-		-	
pH		7.26	7.41	7.43	7.26	7.57	7.40	7.57	7.40	7.22	7.41
Temperature	°C	10.8	10.8	10.8	11	10.6	10.9	10.7	10.8	10.8	10.8
Free chlorine	mg/L	-	0.38	-	0.36	-	0.31	-	0.35	-	0.28
Total chlorine	mg/L	-	1.17	-	1.15	-	1.08	-	1.08	-	1.07
As (Total)	mg/L	0.0094	0.0094	0.0093	0.0092	0.0091	0.0092	0.0090	0.0090	0.0093	0.0091
Mn (Total)	mg/L	0.139	<0.001	0.138	<0.001	0.133	<0.001	0.132	<0.001	0.129	<0.001
Fe (Total)	mg/L	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Fluoride	mg/L	0.28	0.30	0.29	0.25	0.24	0.29	0.27	0.27	0.29	0.29
Chloride	mg/L	16.41	18.32	16.53	18.07	16.57	18.06	16.45	18.03	16.75	18.24
Nitrite	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nitrate	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Bromide	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Phosphate	mg/L	1.22	1.20	1.20	1.20	1.22	1.21	1.21	1.16	1.21	1.18
Sulfate	mg/L	20.07	19.96	19.87	19.85	19.90	19.92	19.80	19.78	19.88	19.80
Turbidity	NTU	0.05	0.07	0.06	0.04	0.05	0.04	0.07	0.04	0.05	0.04

Figure 5.1 *(continued) System operational and analytical data at sampling dates*

Sampling Date		3/30/2017		3/31/2017		4/1/2017		4/7/2017		4/10/2017		4/11/2017		4/12/2017	
Sampling Location		In	G	In	G	In	G	In	G	In	G	In	G	In	G
Parameters	Unites														
Flowrate	L/min	19.8	19.8	13.1	13.1	12.7	12.7	18.7	18.7	19.9	19.9	20.0	20.0	19.9	19.9
Throughput	m^3	-	27	-	17.98	-	26.29	-	19.75	-	22.54	-	25.92	-	33.1
Bed volumes		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Filtration rate	m/h	-	11.93	-	7.89	-	7.65	-	11.27	-	11.98	-	12.05	-	11.99
Pressure drop	psi	-	-	-	-	-	-	-	3.4	-	3.7	-	4.1	-	5.2
pH		7.57	7.55	7.31	7.53	7.44	7.54	7.35	7.35	7.3	7.25	7.22	7.19	7.7	7.64
Temperature	°C	10.1	11.0	10.5	10.6	10.3	11.0	10.9	11.1	12.0	10.6	11.1	11.8	10.3	10.4
Ozone	mg/L	0.1	0	0.5	0	0.5	0	0.4	0	0.5	0	0.5	0	0.5	0
As (Total)	mg/L	0.0010	0.0090	0.0011	0.0090	0.0098	0.0092	0.0010	0.0092	0.0097	0.0086	0.0088	0.0086	0.0088	0.0084
Mn (Total)	mg/L	0.138	0.004	0.138	0.005	0.137	0.001	0.136	0.002	0.139	0.001	0.137	0.003	0.135	0.001
Fe (Total)	mg/L	0.018	<0.004	0.008	<0.004	0.007	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Fluoride	mg/L	0.22	0.21-	0.21	0.21	0.21	0.21	0.21	0.21	0.22	0.21	0.21	0.21	0.21	0.20
Chloride	mg/L	17.45	15.88	16.08	15.81	15.97	15.79	13.53	15.56	15.39	15.42	16.12	15.51	15.77	15.76
Nitrite	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nitrate	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Bromide	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Phosphate	mg/L	1.23	1.19	1.17	1.19	1.19	1.18	1.17	1.13	1.15	1.15	1.16	1.16	1.15	1.15
Sulfate	mg/L	20.09	20.11	20.20	20.00	20.80	19.11	19.65	18.5	18.56	19.56	20.68	20.21	20.85	20.16
Turbidity	NTU	0.04	0.08	0.04	0.09	0.04	0.07	0.05	0.07	0.04	0.06	0.04	0.07	0.04	0.07

Figure 5.1 *(continued) System operational and analytical data at sampling dates*

Sampling Date		4/13/2017		4/18/2017		4/20/2017		4/24/2017		4/25/2017		4/26/2017		4/27/2017	
Sampling Location		In	G	In	G	In	G	In	G	In	G	In	G	In	G
Parameters	Unites														
Flowrate	L/min	20.0	20.0	20.7	20.7	20.5	20.5	17.5	17.5	16.7	16.7	16.6	16.6	16.3	16.3
Throughput	m^3	-	40.67	-	45.89	-	53.68	-	59.51	-	62.82	-	64.82	-	67.12
Bed volumes		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Filtration rate	m/h	-	12.05	-	12.47	-	12.35	-	10.54	-	10.06	-	10.00	-	9.82
Pressure drop	psi	-	5.5	-	5.8	-	6	-	6.4	-	7	-	7	-	7
pH		8.13	8.08	8.18	7.99	7.45	7.40	8.21	8.03	8.37	8.28	8.26	8.16	8.38	8.15
Temperature	°C	10.7	10.4	10.9	11	10.6	11	11.2	11.3	10.5	10.7	11.3	11.1	10.8	11
Ozone	mg/L	0.5	0	0.5	0	0.5	0	1	0	1	0	1	0	1	0
As (Total)	mg/L	0.0088	0.0080	0.0086	0.0084	0.0094	0.0092	0.0094	0.0086	0.0094	0.0091	0.0094	0.0090	0.0094	0.0091
Mn (Total)	mg/L	0.13	0.003	0.130	0.001	0.135	0.003	0.135	0.005	0.132	0.002	0.133	0.001	0.132	0.001
Fe (Total)	mg/L	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Fluoride	mg/L	0.21	0.21	0.21	0.21	0.20	0.21	0.21	0.22	0.20	0.21	0.20	0.22	0.2097	0.2125
Chloride	mg/L	15.45	15.40	15.27	15.22	15.00	15.06	15.38	15.50	15.41	15.45	15.48	15.52	15.45	15.44
Nitrite	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nitrate	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Bromide	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Phosphate	mg/L	1.14	1.14	1.14	1.15	1.15	1.14	1.18	1.18	1.21	1.18	1.19	1.19	1.19	1.19
Sulfate	mg/L	20.09	20.11	20.10	20 .11	20.09	20.11	18.10	19.11	19.09	20.05	20.10	20.11	17.09	17.11
Turbidity	NTU	0.04	0.08	0.04	0.07	0.04	0.06	0.04	0.06	0.04	0.07	0.04	0.09	0.04	0.07

Figure 5.1 *(continued) System operational and analytical data at sampling dates*

Sampling Date		6/1/2017		6/2/2017		6/3/2017	
Sampling Location		In	G	In	G	In	G
Parameters	Unites						
Flowrate	L/min	18.0	18.0	18.0	18.0	18.1	18.1
Throughput	m^3	-	23.79	-	48.29	-	71.69
Bed volumes		-	-	-	-	-	-
Filtration rate	m/h	-	10.84	-	10.84	-	10.9
Pressure drop	psi	-	4.2	-	6.2	-	7.9
pH		6.86	6.84	6.82	6.85	7.37	7.30
Temperature	°C			11.5	11.9	11.3	11.5
Free chlorine	mg/L	-	0.13	-	0.15	-	0.12
Total chlorine	mg/L	-	0.9	-	0.95	-	0.9
As (Total)	mg/L	0.0097	0.0044	0.0097	0.0064	0.0090	0.0072
Mn (Total)	mg/L	0.141	0.001	0.141	0.004	0.130	0.005
Fe (Total)	mg/L	0.001	0.061	0.001	0.389	0.001	0.524
Fluoride	mg/L	0.20	0.21	0.20	0.19	0.21	0.19
Chloride	mg/L	15.67	19.26	15.69	19.37	15.64	19.13
Nitrite	mg/L	BDL	BDL	BDL	BDL	BDL	BDL
Nitrate	mg/L	BDL	BDL	BDL	BDL	BDL	BDL
Bromide	mg/L	BDL	BDL	BDL	BDL	BDL	BDL
Phosphate	mg/L	1.14	1.14	1.14	1.15	1.15	1.14
Sulfate	mg/L	20.09	20.11	20.10	20 .11	20.09	20.11
Turbidity	NTU	0.04	0.11	0.04	0.29	0.05	0.30

THE CORPORATION OF THE

CITY OF WHITE ROCK

CORPORATE REPORT

DATE: **May 30, 2022**

TO: **Mayor and Council**

FROM: **Jim Gordon, P.Eng., Director, Engineering and Municipal Operations**

SUBJECT: **Emerson Park – Options for Additional Playground Equipment**

RECOMMENDATION

THAT the corporate report dated May 30, 2022, from the Director of Engineering & Municipal Operations, titled "Emerson Park – Options for Additional Playground Equipment" be received by Council and that Council direct staff to proceed with the current design as is.

EXECUTIVE SUMMARY

The purpose of this corporate report is to provide Council with information related to playground structure options designed for use by older children 8-10 years of age for Council's consideration and potential redirection related to the Emerson Park Improvements project coming to completion.

PREVIOUS COUNCIL DIRECTION

Motion # & Meeting Date	Motion Details
2022-203 May 9, 2022	THAT Council direct staff to bring forward a corporate report with options to add structures for the age group of 8 - 10 year old children at Emerson Park Playground. Motion CARRIED

INTRODUCTION/BACKGROUND

Emerson Park is a small neighbourhood park on Columbia Avenue and Lee Street. It serves residents who want to enjoy some greenspace, family time or play time. The park is approximately 1,144 square meters. The original playground structure was designed for children 2-5 years old, and it had a coverage area of approximately 70 square meters.

In summer of 2021, the City launched a "Playground Equipment in Emerson Park" survey on the Talk White Rock platform; it received 617 visitors and 309 responses. Based on the responses from nearby residents, staff issued an RFP with key elements for the new playground structure and subsequently awarded the contract to Habitat Systems Inc. The survey was divided between those wishing playground structures for participants 2-5 years of age and those wishing

playground structures for participants 5-12 years of age. It was decided to move forward to replace and upgrade the existing playground with a playground structure for use by those 2-5 years of age. The swings and the adjacent grass area to provide play opportunities for older children.

The new playground is fully installed and complete. It has a coverage area of approximately 140 square meters, or twice the size of the original playground coverage area. It has multiple play features that cater to children 2-5 years old. It also has a swing set for children from 2 to 12 years old.

At the Regular Council Meeting on May 9, 2022, Council directed staff to bring forward a corporate report with options to add structures for the age group of 8-10-year old children at Emerson Park Playground.

Habitat System Inc provided two main options: replace the swing set with a new structure for older children and extend the current playground footprint to add an additional play structure for older children. Within each of these options are three different designs shown below.

A summary of the options is attached in Appendix A and noted below in Table 1.

Table 1 – Summary of Options for Changes to Existing Playground Design

Options	Description	Estimated Cost	Impact to Schedule
2262-1-1	Replace the swing set with a Quantis play structure.	$101K	6 months
2262-1-2	Add Quantis play structure next to the current playground upgrade. An additional 70 square meters of playground surface will be added to the park for a total coverage of 210 square meters.	$129K	8 months
2262-2-1	Replace the swing set with a Netplex 7-Post and Rushwinder play structures.	$116K	6 months
2262-2-2	Add Netplex 7-Post and Rushwinder play structures next to the current playground upgrade. An additional 78 square meters of playground surface will be added to the park for a total coverage area of 218 square meters.	$144K	8 months
2262-4-1	Replace the swing set with a 3-Ring Climber, Overhead Trekker, Lolliladder, Curved Balance Beam, and a Rushwinder.	$88K	6 months
2262-4-2	Add 3-Ring Climber, Overhead Trekker, Lolli-ladder, Curved Balance Beam, and a Rushwinder play structures next to the current playground upgrade. An additional 87 square meters of playground surface will be added to the park for a total coverage of 227 square meters.	$119K	8 months

All six options cause delay to the project by at least six (6) months. Option 2262-4-1 has the least cost increase as compared to the other options.

Emerson Park is a very small park. Adding playground equipment options that increase the footprint will take away greenspace for children to play with soccer balls, play tag or otherwise enjoy a green environment. It will also take away opportunities of families to picnic on the grass.

Nearby residents could potentially object to more structure buildup adjacent to their homes.

Although staff are not recommending any changes to the original plan, it is suggested that options limited to replacement of the swing set would fit best within the context of a small local community park.

FINANCIAL IMPLICATIONS

A summary of the project budget is as follows.

Table 2 – Project Budget

	Playground	Park Improvements from CAC	Total
Project Budget	$160,000	$200,000	$360,000
Tire Stewardship BC Grant	$27,481.50	nil	$27,481.50
Total Funding	**$187,481.50**	**$200,000**	**$387,481.50**
Contract Amount	$151,780	$97,945	$249,725
Contingency (5%)	$7,589.00	$4,897.25	$12,486.25
Forecast Balance	**$28,112.50**	**$97,157.75**	**$125,270.25**

Funds are included in the 2021 – 2025 Financial Plan.

LEGAL IMPLICATIONS

The Contractor could seek compensation for extensive project delay costs and barricade/site maintenance costs.

COMMUNICATION AND COMMUNITY ENGAGEMENT IMPLICATIONS

If there is direction to modify or add additional equipment, Staff will need to deliver notices to the residents located within two (2) blocks of the project area advising of any changes to the existing design.

INTERDEPARTMENTAL INVOLVEMENT/IMPLICATIONS

The Communications Department and the Recreation & Culture staff will be notified to reschedule the Emerson Park opening event.

CLIMATE CHANGE IMPLICATIONS

If the playground equipment footprint is expanded, there will be a reduction in green space as additional structures and construction will also consume additional natural resources.

ALIGNMENT WITH STRATEGIC PRIORITIES

The park improvements are a Community Amenity Contribution “Shovel-in-the-Ground” project, and it is consistent with Council’s top five priorities. Any changes to the existing design will delay the project by at least 6 months.

OPTIONS / RISKS / ALTERNATIVES

The following options are available for Council's consideration:

1. Proceed with the current design as-is, without any additional changes to the playground structure.
2. Proceed with the current design as-is and introduce additional playground structure at a later date.
3. Select one of the six options listed in Table 1 to add additional play structures to Emerson Park for the age group of 8-10 year-old participants. Option 2262-4-1 would provide the least additional cost increase to the project.

Staff recommend option 1.

CONCLUSION

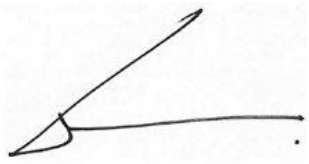
At the Regular Council Meeting on May 9, 2022, Council directed staff to bring forward a corporate report with options to add additional playground structures for the age group of 8-10-years at Emerson Park Playground. Staff consulted with the playground vendor, Habitat Systems Inc, and they provided six different options to add additional play structures to Emerson Park for consideration. For the reasons discussed in this report, staff recommend Council to proceed with the current design as-is.

Respectfully submitted,

Jim Gordon, P.Eng.
Director, Engineering and Municipal Operations

Comments from the Chief Administrative Officer

I concur with the recommendation of this corporate report.



Guillermo Ferrero
Chief Administrative Officer

Appendix A: 2022-05-30 Appendix A – Option 2262-1-1
Appendix B: 2022-05-30 Appendix B – Option 2262-1-2
Appendix C: 2022-05-30 Appendix C – Option 2262-2-1
Appendix D: 2022-05-30 Appendix D – Option 2262-1-2
Appendix E: 2022-05-30 Appendix E – Option 2262-4-1
Appendix F: 2022-05-30 Appendix F – Option 2262-4-2

Emmerson Park

White Rock, BC **19-May-22** **2262-1-1 PHASE 2**

info@habitat-systems.com | 1.866.422.4828 | www.habitat-systems.com

Pricing 2262-1-1 PHASE 2

Supply playground equipment (Landscape Structures Inc.)		$50,755.00
Install playground equipment (Habitat Systems Inc.)		$10,940.00
Installation of Pour in Place Rubber Surfacing		$31,386.00
Site work		$7,724.00
	Subtotal	**$100,805.00**
	GST @ 5%	$5,040.25
	Total	$105,845.25

Credit check may be required. Listed taxes (GST & PST) are applicable and need to be paid by purchaser. Habitat Systems Inc. and the customer agree that the customer is responsible for paying the PST on materials to be installed under this agreement, as provided for under section 80 of the Provincial Sales Tax Act. Pricing in this quotation is valid for 14 days, unless otherwise stated. Pricing includes freight costs to site. Standard installation projects 24 weeks from date of order.

If you wish to place an order, please sign where indicated below and fax back to our office to (604) 294-4002 or toll free at 1 (866) 294-4002.

Print Name: _____ **Date:** _____

Signature of Acceptance: _____ **Title:** _____

PO Number (if applicable): _____

Delivery Address: _____

Installation Address: _____

Site Contact Name: _____ **Phone #:** _____

Invoicing Name & Address: _____

Colours/Palette: _____

Habitat Systems Representative (Office Use Only)

Print Name: _____ *Date:* _____

Signature of Acceptance: _____ *Title:* _____

info@habitat-systems.com | 1.866.422.4828 | www.habitat-systems.com

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info@habitat-systems.com | 1.866.422.4828 | www.habitat-systems.com

Emerson Park

White Rock, BC **19-May-22** **2262-1-2 PHASE 2**

info@habitat-systems.com | 1.866.422.4828 | www.habitat-systems.com

Pricing 2262-1-2 PHASE 2

Supply playground equipment (Landscape Structures Inc.)		$50,755.00
Install playground equipment (Habitat Systems Inc.)		$10,940.00
Installation of Pour in Place Rubber Surfacing		$31,386.00
Site work *Estimated*		$33,350.00
	Subtotal	**$128,874.00**
	GST @ 5%	$6,443.70
	Total	$135,317.70

Credit check may be required. Listed taxes (GST & PST) are applicable and need to be paid by purchaser. Habitat Systems Inc. and the customer agree that the customer is responsible for paying the PST on materials to be installed under this agreement, as provided for under section 80 of the Provincial Sales Tax Act. Pricing in this quotation is valid for 14 days, unless otherwise stated. Pricing includes freight costs to site. Standard installation projects 24 weeks from date of order.

If you wish to place an order, please sign where indicated below and fax back to our office to (604) 294-4002 or toll free at 1 (866) 294-4002.

Print Name: _____ **Date:** _____

Signature of Acceptance: _____ **Title:** _____

PO Number (if applicable): _____

Delivery Address: _____

Installation Address: _____

Site Contact Name: _____ **Phone #:** _____

Invoicing Name & Address: _____

Colours/Palette: _____

Habitat Systems Representative (Office Use Only)

Print Name: _____ *Date:* _____

Signature of Acceptance: _____ *Title:* _____

info@habitat-systems.com | 1.866.422.4828 | www.habitat-systems.com

info@habitat-systems.com | 1.866.422.4828 | www.habitat-systems.com

info@habitat-systems.com | 1.866.422.4828 | www.habitat-systems.com

Emmerson Park

White Rock, BC **19-May-22** **2262-2-1 PHASE 2**

info@habitat-systems.com | 1.866.422.4828 | www.habitat-systems.com

Pricing 2262-2-1 PHASE 2

Supply playground equipment (Landscape Structures Inc.)		$62,459.00
Install playground equipment (Habitat Systems Inc.)		$13,583.00
Installation of Pour in Place Rubber Surfacing		$31,386.00
Site work		$7,724.00
	Subtotal	**$115,152.00**
	GST @ 5%	$5,757.60
	Total	$120,909.60

Credit check may be required. Listed taxes (GST & PST) are applicable and need to be paid by purchaser. Habitat Systems Inc. and the customer agree that the customer is responsible for paying the PST on materials to be installed under this agreement, as provided for under section 80 of the Provincial Sales Tax Act. Pricing in this quotation is valid for 14 days, unless otherwise stated. Pricing includes freight costs to site. Standard installation projects 24 weeks from date of order.

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Signature of Acceptance: _____ **Title:** _____

PO Number (if applicable): _____

Delivery Address: _____

Installation Address: _____

Site Contact Name: _____ **Phone #:** _____

Invoicing Name & Address: _____

Colours/Palette: _____

Habitat Systems Representative (Office Use Only)

Print Name: _____ *Date:* _____

Signature of Acceptance: _____ *Title:* _____

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info@habitat-systems.com | 1.866.422.4828 | www.habitat-systems.com

Emerson Park

White Rock, BC **19-May-22** **2262-2-2 PHASE 2**

info@habitat-systems.com | 1.866.422.4828 | www.habitat-systems.com

Pricing 2262-2-2 PHASE 2

Supply playground equipment (Landscape Structures Inc.)		$62,459.00
Install playground equipment (Habitat Systems Inc.)		$13,583.00
Installation of Pour in Place Rubber Surfacing		$31,386.00
Site work		$33,354.00
	Subtotal	**$143,423.00**
	GST @ 5%	$7,171.15
	Total	$150,594.15

Credit check may be required. Listed taxes (GST & PST) are applicable and need to be paid by purchaser. Habitat Systems Inc. and the customer agree that the customer is responsible for paying the PST on materials to be installed under this agreement, as provided for under section 80 of the Provincial Sales Tax Act. Pricing in this quotation is valid for 14 days, unless otherwise stated. Pricing includes freight costs to site. Standard installation projects 24 weeks from date of order.

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Print Name: _____ **Date:** _____

Signature of Acceptance: _____ **Title:** _____

PO Number (if applicable): _____

Delivery Address: _____

Installation Address: _____

Site Contact Name: _____ **Phone #:** _____

Invoicing Name & Address: _____

Colours/Palette: _____

Habitat Systems Representative (Office Use Only)

Print Name: _____ *Date:* _____

Signature of Acceptance: _____ *Title:* _____

info@habitat-systems.com | 1.866.422.4828 | www.habitat-systems.com

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info@habitat-systems.com | 1.866.422.4828 | www.habitat-systems.com

Emerson Park

White Rock, BC **19-May-22** **2262-4-1 PHASE 2**

info@habitat-systems.com | 1.866.422.4828 | www.habitat-systems.com

Pricing 2262-4-1 PHASE 2

Supply playground equipment (Landscape Structures Inc.)		$39,700.00
Install playground equipment (Habitat Systems Inc.)		$8,444.00
Installation of Pour in Place Rubber Surfacing		$31,386.00
Site work		$7,724.00
	Subtotal	**$87,254.00**
	GST @ 5%	$4,362.70
	Total	$91,616.70

Credit check may be required. Listed taxes (GST & PST) are applicable and need to be paid by purchaser. Habitat Systems Inc. and the customer agree that the customer is responsible for paying the PST on materials to be installed under this agreement, as provided for under section 80 of the Provincial Sales Tax Act. Pricing in this quotation is valid for 14 days, unless otherwise stated. Pricing includes freight costs to site. Standard installation projects 24 weeks from date of order.

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Print Name: _____ **Date:** _____

Signature of Acceptance: _____ **Title:** _____

PO Number (if applicable): _____

Delivery Address: _____

Installation Address: _____

Site Contact Name: _____ **Phone #:** _____

Invoicing Name & Address: _____

Colours/Palette: _____

Habitat Systems Representative (Office Use Only)

Print Name: _____ *Date:* _____

Signature of Acceptance: _____ *Title:* _____

info@habitat-systems.com | 1.866.422.4828 | www.habitat-systems.com

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info@habitat-systems.com | t.866.422.4828 | www.habitat-systems.com

Emerson Park

White Rock, BC **19-May-22** **2262-4-2 PHASE 2**

info@habitat-systems.com | 1.866.422.4828 | www.habitat-systems.com

Pricing 2262-4-2 PHASE 2

Supply playground equipment (Landscape Structures Inc.)		$39,700.00
Install playground equipment (Habitat Systems Inc.)		$8,444.00
Installation of Pour in Place Rubber Surfacing		$34,349.00
Site work		$33,350.00
	Subtotal	**$118,681.00**
	GST @ 5%	$5,934.05
	Total	$124,615.05

Credit check may be required. Listed taxes (GST & PST) are applicable and need to be paid by purchaser. Habitat Systems Inc. and the customer agree that the customer is responsible for paying the PST on materials to be installed under this agreement, as provided for under section 80 of the Provincial Sales Tax Act. Pricing in this quotation is valid for 14 days, unless otherwise stated. Pricing includes freight costs to site. Standard installation projects 24 weeks from date of order.

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Print Name: _____ **Date:** _____

Signature of Acceptance: _____ **Title:** _____

PO Number (if applicable): _____

Delivery Address: _____

Installation Address: _____

Site Contact Name: _____ **Phone #:** _____

Invoicing Name & Address: _____

Colours/Palette: _____

Habitat Systems Representative (Office Use Only)

Print Name: _____ *Date:* _____

Signature of Acceptance: _____ *Title:* _____

info@habitat-systems.com | 1.866.422.4828 | www.habitat-systems.com

info@habitat-systems.com | 1.866.422.4828 | www.habitat-systems.com

info@habitat-systems.com | t.866.422.4828 | www.habitat-systems.com

THE CORPORATION OF THE

CITY OF WHITE ROCK

CORPORATE REPORT

DATE: **May 30, 2022**

TO: **Mayor and Council**

FROM: **Tracey Arthur, Director, Corporate Administration**

SUBJECT: **Advisory Committee Meeting Method Considerations – Virtual, In-Person or Hybrid**

RECOMMENDATION

THAT Council direct staff to continue with virtual advisory committee meetings until the end of the current committee term.

EXECUTIVE SUMMARY

The purpose of this corporate report is to provide Council with feedback regarding methods of delivery with future advisory committee (Committee) meetings (virtually, in-person or utilizing a hybrid model). Following a number of considerations, staff recommend that Committee meetings continue in virtual format until the end of the current Committee term.

INTRODUCTION/BACKGROUND

The City's Committee meetings have been held virtually through Microsoft Teams since fall, 2020. With COVID-19 restrictions lifting staff have received inquiries as to when meetings can resume in-person. The topic of "Future Meeting Methods" was placed on each Committee agenda in March and April of this year. Members were asked to provide feedback on their preferences for meetings moving forward. Attached to this report as Appendix A is a table summarizing the feedback received from Committee members.

In reviewing this information there is not full agreement on a preferred meeting method from Committee members. The Economic Development Advisory Committee and the Housing Advisory Committee had all voting members requesting to meet in-person, while the Environmental Advisory Committee had all voting members preferring meetings to continue virtually. The Arts and Culture Advisory Committee, History and Heritage Advisory Committee and Public Art Advisory Committee were split on preferences for in-person and virtual meeting.

Since the COVID-19 pandemic, virtual meetings have become a new meeting format that has become well accepted. Committee Members applied for the current Committee term with the understanding that meetings would be taking place fully virtually. The City has been able to utilize Microsoft Teams technology and has found that virtual meetings provide for good quality sound and visual. This is much different from committee meeting recordings started during this Council term.

In working with the City IT staff it is noted that the audio/video technology in the Council Chambers was not designed to accommodate in-person committee meetings, and while an ad-hoc solution was put in place during this Council term, it did not provide for an effective and seamless solution. To properly accommodate in-person committee meetings a dedicated microphone for each speaker would be required. This will pose a significant investment in equipment, furniture, and the associated logistics (room set up for each meeting type and take down and, etc.). Continuing to deliver virtual Committee meetings will allow for a more predictable, accessible and cost-effective approach to conducting these meetings.

Due to current limitations in regard to Committee meetings, staff do not feel confident that reverting to the previous way for live streaming these in person meetings would be sufficient (issues arose related to sound and camera angles (visibility) and were not adequate for many of the Committee meetings).

To keep the current and expected quality of sound and visual capture, full in-person attendance could be considered if Committee members were to sit at the Council horseshoe and use Council's microphones. This would allow for clearer sound and full visual for the meeting. However, it is noted that for some Committees, there would still be too many members to sit in Council's chairs. Closer seating could be considered by adding more chairs around the current Council horseshoe; however, this would require close proximity seating and the sharing of microphones between Committee members. In consideration of space, the Chairperson for the meeting could sit at the presentation desk (facing the Committee); however, it is noted that they could then at times have their back to the camera and staff. Staff and non-voting liaisons would be able to be accommodated in the staff seating area.

If meetings were to move forward to an "in-person" format, it must be anticipated that it is likely there would be many instances the Committee members would still seek to have the option to participate virtually when needed (due to illness, travel / travel time etc.). Hybrid meetings, where some members are to participate in-person and others virtually, can be challenging for staff to manage. Hybrid meetings for committees are a concern, the Committee Clerks need to be available to assist members at the meeting in-person and would also need to be providing technical support at times for those joining remotely. Technical issues can delay meeting start times which could be compounded when also assisting members attending in-person (requesting agendas, asking questions relating to the meeting, etc.). While Council meetings currently have the ability to follow a hybrid-meeting format relatively smoothly when required, this does require two (2) staff members to facilitate this (one to take meeting minutes and ensure meeting process, and a second staff person to manage in-person and virtual participants).

Due to these considerations, staff recommend that to be more manageable, effective and efficient, that Committee meetings be held fully virtual or fully in-person.

FINANCIAL IMPLICATIONS

The purchase of additional equipment would be required to deliver hybrid (in person and virtual) Committee meetings efficiently and effectively.

OPTIONS / RISKS / ALTERNATIVES

The following options are available for Council's consideration:

1. Continue with virtual Committee meetings (through Microsoft Teams) for the remainder of the Committee term;

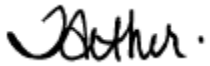
2. Hold Committee meetings again in-person utilizing the Council horseshoe and existing microphones (to be shared for larger sized committees);
3. Hold Committee meetings in-person as they were held previously (around a Committee table with the same previous technology whereby consideration for budget to update equipment in future will be understood); or,
4. Direct that hybrid meetings take place, providing members with an option to participate virtually or in-person (recognizing there will be additional cost incurred in order to have an additional staff person work the hybrid meeting).

Staff recommend Option 1.

CONCLUSION

After reviewing the options, staff recommend that Committee meetings continue to be held virtually for the remainder of the Committee term (October 2022). At this time, virtual meetings provide the best sound and visual coverage for members and would not limit (or crowd) the number of participants included in the meeting. This would address the current concerns regarding being seated in close proximity and allows for a predictable and cost effective means to continue to conduct Committee meetings.

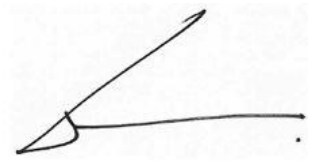
Respectfully submitted,



Tracey Arthur
Director of Corporate Administration

Comments from the Chief Administrative Officer

I concur with the recommendation of this corporate report.



Guillermo Ferrero
Chief Administrative Officer

Appendix A: Future Meeting Methods - Feedback from Committee Members

Appendix A: Future Meeting Methods - Feedback from Committee members

Committee Name	Number of Members with full attendance (staff/ members/ non-voting representatives)	Number of Members who provided feedback:	Members Preferring Virtual	Members Preferring In-Person
Arts and Culture Advisory Committee	12	3	2	1 (but noted they are flexible)
Economic Development Advisory Committee	14	6	0	All voting members
Environmental Advisory Committee	15	6	6	0
Housing Advisory Committee	15	7	0	All voting members
History and Heritage Advisory Committee	11	3	1 (non-voting member)	All voting members
Public Art Advisory Committee	11	5	1	4

Land Use and Planning Committee

Minutes

May 9, 2022, 6:30 p.m.
City Hall Council Chambers
15322 Buena Vista Avenue, White Rock, BC, V4B 1Y6

PRESENT:	Mayor Walker Councillor Chesney Councillor Johanson Councillor Kristjanson Councillor Manning Councillor Trevelyan
STAFF:	Guillermo Ferrero, Chief Administrative Officer Tracey Arthur, Director of Corporate Administration Anne Berry, Director of Planning and Development Services Debbie Johnstone, Deputy Corporate Officer
PUBLIC:	2

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1. CALL TO ORDER

Councillor Trevelyan, Chairperson

The meeting was called to order at 6:32 p.m.

2. ADOPTION OF AGENDA

Motion Number: 2022-LU/P-010 It was MOVED and SECONDED

THAT the Land Use and Planning Committee adopt the agenda for May 9, 2022 as circulated.

Motion CARRIED (6 to 0)

3. ADOPTION OF MINUTES

Motion Number: 2022-LU-P-011 It was MOVED and SECONDED

THAT the Land Use and Planning Committee adopt the minutes of the April 11, 2022, meeting as circulated.

Motion CARRIED (6 to 0)

4. CONSIDERATION OF 1ST AND 2ND READING OF "WHITE ROCK ZONING BYLAW, 2012, NO. 2000, AMENDMENT (RS-4 - 15916 RUSSELL AVENUE), BYLAW, 2022, NO. 2429

Corporate report dated May 9, 2022, from the Director of Planning and Development Services titled "Consideration of 1st and 2nd Reading of “White Rock Zoning Bylaw, 2012, No. 2000, Amendment (RS-4 – 15916 Russell Avenue) Bylaw, 2022, No. 2429”.

The Director of Planning and Development Services provided a PowerPoint that outlined the application.

The following discussion points were noted:

- A member of Council noted the Official Community Plan (OCP) designation for the site (would like to see restriction with housing being removed and replaced with higher density)
- It was noted at the City's Affordable Housing Workshop held in April that the most affordable home is the existing home

Motion Number: 2022-LU/P-012 It was MOVED and SECONDED

THAT the Land Use and Planning Committee recommend that Council give first and second readings to “White Rock Zoning Bylaw, 2012, No. 2000, Amendment (RS-4 – 15916 Russell Avenue) Bylaw, 2022, No. 2429”.

Voted in the Negative (2): Councillor Johanson, and Councillor Kristjanson

Motion CARRIED (4 to 2)

Motion Number: 2022-LU/P-0123 It was MOVED and SECONDED

THAT the Land Use and Planning Committee recommend that Council direct staff to schedule the public hearing for "White Rock Zoning Bylaw, 2012, No. 2000, Amendment (RS-4 – 15916 Russell Avenue) Bylaw, 2022, No. 2429".

Voted in the Negative (2): Councillor Johanson, and Councillor Kristjanson

Motion CARRIED (4 to 2)

Motion Number: 2022-LU/P-014 It was MOVED and SECONDED

THAT the Land Use and Planning Committee recommend that Council direct staff to address the following conditions prior to bringing "White Rock Zoning Bylaw, 2012, No. 2000, Amendment (RS-4 – 15916 Russell Avenue) Bylaw, 2022, No. 2429" back for consideration of final adoption:

a. **Ensure that all engineering requirements and issues, including road dedication and the execution of a Works and Servicing Agreement, are addressed to the satisfaction of the Director of Engineering and Municipal Operations;**

b. **Ensure that all matters pertaining to tree protection and retention are addressed to the satisfaction of the Director of Planning and Development Services.**

c. **Require the applicant to sign a no-build covenant related to the 17-metre setback, the no-build covenant is to be registered on title.**

d. **Confirm and ensure the recommendations of the final arborist report, approved by the Director of Planning and Development Services and, more specifically the City's Arboricultural Technician, are implemented and maintained through future demolition and construction activities; and**

e. **Complete the demolition of the existing dwelling to the satisfaction of the Director of Planning and Development Services.**

Motion CARRIED (6 to 0)

5. CONCLUSION OF THE MAY 9, 2022 LAND USE AND PLANNING COMMITTEE MEETING

The meeting was concluded at 6:43 p.m.

Councillor Trevelyan, Chairperson

Tracey Arthur, Director of Corporate Administration

Public Art Advisory Committee

Minutes

May 10, 2022, 4:00 p.m.
City Hall Council Chambers
15322 Buena Vista Avenue, White Rock, BC, V4B 1Y6

PRESENT:	Barbara Cooper, Community Member Jim Adams, Community Member Gary Kennedy, Community Member (joined at 4:07 p.m.) Yvonne Everson, Community Member Patryk Stasieczek, Community Member (left at 5:27 p.m.)
COUNCIL:	Councillor David Chesney, Chairperson (non-voting)
ABSENT:	Patti Ghuman, Community Member
STAFF:	Eric Stepura, Director of Recreation and Culture Elizabeth Keurvorst, Manager of Cultural Development Janessa Auer, Committee Clerk

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1. CALL TO ORDER

The Chairperson called the meeting to order at 4:04 p.m.

2. ADOPTION OF AGENDA

Motion Number 2022-PAAC-007: It was MOVED and SECONDED

THAT the Public Art Advisory Committee adopts the agenda for the May 10, 2022 meeting as circulated.

Motion CARRIED

3. ADOPTION OF MINUTES

Motion Number 2022-PAAC-008: It was MOVED and SECONDED

THAT the Public Art Advisory Committee adopts the minutes of the April 12, 2022 meeting as circulated.

Motion CARRIED

4. BUSINESS ARISING FROM ACTION AND MOTION TRACKING DOCUMENT

The Manager of Cultural Development provided a brief update regarding the status of action items and recommendations on the Committee's action and motion tracking document.

As a follow-up to a previous action item noted, Committee member, G. Kennedy, provided a PowerPoint presentation regarding potential locations for mural placement within the City, as well as recommended ideas and topics to consider when embarking on this process.

A roundtable discussion followed, during which time the Manager of Cultural Development noted that this topic will be brought forward for further action during the discussion workshop for the creation of an Art Plan for the City.

5. UPDATE ON ARTS AND CULTURAL ADVISORY COMMITTEE MOTIONS TO COUNCIL

The Director of Recreation and Culture provided an update regarding the following recommendations that were recently presented to, and endorsed by, Council by the Arts and Cultural Advisory Committee:

2022-ACAC-007: THAT the Arts and Cultural Advisory Committee recommends that Council direct staff to invite two (2) representatives each from the Public Art Advisory Committee, the Economic Development Advisory Committee, and the Arts and Cultural Advisory Committee to participate in a roundtable discussion workshop facilitated by the Manager of Cultural Development, and invite the Economic Development Officer to participate, focused on creating a report regarding placemaking in the City.

2022-ACAC-008: THAT the Arts and Cultural Advisory Committee recommends that Council directs staff to focus the programming of

Canada Day with an emphasis on celebrating White Rock's diverse communities.

2022-ACAC-009: THAT the Arts and Cultural Advisory Committee recommends that Council endorse the Committee preparing a report, in collaboration with the BIA, to present to commercial business owners, informing of the benefits of allowing their vacant storefronts to be used to display artwork from local artists.

A roundtable discussion followed, during which time Committee members shared feedback and suggestions regarding the above recommendations.

During discussion regarding the recommendation to hold a roundtable workshop for the creation of a placemaking report, Committee members, P. Stasieczek and G. Kennedy, were selected as the Committee's two (2) representatives to participate.

ACTION ITEM: Committee Clerk to canvas staff, Committee Chairpersons, and Committee representatives to determine a suitable date and time for the multi-Committee roundtable workshop to take place.

6. REVIEW OF UPDATED PUBLIC ART AND PLACEMAKING ART POLICY

The Manager of Cultural Development provided an overview of the updated Public Art and Placemaking Art Policy 708, highlighting specific updates that will be relevant to the Committee as they move forward with their 2021-2022 Work Plan priority items.

7. PUBLIC ART INCLUSION AT NEW JOHNSTON ROAD DEVELOPMENT SITE

The Manager of Cultural Development informed the Committee about a development company's recent inquiry about public art inclusion in their Johnston Road residential construction project.

It was noted that this will be a standing agenda item going forward, and updates will be provided as they become available.

8. DISCUSSION ON THE PROCESS AND REQUIREMENTS FOR APPROVAL OF ARTS-RELATED COMPETITIONS IN WHITE ROCK

The following draft motion was presented to the Committee prior to the meeting by member, J. Adams, for consideration and discussion:

> *"With the current sculpture competition having made its way through an ad hoc process to City Council outside the Public Art Advisory Committee's mandate, and with the potential of other arts related competitions coming to Council, BE IT MOVED THAT all arts competitions that have an impact on the City or the Public Art Policy first come before the Public Art Advisory Committee to ensure that they are in compliance with the Public Art Policy."*

The Committee shared feedback regarding the draft motion and engaged in a discussion around the process for future arts-related event applications and approvals. The following suggestions were noted:

- That *all* arts-related events, including competitions, that relate to public art in the City, first come before the Public Art Advisory Committee to ensure that they comply with the Public Art and Placemaking Art Policy; and,
- That the City website's Public Art page be updated to include guidelines, applicable forms and helpful links for individuals/organizations applying to facilitate arts-related events in the City.

ACTION ITEM: Committee members to review the Public Art page on the City's website and submit their ideas around how to include guidelines and information regarding the application process for potential art events/competitions, as well as general page design feedback, to the Manager of Cultural Development, to be discussed further at the next meeting.

ACTION ITEM: The Director of Recreation and the Manager of Cultural Development to bring forward a policy recommendation for the inclusion of art event application guidelines within the Public Art and Placemaking Art Policy to the next meeting, for discussion and feedback.

9. CREATION OF AN ART PLAN FOR THE CITY: PREPARING FOR AN UPCOMING WORKSHOP

The Manager of Cultural Development provided an overview of recommended steps in creating an art plan for the City, and of how to optimize the upcoming workshop/facilitated discussion, following these key steps:

1. Using rich language, define the three (3) neighbourhoods' identities (waterfront, uptown, walkways district). This will clarify how people interact culturally with one another and their environment (placemaking statements).
2. Then, taking one area at a time, brainstorm art opportunities and ballpark budgets. These could range from temporary banners and murals to more permanent integrated artwork. Some research may be required before Step 3 on a budget, conferring with Engineering and/or Planning, etc.
3. Finally (follow up meeting likely) prioritize the opportunities for each area and bring them together with firm budgets into the Art Plan; provide rationale for the plan. Leave room for unexpected opportunities that arise.
4. Make a recommendation to Council to accept the recommended art plan for the City.

During this overview, the Manager of Cultural Development shared a presentation regarding the inclusion of placemaking art in the Walkways District, as an example.

ACTION ITEM: Committee Clerk to review upcoming possible dates for the art plan workshop, in collaboration with staff liaisons and Chairperson, and then canvas Committee members about their availability (to take place after the multi-committee and staff roundtable workshop regarding the creation of a placemaking art report).

10. 2021-2022 WORK PLAN UPDATE

The Manager of Cultural Development noted there were no further updates at this time.

11. OTHER BUSINESS

A Committee member inquired about whether the art plan workshop would be held in person. The Manager of Cultural Development confirmed that this type of workshop would be most effective if held in-person.

12. INFORMATION

None

13. 2022 MEETING SCHEDULE

The following meeting schedule was previously approved by the Committee and was provided for information purposes:

- June 14, 2022;
- July 12, 2022; and,
- September 13, 2022.

All meetings are scheduled to take place from 4:00 p.m. to 6:00 p.m.

14. CONCLUSION OF THE MAY 10, 2022 PUBLIC ART ADVISORY COMMITTEE MEETING

The Chairperson declared the meeting concluded at 5:29 p.m.

Councillor Chesney, Chairperson

Janessa Auer, Committee Clerk

Housing Advisory Committee

Minutes

May 11, 2022, 4:00 p.m.
Electronic Meeting via Microsoft Teams

PRESENT:	Councillor Manning, Chairperson (non-voting) Councillor Trevelyan, Vice-Chairperson (non-voting) Stephen Crozier, Community Member Greg Duly, Community Member Brian Hagerman, Community Member Abhishek Mamgain, Community Member (joined at 4:04 p.m.) Gary Quinn, Community Member Marie Sabine, Community Member
ABSENT:	Chris Harris, Community Member
GUEST:	Mayor Walker
STAFF:	Anne Berry, Director of Planning and Development Services Alex Wallace, Manager of Planning Chloe Richards, Committee Clerk

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1. CALL TO ORDER

The Chairperson called the meeting to order at 4:03 p.m.

2. ADOPTION OF AGENDA

Motion Number 2022-HAC-029: It was MOVED and SECONDED

THAT the Housing Advisory Committee adopt the agenda for May 11, 2022 as circulated.

Motion CARRIED

3. ADOPTION OF MINUTES

A. Mamgain joined the meeting at 4:04 p.m.

Motion Number 2022-HAC-030: It was MOVED and SECONDED

THAT the Housing Advisory Committee adopts the minutes of the April 13, 2022 and April 26, 2022 meetings as circulated.

Motion CARRIED

4. HOUSING STRATEGY ACTION PLAN

Staff provided a summary of the April 25, 2022 Regular Council meeting and an update on the Housing Strategy Action Plan. At the April 25, 2022 Regular Council meeting, Council endorsed two (2) of the four (4) pillar recommendations. Due to time limitations, not all pillar recommendations were included in the April 25th Regular Council agenda, and they will be added to the May 30th Regular Council agenda for review.

A roundtable discussion on the Housing Strategy Action Plan took place.

Motion Number 2022-HAC-031: It was MOVED and SECONDED

THAT the Housing Advisory Committee take the entirety of Pillars 1, 2 , 9, 10, 11, and the high-level statement of Pillar 5, outlined in the Housing Strategy Action Plan presentation, with guidance from staff, to re-focus the Committee's discussion points going forward.

Motion CARRIED

5. 2021-2022 WORK PLAN UPDATE

Due to meeting time limitations, Item 5, *2021-2022 Work Plan Update*, will be discussed at the following Housing Advisory Committee meeting.

6. CAC FUNDING AND SENIOR SPOT ZONING

Due to meeting time limitations, Item 6, *CAC Funding and Senior Spot Zoning*, will be discussed at the following Housing Advisory Committee meeting.

7. OTHER BUSINESS

None

8. INFORMATION

8.1 COMMITTEE ACTION TRACKING

Corporate Administration provided an action and motion tracking document to the Committee for information. This document is updated after each meeting.

9. 2022 MEETING SCHEDULE

The following meeting schedule was approved by the Committee and is provided for information purposes:

- May 24, 2022;
- June 28, 2022;
- July 26, 2022; and
- September 27, 2022.

All meeting times are scheduled to take place from 4:00 p.m. to 6:00 p.m.

10. CONCLUSION OF THE MAY 11, 2022 HOUSING ADVISORY COMMITTEE MEETING

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

Councillor Manning, Chairperson

Chloe Richards, Committee Clerk

Arts and Cultural Advisory Committee

Minutes

May 12, 2022, 4:00 p.m.
Via Microsoft Teams

PRESENT:	Jim Adams, Community Member Elaine Cheung, Community Member Denice Thompson, Community Member
NON-VOTING MEMBERS:	Karin Bjerke-Lisle, White Rock Museum & Archives
COUNCIL:	Mayor Walker (non-voting) Councillor Manning, Chairperson (non-voting)
ABSENT:	Louise Taylor, Community Member
STAFF:	Eric Stepura, Director of Recreation and Culture Elizabeth Keurvorst, Manager of Cultural Development Janessa Auer, Committee Clerk

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1. CALL TO ORDER

The meeting was called to order at 4:04 p.m.

2. ADOPTION OF AGENDA

Motion Number 2022-ACAC-005: It was MOVED and SECONDED

THAT the Arts and Cultural Advisory Committee adopts the agenda for the May 12, 2022 meeting as circulated.

Motion CARRIED

3. ADOPTION OF MINUTES

Motion Number 2022-ACAC-006: It was MOVED and SECONDED

THAT the Arts and Cultural Advisory Committee adopts the minutes of the April 14, 2022 meeting as circulated.

Motion CARRIED

4. BUSINESS ARISING FROM ACTION AND MOTION TRACKING DOCUMENT

The Director of Recreation and Culture provided an update regarding the Committee's three (3) recent recommendations that were endorsed by Council at their April 25, 2022 meeting.

Committee members, E. Cheung and D. Thompson, were selected as the Committee's representatives for the upcoming multi-Committee workshop for the creation of a report around placemaking in the City.

ACTION ITEM: Committee Clerk to canvas Committee Chairpersons, staff liaisons and selected Committee representatives from the Arts and Cultural Advisory Committee, Public Art Advisory Committee, and Economic Development Advisory Committee to determine a date for the upcoming multi-Committee placemaking workshop.

Regarding the White Rock Promenade Sculptures Competition, the Chairperson noted that the Call to Sculptors has gone out, so he encouraged Committee members or members of the public to advise any sculptors they know in case they are interested in applying.

5. PUBLIC ART DISPLAYS IN VACANT STOREFRONTS

Following Council's endorsement during the April 25, 2022 Regular Council meeting, the Committee discussed plans for preparing a report, in collaboration with the White Rock Business Improvement Association (BIA), informing of the benefits of allowing vacant storefronts to be used to display artwork from local artists, with the intention of presenting this report to local commercial business owners.

ACTION ITEM: Committee member, E. Cheung, to begin designing a PowerPoint presentation for the Vacant Storefront Public Art Displays report.

The Director of Recreation and Culture shared feedback around this topic that was provided during discussion with the Public Art Advisory Committee at their May 10, 2022 meeting.

6. DISCUSSION AROUND ART TOURS OF LOCAL ARTISTS' HOMES

The Chairperson led the Committee in a roundtable discussion, at which time members shared their feedback regarding a recent Crescent Beach artists' walk event and discussed ideas around planning more City events of this type.

ACTION ITEM: Mayor Walker to obtain relevant information about an upcoming artists' walk event that a friend of his is involved in and share this information with the Committee's Chairperson or staff liaison.

ACTION ITEM: Committee member, J. Adams, to contact Bayview Arts Collective, the organizers of the recent Crescent Beach artists' walk event, to obtain information around what inspired them, how they organized their event, what challenges they faced, etc., and to bring this information forward for discussion during the next meeting.

ACTION ITEM: Committee member, E. Cheung, to contact the organizers of the South Rock Art Tour to obtain information about their upcoming artists' walk event, and to bring gathered information forward to the upcoming multi-Committee workshop.

ACTION ITEM: The Director of Recreation and Culture to connect with his neighbour, who hosts an annual garden party showcasing local artists' work, and to share any helpful information with the Committee at their next meeting.

The Manager of Cultural Development noted that the City does not currently have any guidelines, or a framework, in place for residents and/or organizations interested in applying to facilitate community block party style, pop-up events.

Motion Number 2022-ACAC-007: It was MOVED and SECONDED

THAT the Arts and Cultural Advisory Committee recommends that Council endorse the Committee including a discussion around establishing a framework and guidelines for residents and/or organizations who are interested in facilitating block party style, pop-up community events in the City as an agenda item for their next meeting.

Motion CARRIED

7. MULTI-COMMITTEE DISCUSSION WORKSHOP FOR THE CREATION OF A CITY PLACEMAKING REPORT

The Manager of Cultural Development informed the Committee that planning for this workshop is underway. Following the appointment of two (2) representatives from the Economic Development Advisory Committee, after their May 18, 2022 meeting, the Committee Clerk will move forward with setting up a date.

A Committee member inquired about the possibilities around fundraising for initiatives that may be suggested during this upcoming multi-Committee workshop, in cases when the City does not have the required budget to fund proposed initiatives on its own. A roundtable discussion followed.

ACTION ITEM: The Director of Recreation and Culture to look into whether the Peninsula Community Foundation is still up and running and, if so, whether it has a component for providing funding for the arts.

Motion Number 2022-ACAC-008: It was MOVED and SECONDED

THAT the Arts and Cultural Advisory Committee recommends that Council endorse the Committee establishing their 2021-2022 Work Plan item 1.3.1, *"Explore the options for creating an Arts Endowment Fund,"* as their top priority going forward.

Motion CARRIED

8. 2021-2022 WORK PLAN UPDATE

The Chairperson introduced this item and asked the Committee if they had any comments or questions.

A Committee member raised the topic of the City's marketing and tourism promotion processes, in relation to multiple priority items on the 2021-2022 Work Plan. A roundtable discussion followed.

9. OTHER BUSINESS

The Manager of Cultural Development provided an update and highlights to the Committee regarding a recent lunch meeting that she attended with Mayor Walker, the Director of Recreation and Culture, the Manager of Communications and Government Relations, and representatives from the Semiahmoo First

Nation (SFN), Chief Harley Chappell, Councillor Joanne Charles, Councillor Jennine Cook, along with their Communications representatives.

Following this update, the Committee engaged in a roundtable discussion, during which time Mayor Walker and the Director of Recreation and Culture shared their highlights from the meeting as well.

10. INFORMATION

None

11. 2022 MEETING SCHEDULE

The following schedule of meetings was previously approved by the Committee and was provided for information purposes:

- June 9, 2022;
- July 14, 2022; and,
- September 8, 2022.

All meetings are scheduled to take place from 4:00 p.m. to 6:00 p.m.

12. CONCLUSION OF THE MAY 12, 2022 ARTS AND CULTURAL ADVISORY COMMITTEE MEETING

The Chairperson declared the meeting concluded at 5:30 p.m.

Councillor Manning, Chairperson

Janessa Auer, Committee Clerk

THE CORPORATION OF THE

CITY OF WHITE ROCK

DEVELOPMENT VARIANCE PERMIT NO. 443

1. This Development Variance Permit No. 443 is issued to **WHITE ROCK PLAYERS' CLUB** as the owner and shall apply only to ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and being in the City of White Rock, in the Province of British Columbia, and more particularly known and described as:

   Legal Description: Lot 3, Except: West 7 Feet (Reference Plan EPP68636), Section 11, Township 1, New Westminster District Plan 8437

   PID: 011-306-599

   As indicated on Schedule A

2. This Development Variance Permit No. 443 is issued pursuant to the authority of Section 498 of the *Local Government Act, R.S.B.C. 2015, Chapter 1* as amended, and in conformity with the procedures prescribed by "White Rock Planning Procedures Bylaw, 2017, No. 2234," as amended.

3. The provisions of the "White Rock Sign Bylaw, 2010, No. 1923," as amended, is varied as follows:

   (a) Part 7, Section 3.3 is varied to read as follows:

   "The Sign Copy Area shall not exceed 1.71 metres (5.6 feet) and shall not exceed 45% of the Sign Area."

4. Said lands shall be developed in accordance with all terms, conditions, and provisions of this permit and any plans and specifications attached to this permit which shall form a part hereof.

   Terms and Conditions:

   (a) The varied signage plan shall substantially conform to the plans attached hereto as Schedule B.

5. Where the holder of this Permit does not receive final approval of a sign permit for the varied signage within two (2) years after the date this Permit was issued, the Permit shall lapse, unless the Council, prior to the date the permit would have lapsed, has authorized the extension of the Permit.

6. This permit does not constitute a Sign Permit, or a Building Permit.

Authorizing Resolution passed by the Council on the _____ day of _____ 2022.

This development variance permit has been executed at White Rock, British Columbia, the _____ day of _____ 2022.

The Corporate Seal of THE CORPORATION
OF THE CITY OF WHITE ROCK was hereunto
affixed in the presence of:

_____
Mayor – Darryl Walker

_____
Director of Corporate Administration – Tracey Arthur

metrovancouver
SERVICES AND SOLUTIONS FOR A LIVABLE REGION

Office of the Chair
Tel. 604 432-6215 or via Email
CAOAdministration@metrovancouver.org

May 3, 2022

File: CR-12-01
Ref: RD 2022 Apr 29

Mayor Darryl Walker and Council
City of White Rock
15322 Buena Vista Avenue
White Rock, BC V4B 1Y6
VIA EMAIL: dwalker@whiterockcity.ca; tarthur@whiterockcity.ca

Dear Mayor Walker and Council:

Submission of *Metro 2050* for Acceptance by Affected Local Governments

Metro Vancouver has been working closely with member jurisdictions, local First Nations, and other agencies and organizations over the past three years on the review and update of the regional growth strategy. Thank you for your participation and thoughtful contributions to the *Metro 2050* process. *Metro 2050* will replace *Metro Vancouver 2040: Shaping our Future*, and will guide land use decisions in Metro Vancouver over the coming decades.

Metro 2050 introduces important new and enhanced policies that will help Metro Vancouver, member jurisdictions, TransLink, and other parties address the significant challenges facing this region - including climate change, housing affordability, equity, and resilience - and will advance our shared vision for a sustainable, prosperous, and livable region.

Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022, was given first and second readings by the Metro Vancouver Board on March 25, 2022, and a public hearing was held on April 20, 2022. At its meeting of April 29, 2022, the Metro Vancouver Board resolved to refer *Bylaw No. 1339, 2022* to all affected local governments (signatories) for acceptance. A copy of the Bylaw and the accompanying report dated April 22, 2022, titled "*MVRD Regional Growth Strategy Bylaw No. 1339, 2022*, a bylaw to adopt *Metro 2050* – Public Hearing Minutes and Bylaw Referral for Acceptance" is attached.

In accordance with Section 436 of the *Local Government Act*, affected local governments must, by way of a council resolution submitted to Metro Vancouver and within 60 days of receipt of this notice, accept the regional growth strategy. The *Local Government Act* affirms that if an affected local government fails to act within the period for acceptance, it is deemed to have accepted the regional growth strategy.

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If an affected local government does not accept the regional growth strategy, it must indicate by way of a resolution within the sixty (60) day period: (a) the provision(s) to which it objects, (b) the reasons for its objection, and (c) whether it is willing that a provision to which it objects be included in the regional growth strategy on the basis that the provision will not apply to its jurisdiction.

Upon the conclusion of the acceptance period, Metro Vancouver staff will be reporting to the Metro Vancouver Board at its July 29, 2022 meeting on the status of affected local government acceptances, and, if appropriate, whether third reading and adoption of *Bylaw No. 1339, 2022* may be considered. Correspondingly, this will repeal *Metro 2040* (i.e. *Greater Vancouver Regional District Regional Growth Strategy Bylaw No. 1136, 2010*, as amended).

At the April 29, 2022 Metro Vancouver Board meeting, staff provided a summary of the engagement on the development of *Metro 2050* over the past three years. The Board expressed that this would be helpful context for member jurisdictions, and asked that the presentation be attached to the consideration of acceptance letter and email going to affected local government Councils and Boards. Please find attached the presentation titled *"Metro 2050: Public Hearing and Referral for Acceptance"*.

Council resolutions can be sent to Chris Plagnol, Corporate Officer, Metro Vancouver, by email at Chris.Plagnol@metrovancouver.org.

If you have any questions about the regional growth strategy or the process for adopting the Bylaw, please do not hesitate to contact Heather McNell, General Manager, Regional Planning and Housing Services, by email at Heather.Mcnell@metrovancouver.org or by phone at 604-436-6813.

Yours sincerely,

Sav Dhaliwal

Sav Dhaliwal
Chair, Metro Vancouver Board

SD/JWD/hm

cc: Guillermo Ferrero, Chief Administrative Officer, City of White Rock
Anne Berry, Director, Planning and Development Services, City of White Rock
Jerry W. Dobrovolny, Commissioner/Chief Administrative Officer, Metro Vancouver
Heather McNell, General Manager, Regional Planning and Housing Services, Metro Vancouver
Chris Plagnol, Corporate Officer, Metro Vancouver

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Enclosures:

1. Report dated April 22, 2022, titled *"MVRD Regional Growth Strategy Bylaw No. 1339, 2022*, a bylaw to adopt *Metro 2050* – Public Hearing Minutes and Bylaw Referral for Acceptance"
2. *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*
3. Presentation – *Metro 2050* Public Hearing Report and Referral for Acceptance

All enclosures can also be found at this link:
https://cloudshare.metrovancouver.org:5001/sharing/3wjoLF21c

51386459

To: MVRD Board of Directors

From: Heather McNell, General Manager, Regional Planning and Housing Services
Chris Plagnol, Corporate Officer

Date: April 22, 2022 Meeting Date: April 29, 2022

Subject: ***MVRD Regional Growth Strategy Bylaw No. 1339, 2022*, a bylaw to adopt *Metro 2050* – Public Hearing Minutes and Bylaw Referral for Acceptance**

RECOMMENDATION

That the MVRD Board:

a) receive the minutes of the Public Hearing held April 20, 2022 regarding *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*, a bylaw to adopt *Metro 2050* as the regional growth strategy for Metro Vancouver;

b) refer *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*, to affected local governments for acceptance;

c) refer *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*, to the Minister of Municipal Affairs; and

d) suspend the rules outlined in Part 13 of the *Procedure Bylaw*, relative to hearing delegations, if requests to appear as delegations are in relation to *Metro 2050*, until such time as *Bylaw 1339, 2022* is adopted, defeated or otherwise disposed.

EXECUTIVE SUMMARY

After three years of research, policy analysis, and engagement, the updated regional growth strategy, titled *Metro 2050 (Bylaw No. 1339)*, was given first and second reading at the March 25, 2022 MVRD Board meeting. It was also referred it to public hearing (Attachment 1). The public hearing was held on April 20, 2022 which included 2 written submissions and 10 speakers providing oral remarks (Attachment 2). Pursuant to the *Local Government Act*, the next step in the process is to refer *Metro 2050* to affected local governments for consideration of acceptance, which must be completed within 60 days of receipt of notice. It is expected that the MVRD Board will consider third and final adoption of the Bylaw after the acceptance period at its July 29, 2022 meeting.

PURPOSE

To report on the results of the Public Hearing held on April 20, 2022 regarding *MVRD Regional Growth Strategy Bylaw No. 1339, 2022,* known as *Metro 2050,* (the "Bylaw"), and to initiate acceptance of the Bylaw by affected local governments.

BACKGROUND

At its March 25, 2022 meeting, the MVRD Board gave first and second reading to the Bylaw and scheduled a public hearing for the evening of April 20, 2022.

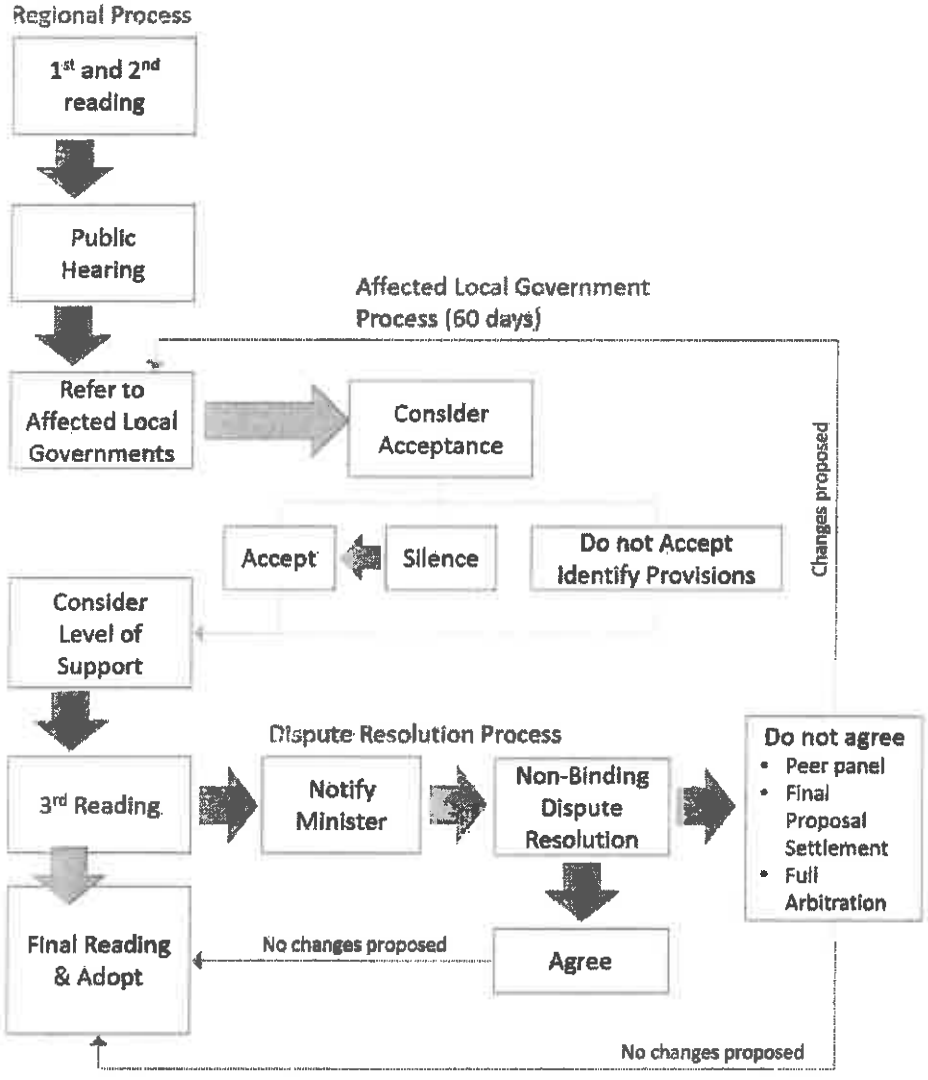
This report brings forward the minutes of the public hearing, summarizes the comments received, recommends referral of the Bylaw to affected local governments for acceptance and to the Minister

of Municipal Affairs as required by the *Local Government Act*, and provides the Board with information about next steps in the process.

PROPOSED BYLAW

The proposed *Metro 2050* Bylaw brings forward the updated regional growth strategy, an update to *Metro Vancouver 2040: Shaping our Future* that has been developed with considerable consultation, discussion, and review over the past three years. Figure 1 lays out the regional adoption and affected local government acceptance process. Each step is discussed below.

Figure 1. Regional Growth Strategy Acceptance Process



Public Hearing

Pursuant to the terms of the *Metro 2050* Engagement Plan, a public hearing was held on April 20, 2022 in the Metro Vancouver boardroom for in-person speakers and over video conferencing for virtual speakers. The MVRD Board must receive a record of the public hearing in the

form of written minutes and/or an oral report by the Public Hearing Chair before the Directors can consider referral for acceptance and adoption of the Bylaw.

Notice for the public hearing was published in the Vancouver Sun on April 5 and 12, 2022, pursuant to the requirements of the *Local Government Act* (Attachment 1); as well as in 10 additional local newspapers between April 13-15, 2022, and posted on the Metro Vancouver website. This has met the minimum notice requirements as set out in the *Act*.

As indicated by the minutes of the Public Hearing (Attachment 2), 2 written submissions were made prior to conclusion of the Public Hearing with 0 in favour of the proposed *Metro 2050* Bylaw, and 2 opposed to it. The written submissions are part of the April 20, 2022 Public Hearing agenda. 10 speakers signed up to address the MVRD Board during the Public Hearing, of which 6 opposed, and 4 were in favour. A summary of speakers' presentations is provided in the Public Hearing minutes, and the Public Hearing agenda includes all the written submissions.

New Information After the Public Hearing

Once a public hearing has been held, a general rule applies against receiving new information. The purpose of this is rule is to safeguard procedural fairness and for accountability to the public.

Once the *Metro 2050* Public Hearing is concluded, and the Bylaw is referred out for acceptance, affected local governments will need to consider the regional growth strategy in the context of their Official Community Plan and other matters affecting their jurisdiction, which is more narrowly focused than how the MVRD Board must consider the regional growth strategy. The MVRD Board will need to, at third reading and adoption of the bylaw, consider the degree of acceptance and alignment as well as the content of the regional growth strategy from a regional perspective. As a result, any information received by the affected local governments when they are considering acceptance of *Metro 2050*, is not necessarily new information received by MVRD Board.

The *Local Government Act* process for adoption of a regional growth strategy bylaw is unique, and specifically contemplates that a Regional District Board will receive reasons, in writing, from affected local governments that accept or refuse to accept the regional growth strategy. As such, those reasons are not new information requiring a new Public Hearing, unless they contain new information not previously considered by the MVRD Board or the public, and where that information is so material and significant that, for procedural fairness, it needs to be brought to the attention of the public at a new public hearing.

If, during consideration of *Metro 2050*, an affected local government (including Mayors or other Councillors who are also Directors on the MVRD Board) hears information that they determine is new, material and significant that, and for procedural fairness needs to be brought to the attention of the public under the MVRD process for adoption of the *Metro 2050* bylaw, then such Director(s) may bring such information to the Board for consideration.

However, given the extensive engagement and consultation process undertaken for *Metro 2050* to date, combined with the Public Hearing, it is unlikely that any new information could be brought forward that is so material or significant that it would warrant a new public hearing.

Given that the Public Hearing has concluded, that the MVRD Board has received significant and broad feedback from the public as per the *Metro 2050* Engagement Plan, and with an aim to not duplicating the Public Hearing, it is recommended that the Board suspend the rules associated with hearing delegations or invited presentations until the Bylaw is given final consideration.

In addition to the requirements for a public hearing for *Metro 2050*, consideration must also be given by affected local governments on the acceptance of the regional growth strategy.

Affected Local Government Acceptance

Affected local governments are defined in the *Local Government Act* as: Metro Vancouver member municipalities (excluding Bowen Island), Tsawwassen First Nation, Fraser Valley Regional District, Squamish-Lillooet Regional District, and TransLink. The *Local Government Act* also requires the Bylaw to be submitted to the Minister of Municipal Affairs.

Pursuant to section 436 of the *Local Government Act*, each affected local government must, by resolution, accept the regional growth strategy or refuse to accept it within 60 days of receipt, or the affected local government is deemed to have accepted the regional growth strategy.

This process is separate from the regional process. Each member jurisdiction, TransLink Board, and Boards of adjacent regional districts must consider *Metro 2050* as the regional federation's vision for how to manage growth that is anticipated to come to the region in a way that reflects the federation's objectives to:

- put growth in the right places (contained within the Urban Containment Boundary and directed to a network of complete and connected Urban Centres and Frequent Transit Development Areas);
- protect important lands (i.e. the region's agricultural, conservation and recreation and industrial lands);
- support improved mobility;
- support the efficient provision of urban infrastructure (i.e. transit and utilities);
- address climate change and natural hazards; and
- support the provision of affordable housing (particularly near transit).

If an affected local government does not accept the regional growth strategy, it must indicate which provision(s) it objects to, the reasons for the objection, and whether it is willing for a provision to which it objects to be included in the regional growth strategy on the basis that the provision will not apply to its jurisdiction.

Once the acceptance period is complete, staff will bring forward received acceptances with an assessment of alignment and support across the region. The Board will be given an opportunity to consider third reading, and if support has been broadly achieved, final reading and adoption of the updated regional growth strategy bylaw. This opportunity is anticipated to occur at the MVRD Board's July 29, 2022 meeting.

Resolving Differences

If one or more affected local governments refuses to accept the regional growth strategy, as per section 439 of the *Local Government Act*, the MVRD Board must notify the Minister of Municipal Affairs in writing. The Minister must then initiate a non-binding resolution process to attempt to reach acceptance on the regional growth strategy. The Minister must at that time, specify a time period within which the parties must begin the resolution process and may specify a time period within which the parties must conclude the resolution process. Any affected local government may participate in a non-binding resolution process. The choice of non-binding resolution process is determined collaboratively between the MVRD Board and the affected local government(s) that refused to accept the regional growth strategy.

If changes to the regional growth strategy that affect all local governments are proposed as result of the non-binding dispute process, the regional growth strategy must be submitted again to affected local governments for acceptance, however they cannot indicate an objection to a provision they already accepted through the previous acceptance period.

If the non-binding dispute resolution process is unsuccessful, the regional growth strategy is to be settled by peer panel, final proposal arbitration, or full arbitration. The matter is to be settled for all affected local government in the same proceedings.

ALTERNATIVES

1. That the MVRD Board:
   a) receive the minutes of the Public Hearing held April 20, 2022 regarding *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*, a bylaw to adopt *Metro 2050* as the regional growth strategy for Metro Vancouver;
   b) refer *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*, to all affected local governments for acceptance;
   c) refer *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*, to Minister of Municipal Affairs; and
   d) suspend the rules outlined in Part 13 of the *Procedure Bylaw*, relative to hearing delegations, if requests to appear as delegations are in relation to *Metro 2050*, until such time as *Bylaw 1339, 2022* is adopted, defeated or otherwise disposed.

2. That the MVRD Board receive for information the report dated April 22, 2022 titled *"MVRD Regional Growth Strategy Bylaw No. 1339, 2022*, a bylaw to adopt *Metro* 2050 – Public Hearing Minutes and Bylaw Acceptance" and provide alternative direction.

FINANCIAL IMPLICATIONS

The financial implications associated with this phase of the *Metro 2050* Bylaw are limited to the costs associated with the public hearing, notably remuneration and public notices. These costs were included in the MVRD Board-approved 2022 budget.

CONCLUSION

Following considerable consultation, discussion, and review over the past three years, at its March 25, 2022 meeting the MVRD Board, gave first and second reading to *MVRD Regional Growth*

Strategy Bylaw No. 1339, 2022, known as *Metro 2050,* and scheduled a public hearing. The Public Hearing was held in the evening of April 20, 2022: 2 written submissions were received, and 10 speakers came forward. This report includes the minutes of the Public Hearing and constitutes the reporting out of the Public Hearing.

At this stage, for the MVRD Board to continue advancing the Bylaw, the *Local Government Act* requires that it be referred to affected local governments for consideration of acceptance. On that basis, staff recommend alternative 1.

Attachment

1. Public Hearing advertisement
2. Minutes of the Public Hearing regarding *Bylaw 1339, 2022*, the *Metro 2050* Bylaw, held on April 20, 2022

References

1. *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*
2. April 20, 2022 Public Hearing Agenda

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Notice of Metro Vancouver Public Hearing

METRO VANCOUVER REGIONAL DISTRICT REGIONAL GROWTH STRATEGY BYLAW NO. 1339, 2022

A Public Hearing will be held to consider *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022* (Metro 2050).

What Is the Bylaw About?

Metro 2050 is the proposed Regional Growth Strategy, a long-range plan for accommodating anticipated future growth to the region with considerations for diverse and affordable housing, transit and mobility, resilient employment, protected ecological and agricultural lands, impacts of climate change and more. Metro 2050 applies to all lands within the boundaries and jurisdiction of the Metro Vancouver Regional District.

How Can I Inspect the Bylaw?

A copy of Metro 2050 and supporting materials may be viewed online at www.metrovancouver.org/metro2050.
Please contact PublicHearing@metrovancouver.org if you would like to make arrangements to inspect the Bylaw and supporting materials in-person at Metro Vancouver Head Office, Metrotower III, 4515 Central Boulevard, Burnaby, BC, during regular office hours 8:00 am to 4:30 pm Monday through Friday, except statutory holidays.

Public Hearing Details

Wednesday, April 20, 2022 at 6:00 pm

28th Floor Boardroom, Metrotower III, 4515 Central Boulevard, Burnaby, BC.

The Public Hearing will be conducted electronically pursuant to the Procedure Bylaw, and streamed live at www.metrovancouver.org.

All persons who believe their interests are affected by the proposed Metro 2050 will be given an opportunity to speak at the Public Hearing. Speakers will be asked to register prior to speaking, and will be limited to a maximum time of five minutes unless otherwise determined by the Chair of the Public Hearing.

How Can I Be Heard?

Submit written submissions to the Corporate Officer as follows:

- PublicHearing@metrovancouver.org
- Metro Vancouver, Metrotower III, 4515 Central Boulevard, Burnaby, BC V5H 0C6
- In-Person at the Public Hearing up until conclusion of the Public Hearing, subject to corporate health and safety protocols currently in place at Metro Vancouver

Register to speak as follows:

Email **PublicHearing@metrovancouver.org** to register in advance and receive instructions on electronic participation

In-Person at the Public Hearing up until conclusion of the Public Hearing, subject to corporate health and safety protocols currently in place at Metro Vancouver

The MVRD Board will not accept written or oral representations after the Public Hearing has concluded.

For further information about Metro 2050 please contact
Sean Galloway, Director, Regional Planning and Electoral Area Services, at **sean.galloway@metrovancouver.org** or **604.451.6616.**

METRO VANCOUVER REGIONAL DISTRICT
PUBLIC HEARING

Minutes of the Public Hearing of the Metro Vancouver Regional District (MVRD) Board of Directors held at 6:00 p.m. on Wednesday, April 20, 2022 in the 28th Floor Boardroom, 4515 Central Boulevard, Burnaby, British Columbia.

MEMBERS PRESENT:

Burnaby, Chair, Director Sav Dhaliwal
North Vancouver City, Vice Chair Director Linda Buchanan*
Anmore, Director John McEwen*
Belcarra, Director Jamie Ross*
Bowen Island, Director David Hocking*
Burnaby, Director Pietro Calendino*
Burnaby, Director Mike Hurley*
Coquitlam, Director Craig Hodge*
Delta, Director George Harvie*
Delta, Director Jeannie Kanakos*
Electoral Area A, Director Jen McCutcheon*
Langley City, Director Gayle Martin*
Langley Township, Alternate Director Petrina Arnason* for Jack Froese
Langley Township, Director Kim Richter*
Lions Bay, Director Ron McLaughlin* (arrived at 6:55 p.m.)
Maple Ridge, Director Mike Morden*
New Westminster, Director Jonathan Coté
North Vancouver District, Director Lisa Muri*
Pitt Meadows, Director Bill Dingwall*
Port Moody, Director Rob Vagramov* (arrived at 6:05 p.m.)
Richmond, Director Malcolm Brodie*
Richmond, Director Harold Steves* (arrived at 6:01 p.m.)
Surrey, Director Linda Annis*
Surrey, Director Doug Elford*
Surrey, Director Laurie Guerra*
Surrey, Director Mandeep Nagra* (arrived at 6:18 p.m.)
Surrey, Director Allison Patton* (arrived at 6:55 p.m.)
Vancouver, Alternate Director Pete Fry* for Kennedy Stewart
Vancouver, Director Adriane Carr
Vancouver, Director Melissa De Genova*
Vancouver, Director Colleen Hardwick*
Vancouver, Director Michael Wiebe (departed at 7:10 p.m.)
West Vancouver, Director Mary-Ann Booth*
White Rock, Alternate Director Scott Kristjanson for Darryl Walker

MEMBERS ABSENT:

Coquitlam, Director Richard Stewart
Port Coquitlam, Director Brad West
Surrey, Director Doug McCallum
Tsawwassen, Director Ken Baird
Vancouver, Director Christine Boyle
Vancouver, Director Lisa Dominato

*denotes electronic meeting participation as authorized by Section 3.6.2 of the *Procedure Bylaw*

STAFF PRESENT:
Katie Karn, Deputy Corporate Officer
Morgan Mackenzie, Legislative Services Coordinator, Board and Information Services
Heather McNell, General Manager, Regional Planning and Housing Services

1. CALL TO ORDER

Chair Dhaliwal called the Public Hearing to order and informed those present that the hearing is to:

- consider *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*, pursuant to provisions in the *Local Government Act*; and
- provide persons who believe their interests are affected by the proposal a reasonable opportunity to be heard, or to present written submissions.

6:01 p.m. Director Steves arrived at the meeting.

The Chair established procedural rules for conduct at the Public Hearing as follows:

- speakers must register to present to the MVRD Board, limit comments to 5 minutes, and may not speak a second time until all registered speakers have had the opportunity to speak a first time;
- written submissions must be made prior to the close of the Public Hearing and will form part of the public record; and
- those present are to respect the rights of others to express opinions and to refrain from applause and other expressions.

2. REFERENCE MATERIALS

2.1 Consideration of *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*, a bylaw to adopt *Metro 2050*

Report dated February 18, 2022, from Sean Galloway, Director, Regional Planning and Electoral Area Services and James Stiver, Division Manager, Regional Land Use Policy, Regional Planning and Housing Services, providing the background information for the public hearing for the proposed *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*.

2.2 Notice of Public Hearing

3. WRITTEN SUBMISSIONS

A total of 2 written submissions were received as follows:

3.1 Roderick Louis, White Rock, BC – In opposition
3.2 Elizabeth Murphy, Coalition of Vancouver Neighbourhoods – In opposition

Written submissions are retained with the April 20, 2022 MVRD Public Hearing agenda.

6:05 p.m. Director Vagramov arrived at the meeting.

4. SPEAKERS

4.1 Roderick Louis, White Rock, BC

Roderick Louis, White Rock resident, spoke to the members in opposition of *Metro 2050*, highlighting concerns about a lack of consultation with citizens, boards of education and K-12 interest groups, and requested further consultation with representatives.

Presentation material "Opposition to Draft Metro Vancouver 2050" is retained with the April 20, 2022 MVRD Board Public Hearing agenda.

4.2 Nathan Davidowicz, Vancouver, BC

Nathan Davidowicz, Vancouver resident, spoke to the members in opposition of *Metro 2050*, highlighting concerns about the alignment with *Transport 2050*, the potential of not reaching *Clean BC 2030* targets and the lack of funding in public transportation. He suggested that the Board seek independent advice from international consultants to strengthen the regional growth strategy.

6:18 p.m. Director Nagra arrived at the meeting.

4.3 James Tang, Coquitlam, BC

James Tang, Coquitlam resident, spoke to members in opposition of *Metro 2050*, stating he believes population and employment growth projections should be addressed in the regional growth strategy to assist in making housing and transportation more affordable and accessible in the region.

4.4 Mike Furey, Metro Vancouver Tourism Destination Management Council

Mike Furey, Metro Vancouver Tourism Destination Management Council, spoke to members on *Metro 2050*, remarking the plan is a very thoughtful one and expressing the alignment with the organization's interests to grow tourism and destination development in the region. He believes that the plan should include recognition that tourism is a means to grow regional economic prosperity, that tourism is part of a larger effort towards reconciliation with Indigenous Nations and that tourism supports cultural diversity.

4.5 Dr. Michael Schwandt, Medical Health Officer, Vancouver Coastal Health

Dr. Michael Schwandt, Medical Health Officer, Vancouver Coastal Health, spoke to members in favour of *Metro 2050*, highlighting the land use planning impacts on health including various physical, environmental, social and economic factors. He expressed that the *Metro 2050* targets are aligned with Vancouver Coastal Health goals for the region.

Presentation material titled "Metro 2050: Regional Growth Strategy" is retained with the April 20, 2022 MVRD Board Public Hearing agenda.

4.6 Joe Carreira, Vice President of Development, Conwest Developments

Joe Carreria, Vice President of Development, Conwest Developments, spoke to members in favour of *Metro 2050*, highlighting the benefits to the region.

4.7 Alex Boston, North Vancouver, BC

Alex Boston, North Vancouver resident, spoke to members in support of *Metro 2050*, highlighting how amending the regional growth strategy to include climate change impacts, transportation planning, land use designations and development impacts would strengthen the plan.

Presentation material titled "Metro 2050 Vision-Strategy Alignment Course Correction" is retained with the April 20, 2022 MVRD Board Public Hearing agenda.

4.8 Sarah Rush, Surrey, BC

Sarah Rush, Surrey resident, spoke to members in opposition of *Metro 2050*, highlighting the origins of the regional growth strategy, the lack of alignment with the provincial goals and the need to densify developments rather than reducing available greenspace. She expressed concerns regarding food security, continuing reconciliation and a sustainable future for the region.

4.9 Deb Jack, Surrey, BC

Deb Jack, Surrey resident, spoke to members in opposition of *Metro 2050*, highlighting the impacts of the climate crisis, the loss of biodiversity, and the need to protect the natural environment. She believes that member jurisdictions should have more of a regional focus towards the *Metro 2050* plan.

4.10 Elizabeth Murphy, Coalition of Vancouver Neighbourhoods

Elizabeth Murphy, Coalition of Vancouver Neighbourhoods, spoke to members in opposition of *Metro 2050*, highlighting her concerns about the lack of transparency, the reliance on aspirational targets, the climate change impacts and the promoting of unsustainable growth due to the lack of financial and social infrastructures.

Chair Dhaliwal asked two times if there were any speakers wishing to speak in connection with *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022.* Roderick Louis, White Rock resident, requested to speak again.

4.11 Roderick Louis, White Rock, BC

Roderick Louis, White Rock resident, spoke to the members in opposition of *Metro 2050*, highlighting the need for more accessible rapid transportation and the need for additional consultation with the school boards.

6:58 p.m. Directors McLaughlin and Patton arrived at the meeting.

Chair Dhaliwal asked two times if there were any speakers wishing to speak in connection with *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022.* Elizabeth Murphy, Coalition of Vancouver Neighbourhoods, requested to speak again.

4.12 Elizabeth Murphy, Coalition of Vancouver Neighbourhoods

Elizabeth Murphy, Coalition of Vancouver Neighbourhoods, spoke to members in opposition of *Metro 2050*, highlighting her concerns about the impacts on the environment, the lack of infrastructure in the areas targeted for growth and the lack of financial resources from the Province for the infrastructure needs to support the region's growth.

In response to a speaker's presentation, members requested comments from staff regarding the consultation with school districts.

7:10 p.m. Director Wiebe departed the meeting.

Chair Dhaliwal asked two times if there were any speakers wishing to speak in connection with *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022.* Roderick Louis, White Rock resident, requested to speak again.

4.13 Roderick Louis, White Rock, BC

Roderick Louis, White Rock resident, spoke to the members in opposition of *Metro 2050*, highlighting the need for school districts to be represented on the advisory committees and the need for early and ongoing consultation with the school districts.

Chair Dhaliwal asked three times if there were any speakers wishing to speak in connection with *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022.* There were no speakers wishing to speak to the Bylaw.

5. ADJOURNMENT/CONCLUSION

The Chair declared the Public Hearing concluded and reminded Directors that no new information can be received in relation to the matter.

The meeting concluded at 7:16 p.m.

CERTIFIED CORRECT

Katie Karn, Deputy Corporate Officer

Sav Dhaliwal, Chair

52236698 FINAL

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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

ATTACHMENT

To: Regional Planning Committee

From: Sean Galloway, Director, Regional Planning and Electoral Area Services and James Stiver, Division Manager, Regional Land Use Policy, Regional Planning and Housing Services

Date: February 18, 2022 Meeting Date: March 4, 2022

Subject: **Consideration of *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*, a bylaw to adopt *Metro 2050***

RECOMMENDATION

That the MVRD Board:

d) give first and second readings to *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*, a bylaw that would adopt *Metro 2050* as the regional growth strategy for Metro Vancouver;

e) refer *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*, to a Public Hearing to be held in April ____, 2022; and

f) given the urgent need to respond to climate change and prepare for extreme weather events, direct staff to undertake work and engagement with an aim to proposing an early amendment to *Metro 2050* post-adoption to strengthen climate action language and policy.

EXECUTIVE SUMMARY

This report presents *Metro 2050*, via *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*, to the MVRD Board for consideration of first and second readings and referral to a Public Hearing. *Metro 2050* is an update to *Metro Vancouver 2040: Shaping our Future*, and is the culmination of close to three years of research, policy analysis, and deep engagement. The MVRD Board scoped the update to:

- extend the projections and policies to the year 2050;
- align with Transport 2050;
- respond to member jurisdiction requests for improvements; and
- strengthen policy actions to address climate change, tackle the challenges of providing affordable housing (particularly near transit), incorporate social equity outcomes, and strengthen First Nations content and relationships, and do more to protect the environment.

Metro 2050 introduces important new policies that will help Metro Vancouver, member jurisdictions, TransLink and others address the significant challenges facing this region. Adopting this bylaw will result in the adoption of *Metro 2050* as the regional growth strategy for Metro Vancouver, and *Metro 2040* would be repealed.

PURPOSE

The purpose of this report is to present *Metro Vancouver Regional District Regional District Regional Growth Strategy Bylaw No. 1339, 2022* for consideration of first and second readings and to refer the bylaw to a Public Hearing which is being recommended for April ____, 2022.

BACKGROUND

The *Greater Vancouver Regional District Regional Growth Strategy Bylaw No. 1136, 2010,* was adopted by the Board on July 29, 2011, thereby introducing *Metro Vancouver 2040: Shaping our Future (Metro 2040)* as the regional federation's regional growth strategy. This strategy has since been a strong vision and tool for managing growth to the region. The update, *Metro 2050*, is based on a comprehensive review of *Metro 2040* and extensive engagement over the past nearly three years. *Metro Vancouver Regional District Regional District Regional Growth Strategy Bylaw No. 1339, 2022* would repeal and replace *Bylaw No. 1136, 2011* (as amended).

At its April 2019 and September 2019 meetings, the MVRD Board approved the timeline and scope of work for updating the regional growth strategy (References 1 and 2). Staff were directed to work towards completing the update within the current local government election cycle. The project timeline was reviewed and adjusted in light of the COVID-19 pandemic, and in November 2020, the MVRD Board confirmed its direction to continue with the approved timeline (Reference 3).

Over the past three years, staff have implemented the Board approved engagement plan and conducted extensive research to identify opportunities to enhance the policies in the regional growth strategy and address the identified policy gaps (Reference 4). Engagement included presentations to member jurisdiction councils, meetings with members, the Province, agencies, organizations, industry, and community groups, deep input from the *Metro 2050* Intergovernmental Advisory Committee as well as public-facing webinars, dialogue events, and online comment opportunities.

At its June 25, 2021 meeting, the MVRD Board referred the draft of *Metro 2050* out for comment over a 5-month period that ended on November 26, 2021 (Reference 5). All comments received, as well as recommended changes to *Metro 2050* as a result were presented to the Regional Planning Committee and MVRD Board as an Issue-Response Table at their respective meetings in January 2022 (References 6 and 7). Some Board members expressed reservations on proceeding with *Metro 2050* at this time given the need for stronger climate action to be embedded in the plan as well as noting a couple of additional outstanding municipal concerns. As a result, the MVRD Board passed the following resolution:

> *That the MVRD Board refer the matter back to staff for a one-month period in order to clarify issues raised by member municipalities and report back to the Board.*

The intent of the one-month delay is to allow time to meet with member jurisdictions with outstanding issues to see if any additional minor changes to *Metro 2050* are necessary to resolve those issues, as well as to provide additional information to the Regional Planning Committee and the MVRD Board on the climate policies included in *Metro 2050* and its relationship with *Climate 2050* and *Transport 2050*, while striving to keep to the Board approved timeline for *Metro 2050* adoption by July 2022.

Staff and elected officials from Metro Vancouver subsequently met with staff and Board members from seven municipalities who had expressed concern at the Board meeting. Beyond the many changes made as a result of over 900 comments received from the comment period, additional edits were made with an aim to resolving any concerns. The resulting *Metro 2050* bylaw is attached to this report for consideration of first and second reading (Attachment 1).

ADDITIONAL RECOMMENDATION TO RESPOND TO BOARD DIRECTION

At its February 11, 2022 meeting, the Regional Planning Committee received a report and presentation to respond to the Board direction on *Metro 2050*, *Climate 2050*, and *Transport 2050* are mutually-supportive and work together, particularly in terms of greenhouse gas reduction and climate adaptation policies and actions (Reference 9). Discussion ensued about the role of land use in climate action and that to achieve strengthened policy action in *Metro 2050* will require engagement and consensus building. As a result, the Committee Chair directed staff to bring forward an additional resolution with the *Metro 2050* bylaw in March for consideration that would set the stage for additional work through 2022 to explore the potential for stronger policy actions for *Metro 2050* via an early amendment to the plan, post adoption. The resulting recommendation is recommendation c) on this report.

ADJUSTMENTS TO *METRO 2050* BYLAW CONTENT

As noted above, concern was expressed by some MVRD Board and Regional Planning Committee members over outstanding areas related to their respective municipalities and the extent of climate policy actions proposed in *Metro 2050*. As a result of additional discussions with members, *Metro 2050* has been further updated and improved as follows:

- To help curb possible speculation, provide greater clarity as to the role of Major Transit Growth Corridors (MTGCs), specifying that not all locations within MTGCs are suitable for growth and that municipalities to determine if and where appropriate locations for growth exist as new Frequent Transit Development Areas (FTDAs) (see page 17, and 1.2.2 and 1.2.7 on page 30);
- Adjust the title of Goal 3 to reflect the need to "address" climate change, not simply "respond" to it, and provide additional clarity in the Goal 3 preamble (page 53);
- Adjust the titles of Strategies 3.3 and 3.4 to reflect stronger language to "advance" land use, infrastructure, and settlement patterns that reduce energy consumption and greenhouse gas emissions and improve resilience, not merely "encourage" it (pages 61 and 64);
- Provide greater clarity on the intent of the 15% regional affordable housing target for Urban Centres and FTDAs to reflect that it is a regional goal that members contribute towards, and noting that other transit-oriented locations can also be good locations for affordable housing (see 4.2.7 a) on page 74); and
- Provide similar clarity for the Urban Tree Canopy cover target.

***METRO 2050* BYLAW ADOPTION**

The Board-approved project timeline for the approvals phase for *Metro 2050* is as follows:

- **March 2022** - Regional Planning Committee and MVRD Board Consider 1st and 2nd readings of the *Metro 2050* bylaw and schedule a Public Hearing;

- **March 2022** - Metro Vancouver provides notice of the Public Hearing;
- **April 2022** - MVRD Board hosts the required Public Hearing and refers the *Metro 2050* bylaw for acceptance by affected local governments;
- **May / June 2022** - Affected local government acceptance period; and
- **July 2022** - MVRD Board receives affected local government acceptances and considers 3rd and 4th reading and adoption of the *Metro 2050* bylaw.

Affected local governments are defined in the *Local Government Act* as: Metro Vancouver member municipalities (excluding Bowen Island), Tsawwassen First Nation, Fraser Valley Regional District, Squamish-Lillooet Regional District, TransLink and the Metro Vancouver Board.

Given the Board-approved timeline for the completion of *Metro 2050*, and the scheduled Regional Planning Committee and MVRD Board meeting dates, the initial bylaw readings must occur in March 2022 to allow adequate time for the Public Hearing and referral process as set out above and the opportunity for adoption by the MVRD Board in July 2022, in order to have the process completed before the local government elections in October 2022.

Opportunities for Affected Local Governments to Accept or Refuse to Accept *Metro 2050*
During the affected local government acceptance period, the *Local Government Act* requires that a response of acceptance or refusal to accept be provided to Metro Vancouver via Council or Board resolution within 60 days of receipt, or the affected local government is deemed to have accepted the regional growth strategy. If an affected local government does not accept the regional growth strategy, it must indicate each provision to which it objects, the reasons for the objection, and whether it is willing for a provision to which it objects to be included in the regional growth strategy on the basis that the provision will not apply to its jurisdiction. In addition, a non-binding dispute resolution process is an option for affected local governments that may have an objection to a provision(s) of the regional growth strategy. Should the non-binding dispute resolution process not be successful, the *Local Government Act*, under Sections 440 and 441, provides for a binding dispute resolution process.

ALTERNATIVES

1. That the MVRD Board:
   a) give first and second readings to *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*, a bylaw that would adopt *Metro 2050* as the regional growth strategy for Metro Vancouver;
   b) refer *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*, to a Public Hearing to be held in April ____, 2022; and
   c) given the urgent need to respond to climate change and prepare for extreme weather events, direct staff to undertake work and engagement with an aim to proposing an early amendment to *Metro 2050* post-adoption to strengthen climate action language and policy.

2. That the MVRD Board receive for information the report dated February 18, 2022, titled "Consideration of *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*, a bylaw to adopt *Metro 2050*" and provide alternative direction to staff.

FINANCIAL IMPLICATIONS

It is anticipated that the Public Hearing for *Metro 2050* required in accordance with the *Local Government Act* will cost approximately $25,000. This funding has been budgeted and is included as part of the MVRD Board-approved 2022 budget.

CONCLUSION

Metro 2050 is an update to *Metro 2040* and has been developed with considerable consultation, discussion, and review over the past three years. *Metro 2050* is the collective regional vision over the next 30 years for a more sustainable, equitable, and resilient future. It reflects the extensive and collective work of Metro Vancouver and its members, and is balanced in its approach to address regional planning objectives while respecting local government interests. Given the consultation, and revisions that were made to the draft *Metro 2050* to best accommodate consensus, staff recommend alternative 1, that *Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022*, be given first and second readings, and a Public Hearing be scheduled for April, 2022.

Attachment *(48616044)*
Metro Vancouver Regional District Regional District Regional Growth Strategy Bylaw No. 1339, 2022

References

1. Report dated March 28, 2019, titled "Towards *Metro 2050*: Updating *Metro Vancouver 2040: Shaping our Future*" presented to the MVRD Board at its regular meeting of April 26, 2019.
2. Report dated August 15, 2019, titled "*Metro 2050* Scope and Status Update" presented to the MVRD Board at its regular meeting of October 4, 2019.
3. Staff presentation to the Regional Planning Committee on November 26, 2020, on the revised *Metro 2050* timeline.
4. Report dated August 15, 2019, titled "*Metro 2050* Engagement Plan" presented to the MVRD Board at its regular meeting of October 4, 2019.
5. Report dated May 25, 2021, titled "Draft *Metro 2050:* Referral for Comment" presented to the MVRD Board at its regular meeting of June 25, 2021.
6. Metro 2050 Issue-Response Table
7. Report dated January 7, 2022, titled "Comments on Draft of *Metro 2050* and Proposed Next Steps" presented to the MVRD Board at its regular meeting January 28, 2022.
8. Report dated December 14, 2021, titled "*Metro 2050* Bylaw Approvals Process" presented to the MVRD Board at its regular meeting January 28, 2022.
9. Report dated February 4, 2022, titled "*Metro 2050* Next Steps: Addressing Member Jurisdiction Comments and Climate Policy" presented to the MVRD Board at its regular meeting of February 25, 2022.

49582544

METRO VANCOUVER REGIONAL DISTRICT
BYLAW NO. 1339, 2022
A Bylaw to Adopt a Regional Growth Strategy for the Metro Vancouver Regional District

WHEREAS:

A. Part 13 of the *Local Government Act* provides for a regional district to undertake the development, adoption, implementation, monitoring, and review of a regional growth strategy; and

B. The Board of the Metro Vancouver Regional District by resolution on April 26, 2019 initiated the review of "Greater Vancouver Regional District Regional Growth Strategy Bylaw Number 1136, 2010" pursuant to section 433 of the *Local Government Act*.

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

Citation

1. The official citation of this bylaw is "Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022". This bylaw may be cited as "Metro 2050".

Repeal of Bylaw

2. "Greater Vancouver Regional District Regional Growth Strategy Bylaw Number 1136, 2010", as amended, is hereby repealed.

Schedule

3. The following Schedule is attached to and forms part of the bylaw:
Schedule "A", Metro 2050, Regional Growth Strategy for the Metro Vancouver Regional District.

Regional Growth Strategy

4. Schedule "A", Metro 2050, Regional Growth Strategy for the Metro Vancouver Regional District, is adopted and designated as the regional growth strategy for the Metro Vancouver Regional District.

Read a first time this 25 day of MARCH, 2022.

Read a second time this 25 day of MARCH, 2022.

Public Hearing held the 20 day of April, 2022.

Read a third time this _____ day of _____, _____.

Passed and finally adopted this _____ day of _____, _____.

Accepted, by Resolution:

- by the Village of Anmore on the ___ day of _____, _____
- by the Village of Belcarra on the ___ day of _____, _____
- by the City of Burnaby on the ___ day of _____, _____
- by the City of Coquitlam on the ___ day of _____, _____
- by the City of Delta on the ___ day of _____, _____
- by the City of Langley on the ___ day of _____, _____
- by the Township of Langley on the ___ day of _____, _____
- by the Village of Lions Bay on the ___ day of _____, _____
- by the City of Maple Ridge on the ___ day of _____, _____
- by the City of New Westminster on the ___ day of _____, _____
- by the City of North Vancouver on the ___ day of _____, _____
- by the District of North Vancouver on the ___ day of _____, _____
- by the City of Pitt Meadows on the ___ day of _____, _____
- by the City of Port Coquitlam on the ___ day of _____, _____
- by the City of Port Moody on the ___ day of _____, _____
- by the City of Richmond on the ___ day of _____, _____
- by the City of Surrey on the ___ day of _____, _____
- by the Tsawwassen First Nation on the ___ day of _____, _____
- by the City of Vancouver on the ___ day of _____, _____
- by the District of West Vancouver on the ___ day of _____, _____
- by the City of White Rock on the ___ day of _____, _____
- by the Fraser Valley Regional District on the ___ day of _____, _____
- by the Squamish-Lillooet Regional District on the ___ day of _____, _____
- by the South Coast British Columbia Transportation Authority on the ___ day of _____, _____

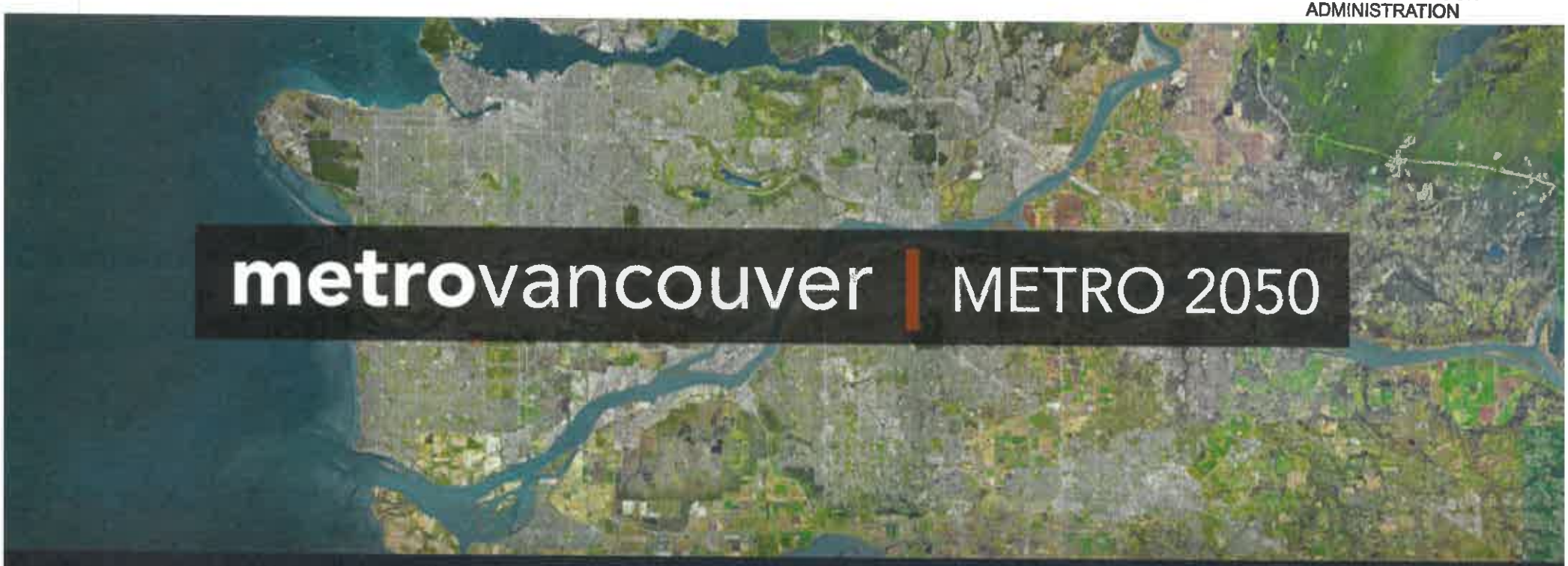
_____

Sav Dhaliwal, Chair

_____

Chris Plagnol, Corporate Officer

Metro 2050, Regional Growth Strategy for the Metro Vancouver Regional District



Metro 2050

PUBLIC HEARING REPORT AND REFERRAL FOR ACCEPTANCE

Heather McNell
General Manager, Regional Planning and Housing Services

Metro Vancouver Regional District Board Meeting | April 29, 2022
Orbit Link

metrovancouver

OUTLINE

- Summarize Metro 2050 Engagement
- Report on Public Hearing
- Provide outline of Metro 2050 acceptance process

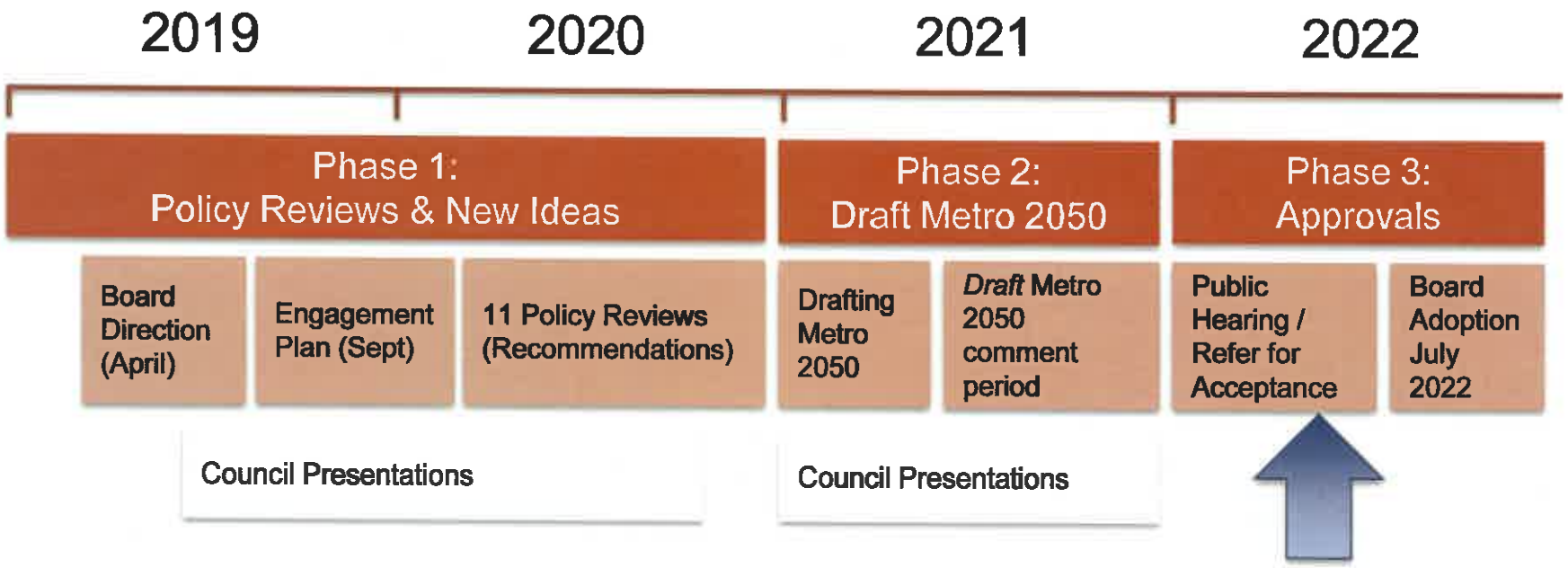
SCOPE OF REGIONAL GROWTH STRATEGY *UPDATE*

- Build on the successes of Metro 2040
  - Long standing tools working well – Urban Containment Boundary, regional land use designations, Urban Centre and FTDAs and targets, limiting extension of sewer services
- Align with Transport 2050
- Focus on updating / modernizing policy on critical issues: climate action, affordable housing, social equity outcomes, and protecting the environment

METRO 2050 ENGAGEMENT PLAN - AUDIENCES

Audience	Examples
Metro 2050 Signatories	• Member Jurisdictions • TransLink • Adjacent Regional Districts
Regional Stakeholders	• Agricultural Land Commission • Health Authorities • Airport and Port Authorities • Post Secondary Institutions
First Nations	• In-Region First Nations • All First Nations with Interests in Metro Vancouver
General Public	• Residents • Businesses and Developers • Non-Profit and Advocacy Organizations

METRO 2050 PHASES AND TIMING



POLICY REVIEWS: ENGAGEMENT (2019-2020)

- Joint survey with *Transport 2050;* ~30,000 responses
- 4 *Metro 2050* Dialogue Events
- Policy Review Forums
- Meetings with First Nations
- Council Presentations
- Benefits of Regional Planning Videos & Social Media promotion
- Public Webinar; 300+ participants
- Online Comment Form

DRAFTING THE PLAN: ENGAGEMENT (2021)

- Intergovernmental Advisory Committee;
- First Nations Working Group
- Build / Review draft content goal by goal (Jan-May)
- **5 Month Comment Period (Jul-Nov); over 900 individual comments**
- Provincial working sessions (spring / summer)
- IAC Policy Working Groups (summer)
- PNE Kiosk (Aug)
- 26 Council & Board Presentations; 4 Public Open Houses (fall)
- Public Webinar (Oct); 300+ participants
- Social Media Promotion; Online Comment Form

COMMENTS RECEIVED FROM COMMENT PERIOD

- 22 member jurisdictions
- Adjacent regional districts
- Vancouver Coastal Health and Fraser Health
- TransLink, Province, Federal Government, Port of Vancouver, Post Secondary Institutions
- Local organizations and non-profits
- 3 local First Nations
- 65 members of the public / businesses

WHAT WE HEARD – AREAS OF SUPPORT

- Major Transit Growth Corridors
- Urban Centre and FTDA growth targets
- **Transit Oriented Development, infill**
- **Compact, complete communities**
- Greater inclusion of First Nations' planning, development, and interests
- **Ecosystem protection**
- **Tree canopy cover target**
- Protection of Agricultural lands

WHAT WE HEARD – AREAS OF SUPPORT

- Resilience with focus on flood risk and natural hazard mitigation
- Climate action including adaptation
- Rental and affordable housing policies, particularly near transit
- Social Equity outcomes
- Advocacy focus – especially regarding housing affordability

Strong commentary that Metro 2050 builds on current plan, advances collective action on critical issues facing region, provides a solid framework for coordinated policy responses, and is aligned with local priorities and policies

WHAT WE HEARD – MIXED SUPPORT & CONCERN

- Frequent Transit Development Area Sub-Types
- 15% Affordable Housing Target and implementation
- Enabling flexibility for residential uses on some Employment lands

RESULTING REVISIONS TO *METRO 2050*

- Removed the Frequent Transit Development Area Sub-Types
- Added content related to Indigenous perspectives and priorities
- Refined the Regional Affordable Housing Target
- Refined policy 2.2.9 d) enabling limited residential uses on Employment lands
- Many other constructive edits for clarity

WHAT WE HEARD

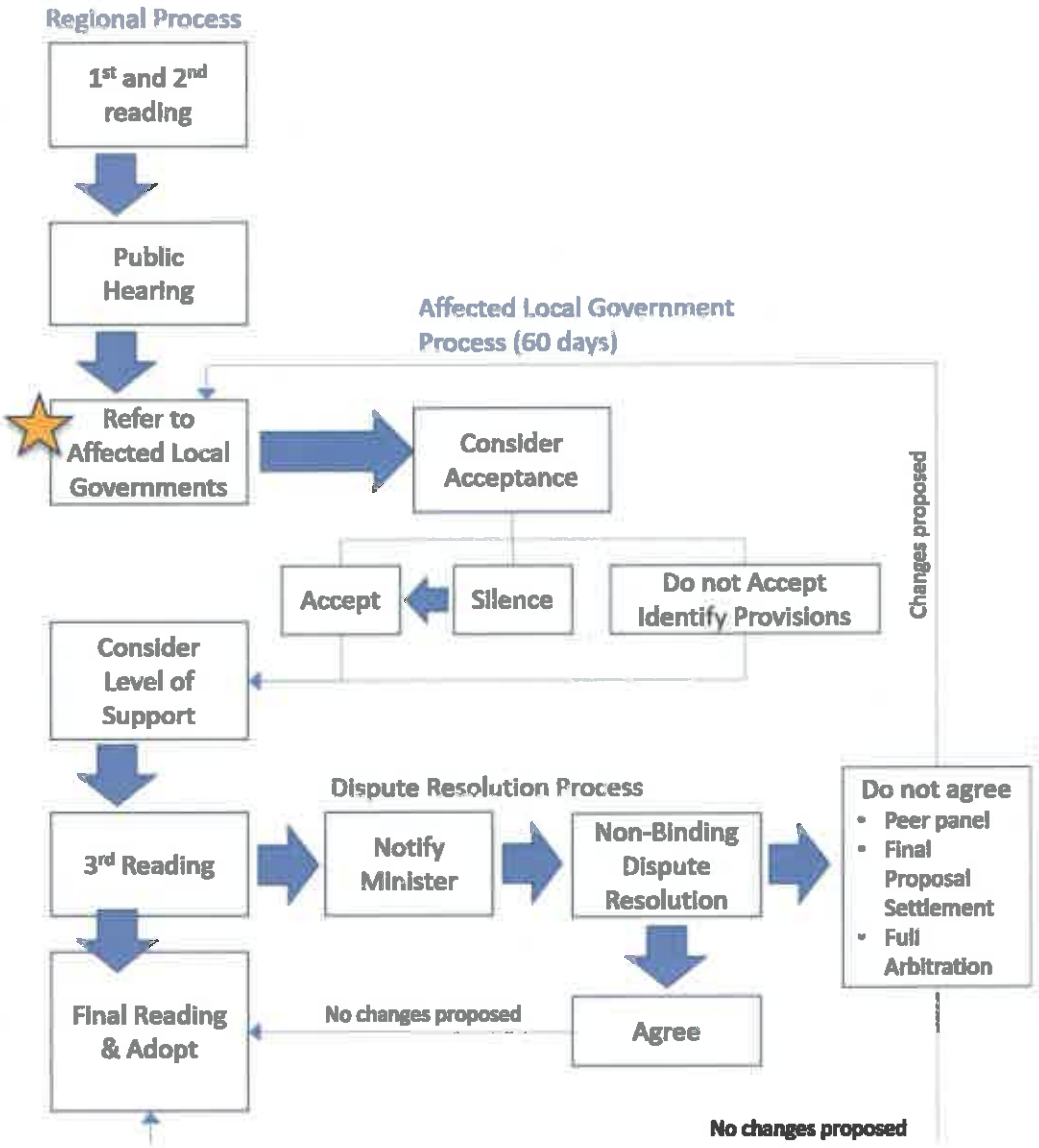
- Comments & proposed edits to *Metro 2050* went to the Board in January; deferred consideration for one month to work with members on outstanding issues.
- Met with staff and elected officials from 7 municipalities and made additional edits to: strengthen climate action language; provide greater clarity on targets; and clarify intent of Major Transit Growth Corridors.
- Also added recommendation to undertake concurrent work on strengthening climate language and policy with an aim to an early amendment.

APRIL 20 PUBLIC HEARING

- Advertised in Vancouver Sun and all local weekly papers
- Social Media
- Email to all engaged stakeholders
- Option to speak in person or online
- 6 pm start time for accessibility
- 10 speakers
- 2 written submissions

NEXT STEPS

- Referral for acceptance
- 60 day acceptance period (May-July)
- 3rd Reading July Board Meeting
- Adopt / Dispute resolution



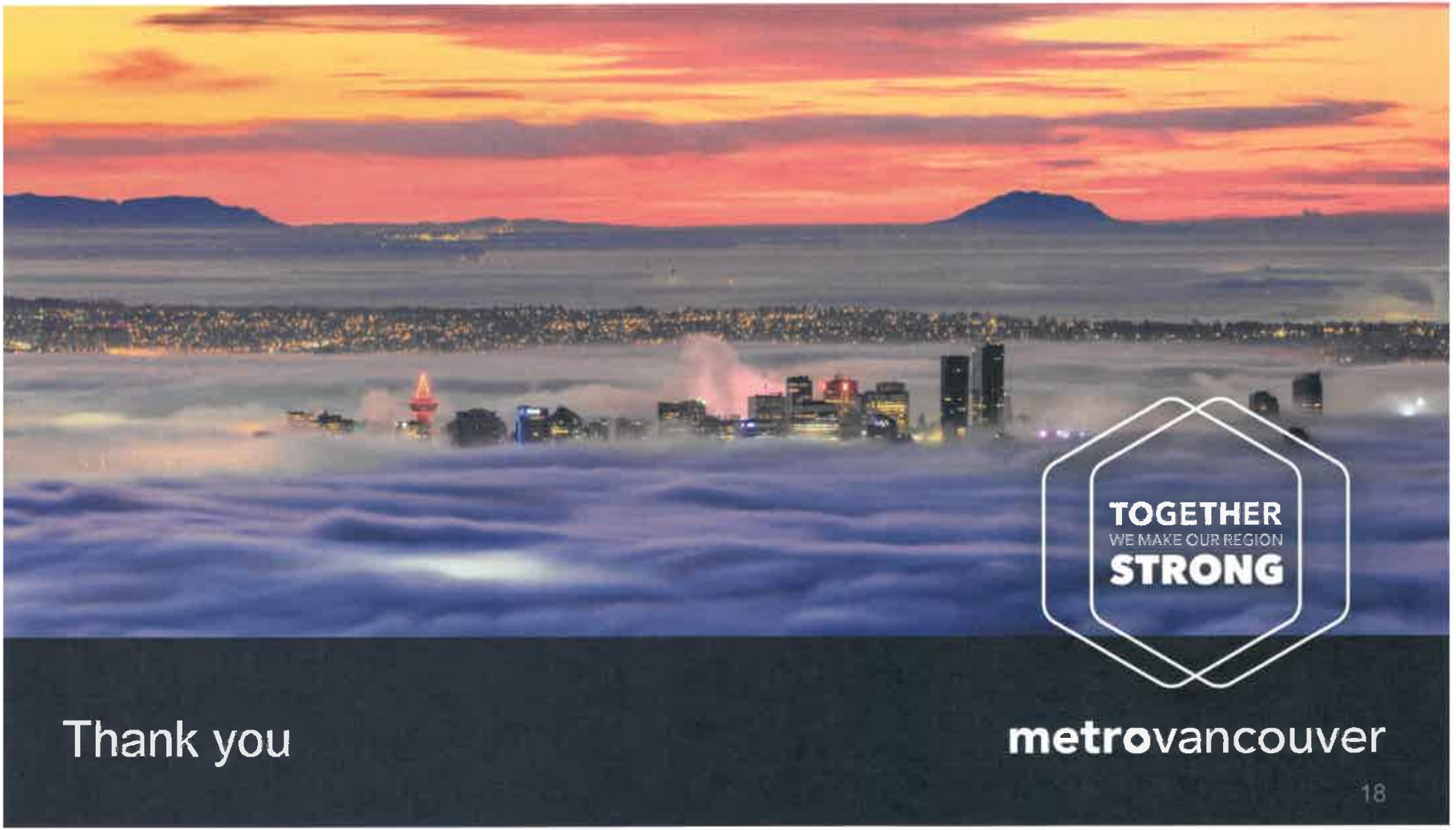
Consider level of support:

- Number of Acceptances
- Any non-acceptance and what objection is
- Consider whether to adopt if provision does not apply to that member

FINAL THOUGHTS

- 3 year process with deep engagement
- Striking the balance with 26 signatories with unique challenges and perspectives
- Still work to do. Living document.
- Minor amendment process allows the plan to be amended when there is better data / science, best practices or with will of the Board

The regional federation's vision for how to manage growth coming to the region in a way that reflects the federation's values (put growth in the right places, protect important lands, support efficient urban infrastructure)


TOGETHER
WE MAKE OUR REGION
STRONG
Thank you
metrovancouver
18

Mayor and Council
City of White Rock

May 11, 2022

Dear Mayor and Councillors,

The White Rock Housing Advisory Committee (HAC) is directed by Council Policy #164, and is mandated to provide input to Council regarding local level policies, programs and incentives that may be used to support a range of housing options and affordability levels in the City. The HAC operates like any other advisory committee does and has done in the City for many years.

On November 22nd, 2021, Council received the Housing Needs Report for the City. As a result of that report, the City engaged a planning consultant, Mr. Joseph Calenda, to prepare in coordination with staff, a draft Housing Strategy which would build on the Housing Needs Report. This strategy became the work plan for the HAC, outlined to the Committee members February 22nd, 2022. The goal was to complete an outline strategy within 90 days. The Advisory Committee diligently addressed the action plan, which ultimately led to the delivery of the report to City Council on April 25th, 2022.

The clear expectation by everyone who follows City business was that Council would receive and then openly discuss the merits or shortcomings of the Housing Strategy report. Instead, the Council voted against receipt of the report. Specifically, Councillor Johanson stated that she wanted it removed from the agenda; she strongly voiced rejection of receipt of the report, and further suggested that Council had not even asked for the report, nor were the terms of reference approved by Council. She was supported in opposition by Councillor Kristjanson, claiming he was "blindsided" by the report. These are falsehoods. Of course the City asked for the report, and they also approved the terms of reference for the HAC committee. The City also hired a qualified outside consultant, specifically for the purpose of developing the draft strategy and action plan. The non-receipt of the report translates to not just a waste of Mr. Calenda's time, whose efforts represent a "sunk" cost to the taxpayers', but is a clear rebuke and dismissal of the volunteers on the Housing Advisory Committee; volunteers who are residents, business owners and neighbours who care about this community.

Council is empowered to consider, debate and accept or reject any recommendations from any Advisory Committee as they see fit, in the best interests of this community. But if Council won't receive reports they mandate in the first place, and then openly discuss the pros and cons, they are abrogating their responsibilities. It begs the question to what purpose do staff, advisory committees and consulting experts even exist ? Why would anyone ever volunteer to be involved (again) in such a dysfunctional process?

Discarding the HAC volunteers' input and genuine efforts, after they've been encouraged to participate in an open, democratic process that is promoted in this City, creates bad faith and mistrust. I respectfully request of Council to reconsider receiving the Housing Strategy report as presented, and engage in further discussions on its merits.

Yours Truly,

Brian Hagerman

[redacted]

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May 10, 2022

Dear Mayor and Council;

RE: Please Join Us in Celebrating Access Awareness Day on June 4, 2022

The year 2022 would mark the 25th annual Access Awareness Day celebrated by British Columbians! Access Awareness Day provides an opportunity for communities to come together to celebrate their successes and show what it means to be truly accessible and inclusive for everyone. Access Awareness Day also falls within National AccessAbility Week which is celebrated from May 29th to June 4th, 2022. National AccessAbility Week is designed to celebrate and recognize the contributions that individuals living with disabilities make in their communities every day.

The theme for this year's Access Awareness Day is "Accessibility Is Inclusion". We have adopted this theme to draw attention to the fact that when we focus on addressing issues of accessibility in our communities, we are also creating opportunities to build true inclusion.

Enclosed is a copy of our Access Awareness Day poster for this year. We recognize that many communities no longer have a practice of passing proclamations and therefore welcome your participation in other ways. For example, you may wish to access our small grant funding of $500 to host an Accessibility Event in your community to highlight some of the ways your community is working to make accessibility a reality.

Please reflect on different ways your community can join the conversation. We appreciate your efforts in creating an accessible and inclusive community where everyone can share their talents, experiences, and abilities in real and meaningful ways.

We look forward to the opportunity to work with you and others in your community to show that by investing in accessibility and believing in the community the possibilities are limitless.

Thank you for the role that you play every day in making this vision a reality!

Sincerely,

Lorraine Copas

Lorraine Copas
Executive Director, SPARC BC

Accessibility is INCLUSION
ACCESS AWARENESS DAY 2022

SPARC BC acknowledges that our office is located on the ancestral and unceded homelands of the hən̓q̓əmin̓əm̓ and Sḵwx̱wú7mesh speaking peoples. They have been custodians of this land for thousands of years and we would like to pay our respect to the Elders and Knowledge keepers both past and present. We are grateful for the opportunity to be on this shared territory.

Accessibility is INCLUSION
ACCESS AWARENESS DAY 2022

Key outcomes and highlights from your event

_____

_____

_____

_____

Number of participants:_____

Next steps

Please complete this grant application form and return it to accessibility@sparc.bc.ca with the subject line—Accessibility is Inclusion.

Sharing your story

On Access Awareness Day, SPARC BC would like to profile your event through social media. Please tag SPARC BC if you will be sharing your event online.

@SPARCBC @sparcbc @socialplanningresearchbc

Questions

Please do not hesitate to reach out:
Tanya Tejassvi
Manager, Accessibility Initiatives
Social Planning and Research Council of British Columbia (SPARC BC)
4445 Norfolk Street Burnaby, BC V5G 0A7
T: 604.718.7732 E: ttejassvi@sparc.bc.ca

Canada

BRITISH COLUMBIA

sparc bc
people. planning. positive change.

ACCESS AWARENESS DAY

This year marks the 25th annual celebration of Access Awareness Day. The theme for this year's Access Awareness Day is ***"Accessibility Is Inclusion"***.

We have adopted this theme to draw attention to the fact that when we focus on addressing issues of accessibility in our communities, we are also creating opportunities to build true inclusion.

Please join us in celebrating Access Awareness Day on June 4, 2022. We know the difference that we can make together in building truly inclusive and accessible communities.

Accessibility is INCLUSION

ACCESS AWARENESS DAY 2022

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