



Committee of Council Agenda

Tuesday, December 8, 2020

2:00 p.m.

Meeting will be conducted virtually

Pages

1. CALL TO ORDER

2. ADOPTION OF THE AGENDA

2.1. Adoption of the Agenda

Recommendation:

That the Tuesday, December 8, 2020, Committee of Council Meeting Agenda be adopted as circulated.

3. CONFIRMATION OF MINUTES

3.1. Minutes of Committee of Council

1

Recommendation:

That the minutes of the following Committee of Council Meetings be adopted:

- *November 4, 2020*
- *November 10, 2020*
- *November 17, 2020*
- *November 24, 2020*
- *November 25, 2020.*

4. DELEGATIONS

4.1. Articulate - Elks Hall Usage

5. REPORTS

5.1. Childcare Needs Assessment

27

Recommendation:

None.

5.2. Rezoning Application for 1431 Barberry Drive

124

Recommendation:

That Committee of Council recommend to Council:

1. *That the zoning of 1431 Barberry Drive be amended from RS1 (Residential Single Dwelling 1) to RD (Residential Duplex).*
2. *That prior to adoption of the amending bylaw, the following conditions be met to the satisfaction of the Director of Development Services:*
 - a. *Demolition of the building;*
 - b. *Completion of design and submission of securities and fees for off-site works and services; and*
 - c. *Registration of a legal agreement to restrict secondary suites.*

5.3. Burns Road Culvert Grant

129

Recommendation:

That Committee of Council confirm support for the Burns Road Culvert Replacement project and provision of overall grant management for \$750,000 in grant funding from the Union of British Columbia Municipalities (UBCM).

5.4. Blue Dot Program Update

133

Recommendation:

None.

5.5. Fremont Natural Area Assessment

142

Recommendation:

None.

5.6. Tree Canopy Update

206

Recommendation:

None.

6. COUNCILLORS' UPDATE

7. MAYOR'S UPDATE

8. CAO UPDATE

9. ADJOURNMENT

9.1. Adjournment of the Meeting

Recommendation:

That the Tuesday, December 8, 2020, Committee of Council Meeting be adjourned.

10. MEETING NOTES



Committee of Council Minutes

Wednesday, November 4, 2020
Port Coquitlam Community Centre - Wilson Lounge
2150 Wilson Avenue, Port Coquitlam, BC

Present: Chair - Mayor West
Councillor Darling
Councillor Dupont
Councillor McCurrach
Councillor Penner
Councillor Pollock
Councillor Washington

1. CALL TO ORDER

The meeting was called to order at 2:00 p.m.

2. ADOPTION OF THE AGENDA

2.1 Adoption of the Agenda

Moved-Seconded:

That the Wednesday, November 4, 2020, Committee of Council Meeting Agenda be adopted as circulated.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

3. CONFIRMATION OF MINUTES

None.

4. REPORTS

4.1 2021 - 2022 Capital Plan and One-Time Enhancements Follow-up

Moved-Seconded:

That Committee of Council direct staff to prepare a bylaw for Council consideration to:

- *Transfer \$690,000 of the operating reserves to the General Capital Reserve;*

- *Consolidate the water and sewer rate stabilization operating reserves into one stabilization reserve; and*

That Committee of Council approve \$384,000 of the legacy capital reserves be transferred to the General Capital Reserve.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

4.2 2021 - 2022 Capital Plan and One-Time Enhancements

Moved-Seconded:

That Committee of Council recommend that \$65,500 be approved in 2021 for a Bylaw Enforcement Vehicle, funded by the General Capital Reserve.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend that \$225,000 be approved in 2022 for Gates Park Tennis Court – LED Lighting funded by General Capital Reserve.

Secondary Motion:

That Committee of Council postpone deliberation of the replacement of Gates Park tennis court led lighting to the 2022-2023 budget deliberations.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend that \$150,000 be approved in 2022 for McAllister Pedestrian Bridge Rehabilitation funded by General Capital Reserve (\$130,000) and Water Infrastructure Reserve (\$20,000).

Amendment:

That \$100,000 be approved in 2021 for design and \$1,650,000 be approved in 2022 for replacement.

In Favour (4): Mayor West, Councillor Darling, Councillor McCurrach, and Councillor Washington

Opposed (3): Councillor Dupont, Councillor Penner, and Councillor Pollock

Carried

Amended Motion:

That Committee of Council recommend that \$100,000 be approved in 2021 for detailed design and \$1,650,000 be approved in 2022 for replacement of the McAllister Pedestrian Bridge, funded by General Capital Reserve (\$1,385,000) and Water Infrastructure Reserve (\$125,000) and Federal Gas Tax \$240,000.

In Favour (5): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, and Councillor Washington

Opposed (2): Councillor Penner, and Councillor Pollock

Carried

Moved-Seconded:

That Committee of Council recommend that \$14,135,000 in 2022 and \$8,440,000 in 2023 be approved for 2022 Neighbourhood Rehabilitation, funded by the General Capital Reserve (\$10,825,500), Water Infrastructure Reserve (\$1,335,000), Sewer Infrastructure Reserve (\$6,507,000), Environmental Reserve (\$15,000), grant funding (\$2,127,500) and developer contributions (\$1,765,000).

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend that a reduction of \$415,000 be approved in 2021 for the 2022 Neighbourhood Rehabilitation Detailed Design, funded by the General Capital Reserve (\$245,000), Water Infrastructure Reserve (\$140,000), Sewer Infrastructure Reserve (\$30,000).

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend that \$100,000 be approved in 2022 for Development Infrastructure Gaps funded by General Capital Reserve.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend that \$1,230,000 be approved in 2022 Sidewalk & Pedestrian Safety Improvements funded by General Capital Reserve (\$1,100,000) and Grant Funding (\$130,000).

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend that \$150,000 be approved in 2022 for Traffic Calming funded by General Capital Reserve.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend that \$100,000 be approved in 2022, \$50,000 in 2023 and \$50,000 in 2024 for Downtown Public Art funded by Arts & Culture Reserve.

Amendment:

That all \$200,000 of funding be combined for 2022.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Amended Motion:

That Committee of Council recommend that \$200,000 be approved in 2022 for Downtown Public Art funded by Arts & Culture Reserve.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend that \$70,000 be approved in 2022 for Fleet Telematics System funded by General Capital Reserve.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend that \$30,000 be approved in each of 2022, 2023, 2024, 2025 and 2026 for Irrigation Expansion funded by General Capital Reserve.

Secondary Motion:

That Committee of Council postpone discussion on Irrigation Expansion to the 2022-2023 budget deliberations.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend that \$400,000 be approved in each of 2022, 2023, 2024 and 2025 for Lane Paving funded by General Capital Reserve (\$1,600,000).

In Favour (6): Mayor West, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Absent (1): Councillor Darling

Carried

Moved-Seconded:

That Committee of Council recommend that \$405,000 be approved in 2022 for School & Park Road Safety Improvements funded by General Capital Reserve.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend that \$30,000 be approved in 2022 and \$425,000 in 2023 for a spray park funded by General Capital Reserve.

Secondary Motion:

That Committee of Council postpone discussion of the spray park project to the 2022-2023 budget deliberations.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend that \$200,000 be approved in each of 2022, 2023, 2024 and 2025 for Streetlight Expansion funded by General Capital Reserve.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend that \$30,000 be approved in 2022 and \$400,000 in 2023 for Traffic Signal – Nicola Avenue at Hawkins Street funded by General Capital Reserve.

Amendment:

That discussion of the traffic signal at Nicola and Hawkins be postponed to the 2022-2023 budget deliberations.

In Favour (6): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Pollock, and Councillor Washington

Opposed (1): Councillor Penner

Carried

Moved-Seconded:

That Committee of Council recommend that \$15,000 be approved in 2021 for Citadel Heights – Water Pump Station Assessment funded by Water Infrastructure Reserve.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend that \$100,000 be approved in 2021 for Coast Meridian Overpass – Detailed Inspection funded by Accumulated Surplus.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend that \$33,600 be approved in 2021 and \$16,800 in 2022 for a Community Policing Vehicle – 18 month Pilot Project funded by Accumulated Surplus.

Secondary Motion:

That discussion of the Community Policing Vehicle be postponed to the 2022-2023 budget deliberations.

In Favour (6): Mayor West, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Opposed (1): Councillor Darling

Carried

Moved-Seconded:

That Committee of Council recommend that \$45,000 be approved in 2021 for Fleet Store Inventory Count Project funded by Accumulated Surplus.

In Favour (3): Councillor Dupont, Councillor McCurrach, and Councillor Pollock

Opposed (4): Mayor West, Councillor Darling, Councillor Penner, and Councillor Washington

Defeated

Moved-Seconded:

That Committee of Council recommend that \$25,000 be approved in 2022 for Hyde Creek Recreation Centre Assessment funded by Building Maintenance Reserve.

Amendment:

That funding be moved to 2021.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Amended Motion:

That Committee of Council recommend that \$25,000 be approved in 2021 for Hyde Creek Recreation Centre Assessment funded by Building Maintenance Reserve.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend that \$33,000 be approved in 2022 for Tri-Cities Cultural Spaces Map funded by Arts & Culture Reserve.

Secondary Motion:

That the \$33,000 be transferred to the public art project.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

5. ADJOURNMENT

5.1 Adjournment of the Meeting

Moved-Seconded:

That the Wednesday, November 4, 2020, Committee of Council Meeting be adjourned at 10:20 p.m.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

6. MEETING NOTES

The meeting recessed at 6:00 p.m. and reconvened at 6:20 p.m.

The Committee of Council resolved to close the meeting at 7:35 p.m. and reconvened at 7:45 p.m.

Councillor Darling left the meeting during Item 4.2 Lane Paving (8:00 p.m.) and returned during Item 4.2 School and Park Road Safety Improvements (8:04 p.m.).

Mayor

Corporate Officer

Committee of Council Minutes

Tuesday, November 10, 2020

Port Coquitlam Community Centre - Wilson Lounge

2150 Wilson Avenue, Port Coquitlam, BC

Present:	Councillor Darling	Councillor Penner
	Councillor Dupont	Councillor Pollock
	Councillor McCurrach	Councillor Washington

Absent: Chair - Mayor West

1. CALL TO ORDER

The meeting was called to order at 2:08 p.m.

2. ADOPTION OF THE AGENDA

2.1 Adoption of the Agenda

Moved-Seconded:

That the Tuesday, November 10, 2020, Committee of Council Meeting Agenda be adopted as circulated.

In Favour (6): Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Absent (1): Mayor West

Carried

3. CONFIRMATION OF MINUTES

None.

4. REPORTS

4.1 Financial Assistance Requests from Community Groups

The following organizations presented to Committee of Council.

- Ms. Cristina Pereira - Tri-Cities Homelessness Task Force
- Ms. Dawn Becker - Port Coquitlam Community Foundation
- Ms. Julie Schmidt - Port Coquitlam Heritage Society and Cultural Society

5. COUNCILLORS' UPDATE

No update.

6. MAYOR'S UPDATE

No update.

7. CAO UPDATE

No update.

8. RESOLUTION TO CLOSE

8.1 Resolution to Close

Moved-Seconded:

That the Committee of Council Meeting of Tuesday, November 10, 2020, be closed to the public pursuant to the following subsections(s) of Section 90(1) of the Community Charter:

Item 5.1

a. personal information about an identifiable individual who holds or is being considered for a position as an officer, employee or agent of the municipality or another position appointed by the municipality.

Item 5.2

k. negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the council, could reasonably be expected to harm the interests of the municipality if they were held in public.

Item 5.3

i. the receipt of advice that is subject to solicitor-client privilege, including communications necessary for that purpose;

l. discussions with municipal officers and employees respecting municipal objectives, measures and progress reports for the purposes of preparing an annual report under section 98 [annual municipal report].

In Favour (6): Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Absent (1): Mayor West

Carried

9. ADJOURNMENT

9.1 Adjournment of the Meeting

Moved-Seconded:

That the Tuesday, November 10, 2020, Committee of Council Meeting be adjourned at 5:08 pm.

In Favour (6): Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Absent (1): Mayor West

Carried

10. MEETING NOTES

The meeting recessed at 2:09 p.m. and reconvened at 3:15 p.m.

Mayor

Corporate Officer

Committee of Council Minutes

Tuesday, November 17, 2020
Meeting will be conducted virtually

Present:	Chair - Mayor West	Councillor Penner
	Councillor Darling	Councillor Pollock
	Councillor Dupont	Councillor Washington
	Councillor McCurrach	

1. CALL TO ORDER

The meeting was called to order at 2:05 p.m.

2. ADOPTION OF THE AGENDA

2.1 Adoption of the Agenda

Moved-Seconded:

That the Tuesday, November 17, 2020, Committee of Council Meeting Agenda be adopted as circulated.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

3. CONFIRMATION OF MINUTES

None.

4. REPORTS

4.1 Rezoning Application - #6108 - 2850 Shaughnessy Street

Moved-Seconded:

That Committee of Council recommend to Council that Comprehensive Development Zone 10 be amended to permit a large child care facility in unit #6108 - 2850 Shaughnessy Street.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

4.2 Development Variance Permit Application - 3567 and 3569 Handley Crescent

Moved-Seconded:

That the Committee of Council:

1. *Authorize staff to provide notice of an application to vary front yard set back requirements for a duplex at 3567 and 3569 Handley Crescent, and*
2. *Advise Council that it supports approval of Development Variance Permit DVP00074.*

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

4.3 Development Permit Application - 1982 Kingsway Avenue

Moved-Seconded:

That Committee of Council approve Development Permit DP000440 to regulate a storage building at 1982 Kingsway Avenue.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

5. COUNCILLORS' UPDATE

No update.

6. MAYOR'S UPDATE

No update,

7. CAO UPDATE

No update.

8. RESOLUTION TO CLOSE

8.1 Resolution to Close

Moved-Seconded:

That the Committee of Council Meeting of Tuesday, November 17, 2020, be closed to the public pursuant to the following subsection(s) of Section 90(1) of

the Community Charter:

Item 5.1

k. negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the council, could reasonably be expected to harm the interests of the municipality if they were held in public.

Item 5.2

i. the receipt of advice that is subject to solicitor-client privilege, including communications necessary for that purpose;

l. discussions with municipal officers and employees respecting municipal objectives, measures and progress reports for the purposes of preparing an annual report under section 98 [annual municipal report].

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

9. ADJOURNMENT

9.1 Adjournment of the Meeting

Moved-Seconded:

That the Tuesday, November 17, 2020, Committee of Council Meeting be adjourned at 5:15 p.m.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

10. MEETING NOTES

None.

Mayor

Corporate Officer



Committee of Council Minutes

Tuesday, November 24, 2020

Council Chambers

3rd Floor City Hall, 2580 Shaughnessy Street, Port Coquitlam, BC

Present: Chair - Mayor West
Councillor Darling
Councillor Dupont
Councillor McCurrach
Councillor Pollock
Councillor Washington

Absent: Councillor Penner

1. CALL TO ORDER

The meeting was called to order at 2:00 p.m.

2. ADOPTION OF THE AGENDA

2.1 Adoption of the Agenda

Moved-Seconded:

That the Tuesday, November 24, 2020, Committee of Council Meeting Agenda be adopted as circulated.

In Favour (6): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Pollock, and Councillor Washington

Absent (1): Councillor Penner

Carried

3. CONFIRMATION OF MINUTES

3.1 Minutes of Committee of Council

Moved-Seconded:

That the minutes of the following Committee of Council Meetings be adopted:

- October 20, 2020
- October 27, 2020
- November 3, 2020.

Carried

4. REPORTS

4.1 Zoning Amendment Bylaw - 1611 Manning Avenue - Request for Extension

Moved-Seconded:

That Committee of Council extend the date of expiry for adoption of Zoning Amendment Bylaw No. 4107 to February 12, 2021.

In Favour (6): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Pollock, and Councillor Washington

Absent (1): Councillor Penner

Carried

4.2 2020 Q3 Operating Variance and Action Plan Update

Staff presented the 2020 Q3 Operating Variance and Action Plan Update to Committee.

5. COUNCILLORS' UPDATE

Council provided updates on City business.

6. MAYOR'S UPDATE

No update.

7. CAO UPDATE

No update.

8. RESOLUTION TO CLOSE

8.1 Resolution to Close

Moved-Seconded:

That the Committee of Council Meeting of Tuesday, November 24, 2020, be closed to the public pursuant to the following subsections(s) of Section 90(1) of the Community Charter:

Item 5.1

c. labour relations or other employee relations;

Item 5.2

g. litigation or potential litigation affecting the municipality;

k. negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the

council, could reasonably be expected to harm the interests of the municipality if they were held in public.

Item 5.3

a. personal information about an identifiable individual who holds or is being considered for a position as an officer, employee or agent of the municipality or another position appointed by the municipality;

c. labour relations or other employee relations.

Item 5.4

i. the receipt of advice that is subject to solicitor-client privilege, including communications necessary for that purpose;

l. discussions with municipal officers and employees respecting municipal objectives, measures and progress reports for the purposes of preparing an annual report under section 98 [annual municipal report].

In Favour (6): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Pollock, and Councillor Washington

Absent (1): Councillor Penner

Carried

9. ADJOURNMENT

9.1 Adjournment of the Meeting

Moved-Seconded:

That the Tuesday, November 24, 2020, Committee of Council Meeting be adjourned at 5:21 p.m.

In Favour (6): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Pollock, and Councillor Washington

Absent (1): Councillor Penner

Carried

10. MEETING NOTES

None.

Mayor

Corporate Officer

Committee of Council Minutes

Wednesday, November 25, 2020

Council Chambers

3rd Floor City Hall, 2580 Shaughnessy Street, Port Coquitlam, BC

Absent: Chair - Mayor West
Councillor Darling
Councillor Dupont
Councillor McCurrach
Councillor Penner
Councillor Pollock
Councillor Washington

1. CALL TO ORDER

The meeting was called to order at 4:01 p.m.

2. ADOPTION OF THE AGENDA

2.1 Adoption of the Agenda

Moved-Seconded:

That the Wednesday, November 25, 2020, Committee of Council Meeting Agenda be adopted as circulated.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

3. CONFIRMATION OF MINUTES

None.

4. REPORTS

4.1 2021 Draft Operating Budget

Moved-Seconded:

That Committee of Council recommend \$75,000 for a Communications Coordinator be approved in 2021, funded by Accumulated Surplus.

In Favour (6): Mayor West, Councillor Darling, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Opposed (1): Councillor Dupont

Carried

Moved-Seconded:

That Committee of Council recommend \$35,000 for Heritage and Cultural Society funding be approved in 2021, funded by Accumulated Surplus.

In Favour (6): Mayor West, Councillor Darling, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Opposed (1): Councillor Dupont

Carried

Moved-Seconded:

That Committee of Council recommend \$7,000 for the Lions Park Artist-in-Residence program be approved in 2021, funded by Accumulated Surplus.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend \$108,600 for additional RCMP members be approved in 2021, funded by taxation.

Opposed (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Defeated

Moved-Seconded:

That Committee of Council approve changes to increase pollinator gardens where feasible.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend \$181,100 for a Strategic Project Manager be removed from the 2021 budget.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council recommend \$193,000 for bulky item collection be approved in 2021, funded by taxation.

Amendment:

Moved-Seconded:

That bulky item collection be approved in 2021 as a pilot project, funded by accumulated surplus.

In Favour (5): Mayor West, Councillor Darling, Councillor McCurrach, Councillor Pollock, and Councillor Washington

Opposed (2): Councillor Dupont, and Councillor Penner

Carried

Amended Motion:

That Committee of Council recommend \$193,000 for bulky item collection be approved in 2021 as a pilot project, funded by accumulated surplus.

In Favour (5): Mayor West, Councillor Darling, Councillor McCurrach, Councillor Pollock, and Councillor Washington

Opposed (2): Councillor Dupont, and Councillor Penner

Carried

Moved-Seconded:

That Committee of Council recommend \$340,000 be approved in 2021 and \$129,500 in 2022 for curbside glass collection funded by accumulated surplus (\$340,000) and taxation (\$129,500).

Secondary Motion:

That the decision on curbside glass collection be postponed pending further information from staff regarding funding sources.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

That Committee of Council recommend \$12,000 for holiday recycling collection be approved in 2021, funded by taxation.

Amendment:

Moved-Seconded:

That service provided in 2020 be funded from accumulated surplus.

In Favour (5): Mayor West, Councillor Darling, Councillor McCurrach, Councillor Pollock, and Councillor Washington

Opposed (2): Councillor Dupont, and Councillor Penner

Carried

Amended Motion:

That Committee of Council recommend \$12,000 for holiday recycling collection be approved in 2021, funded by taxation, and that holiday recycling collection service be provided in 2020, funded from accumulated surplus.

In Favour (5): Mayor West, Councillor Darling, Councillor McCurrach, Councillor Pollock, and Councillor Washington

Opposed (2): Councillor Dupont, and Councillor Penner

Carried

Moved-Seconded:

That Committee of Council recommend \$22,000 be approved in 2021 for menstrual products in civic facilities funded by accumulated surplus (\$13,200) and taxation (\$8,800).

Amendment:

Moved-Seconded:

That Committee of Council recommend that \$11,000 for the first phase of implementation for Menstrual Product Dispensers in Civic Facilities be approved in 2021 and an additional \$11,000 be approved in 2022 for the second phase, funded by Accumulated Surplus (\$13,200) and taxation (\$8,800).

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Amended Motion:

That Committee of Council recommend that \$11,000 for the first phase of implementation for Menstrual Product Dispensers in Civic Facilities be approved in 2021 and an additional \$11,000 be approved in 2022 for the second phase, funded by Accumulated Surplus (\$13,200) and taxation (\$8,800).

Moved-Seconded:

That Committee of Council recommend \$40,000 for Port Coquitlam Community Foundation funding be approved in 2021, funded by accumulated surplus.

Opposed (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Defeated

Moved-Seconded:

That Committee of Council recommend \$4,150 for Tri-Cities Homelessness & Housing Task Group funding be approved in 2021, funded by taxation.

Amendment:

Moved-Seconded:

That funding come from accumulated surplus.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Amended Motion:

That Committee of Council recommend \$4,150 for Tri-Cities Homelessness & Housing Task Group funding be approved in 2021, funded by accumulated surplus.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

Moved-Seconded:

That Committee of Council authorize staff to issue the 2021 draft operating budget for public consultation.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

5. COUNCILLORS' UPDATE

No update.

6. MAYOR'S UPDATE

No update.

7. CAO UPDATE

No update.

8. RESOLUTION TO CLOSE

That the Committee of Council Meeting of Wednesday, November 25, 2020, be closed to the public pursuant to the following subsections(s) of Section 90(1) of the Community Charter:

Item 5.1

a. personal information about an identifiable individual who holds or is being considered for a position as an officer, employee or agent of the municipality or another position appointed by the municipality.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

9. ADJOURNMENT

9.1 Adjournment of the Meeting

Moved-Seconded:

That the Wednesday, November 25, 2020, Committee of Council Meeting be adjourned at 7:51 p.m.

In Favour (7): Mayor West, Councillor Darling, Councillor Dupont, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Carried

10. MEETING NOTES

The meeting recessed at 5:47 p.m. and reconvened at 6:12 p.m.

Council waived notice for a closed portion of the November 25th, 2020, Committee of Council meeting.

Mayor

Corporate Officer

RECOMMENDATION:

None.

PREVIOUS COUNCIL/COMMITTEE ACTION

Council resolution January 8, 2019:

That Council support the following grant applications:

- 1. Application to the Community Child Care Planning Program for a grant for \$25,000 to support the creation of a child care space inventory and action plan.*

REPORT SUMMARY

This report introduces the Child Care Action Plan, appended as Attachment 1, created by consultants retained by the City through the funding from the Province's Community Child Care Planning Program. A member of the consultant team will present key findings, including child care needs and gaps in our community, proposed targets and recommended actions to improve access to and number of quality child care spaces. Staff will provide a follow-up report outlining implementation options of the recommended action items.

BACKGROUND

In March 2019, the City was awarded a \$25,000 grant under the Community Child Care Planning Program administered by the Union of British Columbia Municipalities (UBCM) to identify child care needs and gaps within our community and create an action plan providing direction on how to improve access to child care and increase the number of spaces over the next 10 years.

The City partnered with the City of Coquitlam and the City of Port Moody to retain the consultant, Social Planning and Research Council (SPARC) and to coordinate public engagement events and promotion as many Tri-City residents cross municipal boundaries for child care and local services are provided at a regional level.

Consultation with parents, child care operators, local service providers and government agencies occurred over last fall and winter (pre-COVID 19) through online surveys, open houses, key informant interviews and workshops. Overviews of these activities are provided in the Needs Assessment appended to the Child Care Action Plan (see Attachment 1).

Child Care Action Plan Presentation

Sandra Menzer, who was the lead consultant for SPARC, will be presenting the results of the Child Care Needs Assessment, the proposed targets and the key recommended action items from the Port Coquitlam Child Care Action Plan.

DISCUSSION

The Child Care Action Plan was informed by Port Coquitlam's current and projected demographics, current inventory of child care spaces, and input received through community engagement.

Some key findings from this assessment included:

- There are 2,245 child care spaces for 8,380 children aged 0-12 years in Port Coquitlam, this equates to 27 spaces per 100 children.
- There is a greater need for more spaces in the infant-toddler and school age categories.
- Average monthly fees in Port Coquitlam for group care is \$976 for infants, \$735 for 3-5 year olds and \$393 for school age; reported by YMCA Tri-Cities Child Care Resource and Referral.
- There is a need for facilities that accommodate shift workers with non-traditional hours and children who require additional support.
- Child care operators are having difficulties finding qualified staff and suitable facility locations.

The Action Plan proposes the following targets for three age groups to guide future planning in creating additional child care spaces over the next 10 years:

- Infant/Toddler (under 3 years): 33 spaces per 100 children (currently 15 / 100 children)
- Preschoolers (3 to 5 years): 75 spaces per 100 children (currently 44 / 100 children)
- School Agers (6 to 9 years): 42 spaces per 100 children (currently 14 / 100 children)

The recommended actions to achieve these targets are organized into the following four strategic directions with an overall recommendation to "develop a strong, committed, and comprehensive Child Care Policy":

- Increase Accessibility
- Improve Affordability
- Focus on Quality
- Develop Collaboration and Partnerships

While Port Coquitlam does not have the mandate and resources to fully address child care needs, the City can continue to facilitate the development of quality child care through amending bylaw regulations and policies, utilizing development tools such as density bonusing, repurposing city land and buildings to create new spaces, and advocating to senior governments on local child care needs.

Child Care Action Plan Presentation

A key recommended action from each strategic direction for short, medium or long term consideration include:

- Endorse the space creation targets;
- Provide municipal space rent-free or at a vastly reduced rate for non-profit child care providers;
- Confirm a set of principles, criteria or guidelines to use when developing child care in municipal spaces or when securing child care spaces through development tools; and
- Create a Community Child Care Coordinator position in partnership with the School District, City of Coquitlam and City of Port Moody to lead development of actions, identify opportunities and liaise with the community and the Province.

Staff will follow-up with an implementation report in the spring discussing the recommended action items in more detail with potential implications to the City budget and service levels. The report will identify opportunities, such as bylaw and policy amendments to address local child care needs. Staff will also review the proposed actions through a COVID lens recognizing much of the work was done before the pandemic and many families may have altered their work habits and other daily life arrangements.

FINANCIAL IMPLICATIONS

The future implementation report will consider associated costs and program funding for increases to service levels in order to implement the recommended actions.

ATTACHMENTS

Attachment #1: Child Care Action Plan Report with appendices

Lead author(s): Natalie Coburn

City of Port Coquitlam

Child Care Action Plan Report

Prepared by:

Social Planning and Research Council of BC (SPARC BC)

in collaboration with

Sandra Menzer & John Foster



May 2020

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ACKNOWLEDGEMENTS

The development of the City of Port Coquitlam Child Care Action Plan would not have been possible without the assistance and involvement of City staff, community members and partners.

The Project Team would like to thank the many individuals and organizations who gave their time to provide input, share insights and offer ideas for the City's future work and role in child care. We also want to express appreciation to City of Port Coquitlam staff, Natalie Coburn and Jennifer Little, for their support and guidance throughout.

Over the past three years, the SPARC BC child care planning team has been invited by several BC municipalities to complete child care needs assessments and action plans. To each of these projects, we bring a common approach based on research and best practices, locally, nationally, and from around the world, informed by our combined 60 years of experience in and around the child care sector in BC. We believe this approach reflects the state-of-the-art thinking in child care policy and planning, while remaining attentive to the unique legislated roles and responsibilities of BC local governments in human services. Furthermore, we hope this common framework will contribute to alignment between municipalities and coherency across the province, while also ensuring each child care needs assessment and action plan fully reflects and responds to the unique local context of each community.

Moreover, the three Tri-Cities municipalities: Coquitlam, Port Moody, and Port Coquitlam partnered to take a coordinated and integrated approach to child care planning for the entire Tri-Cities area. This collaboration allowed many phases of the work, most notably the engagement processes, to be done together. As a result, the three Tri-Cities Action Plan Reports have very consistent information and a similar presentation.

1.0 EXECUTIVE SUMMARY

Quality child care services are critical for the social and economic well-being of our communities. Research has confirmed the importance of child care to the economy, to gender equality, to social inclusion, to healthy child development, and as a key component of poverty reduction. The Province of BC has recognized this and has made a paradigm shift, developing a strategy towards a universal child care system that addresses the significant issues of accessibility, affordability and quality of child care that exist in our communities.

The Tri-Cities, which comprise Coquitlam, Port Coquitlam and Port Moody, applied for and received a grant from the Union of BC Municipalities and hired SPARC BC to develop Child Care Action Plans for each of the three cities. To fulfill its mandate for the City of Port Coquitlam, SPARC BC has conducted a literature review on the components of quality child care systems and programs; compiled promising practices from other jurisdictions; reported on the City's planning framework; conducted surveys of both parents and child care providers; conducted interviews with City staff, key informants, and child care providers; gathered current demographic and child care services information; hosted community meetings; and organized two large workshops to identify solutions and actions.

This final report summarizes this work and makes concrete recommendations for the City of Port Coquitlam's consideration.

According to Census data, in 2016, there were 8,380 children (0-12 years) living in Port Coquitlam. The percentage of children (0-17 years) living in low income families was 14.9%. One-third (33%) of residents were first-generation immigrants and close to 10% of children in the School District were identified as having special needs. In terms of access, there are an estimated 26.8 child care spaces per 100 children overall in Port Coquitlam. However, there are only 15.1 spaces per 100 children for infant/toddlers and 13.6 per 100 children for school agers.

Parents and child care providers both reported that, in addition to simply finding spaces, many families cannot afford the care they want for their children. With regard to quality, operators and others reported the difficulty of finding appropriate and safe indoor and outdoor space and of recruiting and retaining qualified staff. Furthermore, from the literature review it is known that the highest quality care is operated by public organizations and not-for-profits. In Port Coquitlam, only 23% of child care spaces are operated by not-for-profits.

To begin to address these gaps and challenges, SPARC BC is recommending that approximately 1450 new licensed spaces be created in the City of Port Coquitlam over the next 10 years.

- Infant/Toddlers (under 3 years): 348 spaces for a total of 33 spaces/100 children;
- Preschoolers (3 to 5 years): 525 spaces for a total 75 spaces/100 children; and,
- School Agers (6 to 9 years): 576 spaces for a total of 42 spaces/100 children.

It is well recognized that local governments do not have the mandate and resources to address child care needs on their own (i.e., they require support from senior levels of government, community partners, and others to address the gaps in service). That said, it is important to identify targets to guide future planning efforts at a local level for child care. In the absence of Federal or Provincial direction on space targets, or widely accepted standards from the research or other jurisdictions, the consultants

worked with Tri-Cities staff to identify “made in Port Coquitlam” targets – ones that seek to balance pressures to address local needs while also being pragmatic and realistic. The targets take into account employment rates for families and projected population growth, and focus on the two age groups with the largest gaps in access – infant/toddlers and school age.

In addition to the space targets, we are recommending that the City commit to developing an overarching Child Care Policy, as well as undertake a number of actions focusing on changes to City regulations, the application approval process, information provision, setting priorities, relationship and partnership building, and assisting with child care financing.

The report concludes with suggestions for implementation, monitoring and reporting.

2.0 INTRODUCTION

The City of Port Coquitlam has recognized that child care is a vital part of a community’s social infrastructure. In addition to directly benefiting the children and families using it, child care positively impacts the local economy and enhances the overall health and well-being of the entire community. In 2018, the Province of BC made a commitment to building a universal, high quality, publicly funded child care system. While details of the long-term plan to move child care away from the current market system are still unfolding, and a number of initiatives towards increasing access, reducing fees and improving quality have been made, serious challenges for families in local communities remain. This report explores opportunities and ways that the City can make a real difference in addressing these challenges, recognizing that the resources and power to significantly change the current child care system ultimately rest with senior levels of government.

This Action Plan will provide the City of Port Coquitlam and its partners with evidence-based, concrete, and actionable recommendations to improve access to high quality child care for the betterment of the community.

The City of Port Coquitlam Child Care Action Plan (“Action Plan”) is organized into seven sections and four appendices as follows:

- Section 1.0: Executive Summary
- Section 2.0: Introduction
- Section 3.0: Methodology
- Section 4.0: The Current Child Care System
- Section 5.0: Port Coquitlam: Our Community
- Section 6.0: Strategic Directions and Recommended Actions
- Section 7.0: Implementation, Monitoring and Reporting
- Appendix A: Glossary of Types of Child Care
- Appendix B: Summary of All Recommendations
- Appendix C: Port Coquitlam Needs Assessment
- Appendix D: Key Findings from Research and Promising Practices

3.0 METHODOLOGY

This Action Plan is an evidence-based report that synthesizes how municipalities can support child care in their communities and places this research within the Port Coquitlam context. It draws upon the best in child care research, relevant Statistics Canada data, information provided by the City of Port Coquitlam and School District 43, vulnerability scores derived from the Human Early Learning Partnership (“HELP”) Early Development Instrument (“EDI”) and Middle Years Development Instrument (“MDI”)¹, and BC government and Fraser Health data. Recommendations based on these data sources have been further refined with reference to promising practices from other British Columbian and Canadian municipalities and a strong literature evidence base (see Appendix D – Key Findings from Research and Promising Practices for a detailed look at this evidence). Overall, to inform the plan, the consultants used four primary methods of data collection and analysis and prepared one background Needs Assessment report (Appendix C).

Data Collection Methods

The main purpose of the Tri-Cities Child Care Action Planning project was to conduct a needs assessment, to engage with community, to develop new child care space creation action plans and to provide strategic directions based on best practices.

A major component of this project was community engagement. This was achieved through a variety of means, namely:

- Two online surveys (one for parents with 433 responses from parents residing in Port Coquitlam and one for child care providers with 115 responses from providers across the Tri-Cities);
- Interviews with 16 key informants, 9 child care providers, and 8 City staff;
- Three open houses/community information sessions in Coquitlam and Port Coquitlam which attracted 60 people;
- Two workshops. The first workshop had 28 participants from the 3 Cities, the School District, the Provincial government, and not-for-profits. The second also had 28 participants, most of whom were City and School District elected officials and senior staff.

Following is an overview of these various instruments:

Surveys

The Tri-Cities together administered two online surveys to parents and child care providers to understand current and anticipated child care needs. The Parent survey had 433 responses from parents residing in Port Coquitlam and the Provider survey had 115 responses from child care providers across the Tri-Cities. The participation of parents and child care providers was sought through a network of Tri-Cities

¹ The [Human Early Learning Partnership](#) (HELP) is a collaborative and interdisciplinary research network located within the School of Population and Public Health at UBC. HELP developed the Early Development Instrument (EDI) to measure the developmental health of the kindergarten population across British Columbia. The EDI measures child vulnerability rates in five key domains: physical health and well-being, social competence; emotional maturity; language and cognitive development; and communications skills and general knowledge. The Middle Years Development Instrument (MDI) is based on a self-report questionnaire that asks children in Grade 4 and 7 about their thoughts, feelings and experiences in school and in the community, to capture a holistic snapshot of their physical and mental well-being.

stakeholders who connect regularly with parents and child care providers in their community, as well as promotion through local newspapers and on the Cities' websites and social media.

Interviews

A total of 33 interviews, in-person and by telephone were conducted with staff in the School District, Fraser Health, the three Cities, the non-profit community services sector, and in the child care community.

Child care providers, from both large and small group and family child care centres, were interviewed in order to understand current and projected child care service needs and gaps as well as vulnerabilities children experience in the Tri-Cities.

These interviews provided perspectives on current and anticipated needs, along with challenges and successes, and elicited a list of child care targets, and opportunities, tools and strategies which could help the City to meet these targets.

Community Information Sessions

The purpose of these 'open house style' sessions was to provide residents with information about the current provision of child care locally and some of the factors influencing the number of spaces available. As well, the sessions were designed to generate interest in the Child Care Action Plan and the surveys, gather initial input regarding child care needs, seek input into priority locations for child care facilities, and develop a contact list of people who wanted to remain involved in the community engagement process.

Workshops

The first workshop (Solutions) was hosted by the Tri-Cities and was designed to share the research and data collected through the planning work about the current state of child care in the Tri-Cities, and to explore potential opportunities, strategies, and partnerships to address child care gaps. The second workshop (Actions) was similar in nature, but was hosted by the Tri-Cities Child Care Task Force and was geared toward elected officials and senior staff. The intent for both workshops was to involve key stakeholders who have influence on the success of the solutions and actions identified.

Between the two workshops there were three complementary purposes:

- To confirm the current child care situation and identify any missing information from the research work;
- To identify potential opportunities to collaborate and develop child care services and hubs; and
- To initiate discussions about potential actions to address child care gaps in the community.

Needs Assessment

The City of Port Coquitlam Needs Assessment presents information about demographic trends, household characteristics, child development indicators, and the distribution of existing child care spaces by program type and neighbourhood. The Needs Assessment is largely based on data from the 2016 Census, and also incorporates the most current data from the City of Port Coquitlam, School District 43, Human Early Learning Partnership, and the UBCM Community Child Care Planning Inventory.

4.0 THE CURRENT CHILD CARE SYSTEM

Child care is an integral part of Canada's social infrastructure and is, indeed, an absolute necessity for many families and for the local economy. Provincial governments have the primary responsibility for developing child care policy and programs, but both the federal and local governments also have strong roles to play, as do other local authorities (e.g. regional health authorities) and child care providers.

The Federal Government

The federal government has an important role in the current child care system. For instance, it provides direct child care funding support to some specific population groups: a) First Nations, Metis and Inuit children and families; b) families serving in the Canadian military; and c) some newcomers to Canada enrolled in language programs. The federal government also provides maternity and parental benefits to eligible parents, through Employment Insurance.

In 2018, the Federal Government allocated \$153 million to BC for child care, and BC established the following priority areas of investment:

- Enhance the accessibility of child care options by increasing the number of spaces;
- Increase affordability of child care, beginning with Infant/Toddler care;
- Enhance the quality of licensed child care programs by supporting the training and professional development of early childhood educators;
- Enhance equity through targeted investment in underserved communities, such as Indigenous families, families with children with special needs and young parents completing their secondary education.

In addition, the Federal Government has committed a further \$535 million to child care over four years to be implemented through agreements with the Provinces and Territories. The priority announced for these funds is school age child care, to build 250,000 new spaces, and to reduce parent fees, but no details are yet available.

The Provincial Government

In BC, the child care system is complex and spans three ministries (Children and Family Development, Health, and Education), all of which have different responsibilities, including the development of legislation, policy and regulations; funding supportive programs and services; providing capital grants; and providing fee subsidies and program supports for families with low incomes.

The Province's commitment is to build a universal, publicly funded child care system that is affordable and available for any family that needs or wants it. To meet this commitment, in 2018, the Provincial government announced a 10-year plan, which includes a \$1.3 billion dollar investment in the first three years. The government has now completed or begun work on the following:

- Provided funding for Aboriginal Head Start programs to include child care.
 - This is the first investment toward a child care system that is Indigenous-led, where child care meets the specific needs of Indigenous people. BC's goal is to implement the principles of the UN Declaration on the Rights of Indigenous People and the Calls to Action of the Truth and Reconciliation Commission.
- Developed the Child Care Fee Reduction initiative;
- Created the Affordable Child Care Benefit;

- Committed to create 22,000 new spaces by 2021;
- Established Universal Child Care Prototype Sites;
- Distributed Capital funding via: a) Child Care BC New Spaces Fund and b) UBCM Community Child Care Space Creation Program; and
- Announced wage increases for early childhood educators.

For more information about these and other initiatives, please refer to [the Province of BC Child Care Programs website](#).

In Budget 2019, the Provincial Government increased its investment in child care and early learning by announcing the BC Child Opportunity Benefit, which replaces the previous Early Childhood Tax Benefit. Starting in October 2020, families could receive up to \$3,600 per year, depending on their income and number of children.

The Province plays the primary role in advancing accessible, affordable, quality child care programs and the current government has demonstrated a desire to enhance the existing system in British Columbia through many new initiatives. Ultimately, however, child care services are developed and delivered at a community level and therefore municipalities have a critical role to play in fostering a system that provides quality child care.

Local Government

Under Provincial legislation, local governments do not have an assigned child care role. They also do not have the mandate and resources of their senior government counterparts to fully address child care needs. However, municipalities and regional districts are the level of government closest to the people and they generally have the most in-depth understanding of the local context. Municipalities and regional districts can also play a vital role in facilitating the establishment of quality child care in their communities². Examples of supportive actions taken by municipalities in BC include:

- Adopting stand-alone municipal child care policies which articulate the importance of child care to overall community well-being and indicate a commitment to support and also provides the policy foundation for other actions;
- Including the importance of child care in Official Community Plans;
- Convening child care planning tables, with cross-sectoral representation, that are dedicated to sharing information and collaborating on joint initiatives;
- Advocating to senior governments on local child care needs;
- Undertaking child care needs assessments;
- Providing grants to child care providers;
- Amending zoning bylaws to facilitate the development of child care spaces;
- Making space available in municipal facilities, at nominal or below-market rates, for the provision of child care;
- Securing built child care spaces or cash in lieu from developers through the development approval process (e.g., by providing bonus density in exchange for child care contributions);

² Note that before the completion of this Child Care Needs Assessment and Strategy, the [Union of BC Municipalities](#) (UBCM) was inviting applications from local governments for two programs: the Community Child Care Space Creation program (funded through the Provincial Government using Federal Government funding) and the Community Child Care Planning program (funded through the Provincial Government).

- Supporting a child care website or link with information targeted both to child care operators and interested parents; and
- Providing recreation services that benefit families and complement licensed child care systems.

Notably, Vancouver and Burnaby have made relationship-building a priority. Vancouver established the Joint Child Care Council (JCC) in 2004 which brings together the City, the Parks Board, the Board of Education, Vancouver Coastal Health and the Vancouver Public Library, along with community organizations and business representatives in order to support quality child care. As a result, the JCC has collaborated on the creation of over 1,000 new child care spaces.

Furthermore, Burnaby developed a Child Care Facilities Memorandum of Agreement (MOA) in 2014 with School District 41 in order to build up to twelve child care facilities in modular buildings on School District lands. This agreement is one of the first of its kind in BC and there is now a further agreement for the City and School District to work together to develop over 700 additional spaces on school grounds.

Other Key Players

Several other parties are involved with the planning, development, support, and operation of child care. Examples include First Nations, regional health authorities, school districts, child care providers and operators, not-for-profit organizations, parents, and the broader community. Additional information on these key child care partners is provided throughout this report.

5.0 PORT COQUITLAM: OUR COMMUNITY

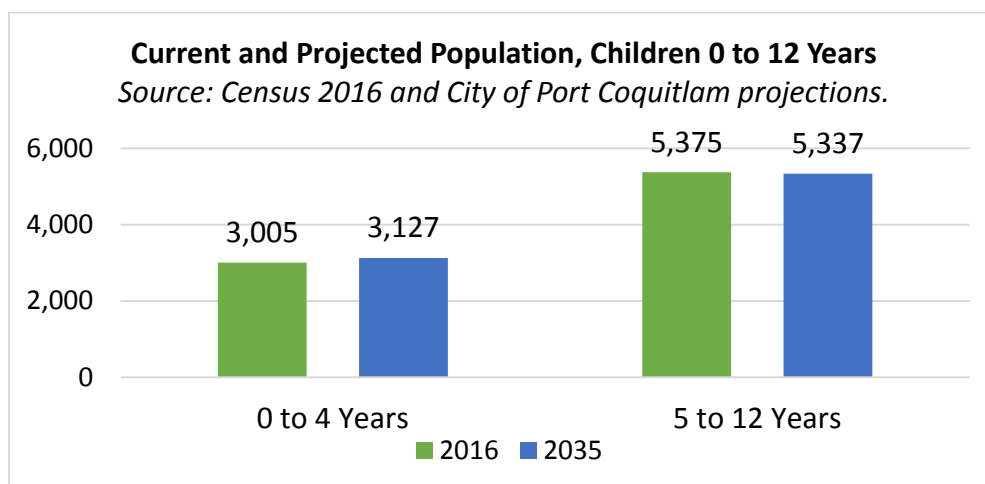
This section highlights several key pieces of data specific to Port Coquitlam, including child population and socio-economic statistics as well as information related to child care availability, needs and priorities. It also highlights information and commentary from the engagement processes in the areas of accessibility, affordability, quality, and partnerships. For more detailed information about the child care context in Port Coquitlam, including a comprehensive statistical community profile and summaries of findings from each community engagement activity, please refer to the Needs Assessment report (Appendix C).

According to Census data, in 2016, there were 8,380 children (0 to 12 years) living in Port Coquitlam, with a modest projected increase to 8,464 children by 2035. One-third (33%) of residents were first-generation immigrants and there were 66 languages spoken in the City. 3.4% of the population identified as Aboriginal (about 2,000 individuals). In terms of access, there are an estimated 26.8 child care spaces per 100 children overall in Port Coquitlam. However, there are only 15.1 spaces per 100 children for infant/toddlers and 13.6 per 100 children for school agers.

Child Population

Projections provided by the City of Port Coquitlam estimate a net increase of 84 children aged 0 to 12 years between 2016 and 2035 (an increase of 1%). The number of 0 to 4-year-olds is projected to increase by 122 children (+4.1% change), while the number of 5 to 12-year-olds is projected to decrease by 38 children (-0.7% change) (Figure 1). While population projections suggest the child population in Port Coquitlam will remain relatively stable over the next 15 years, any new residential developments will likely create more need for child care.

Figure 1: Current and Projected Child Population, 2016 to 2035



Child Vulnerability and Well-Being

To estimate child vulnerability and well-being, we use the Early Development Instrument (EDI) and the Middle Years Development Instrument (MDI), both developed by the Human Early Learning Partnership (HELP) at UBC.

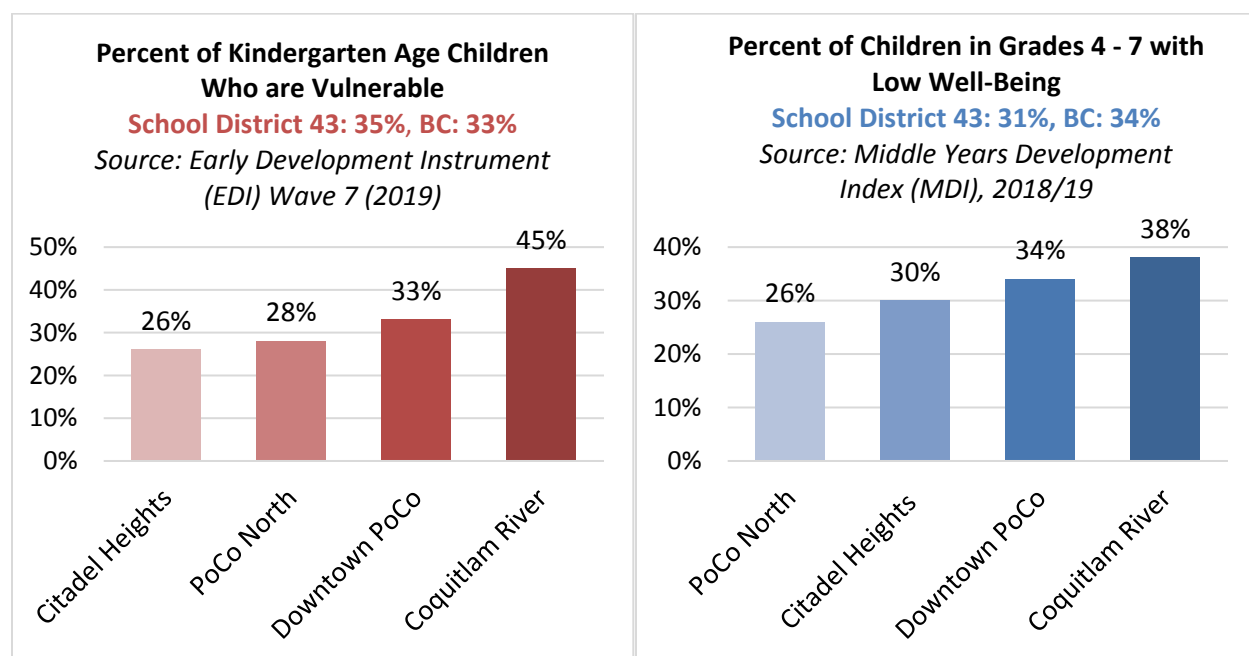
The EDI is based on a survey of kindergarten children. Vulnerable children are defined as those who, without additional support and care, are more likely to experience challenges in their school years and beyond. EDI is measured along five scales: Physical Health & Well-Being, Social Competence, Emotional Maturity, Language & Cognitive Development, and Communication Skills & General Knowledge.

The MDI is based on a survey of children in Grades 4 to 7. The MDI results are summarized in two indices: the Well-Being Index and the Asset Index. The MDI Well-Being Index combines measures of Optimism, Happiness, Self-Esteem, Absence of Sadness, and General Health to provide a holistic summary of children's mental and physical health. Index scores are reported by three categories: high well-being or thriving, medium well-being, and low well-being.

A large and growing body of evidence demonstrates that high-quality child care contributes to children's well-being and development. In addition, high-quality child care can help children develop the skills they need for success in school and in their lives outside of school. By identifying the neighbourhoods of their communities with the highest rates of childhood vulnerability, policy-makers can make informed decisions about where to prioritize investments in child care in order to make the biggest impacts in the lives of children who need it most.

A complete description of both instruments and findings from the EDI and MDI can be found at <http://earlylearning.ubc.ca>.

Figure 2: Vulnerability and Low Well-Being Rates, EDI (2019) and MDI (2018/19)



Parent Employment

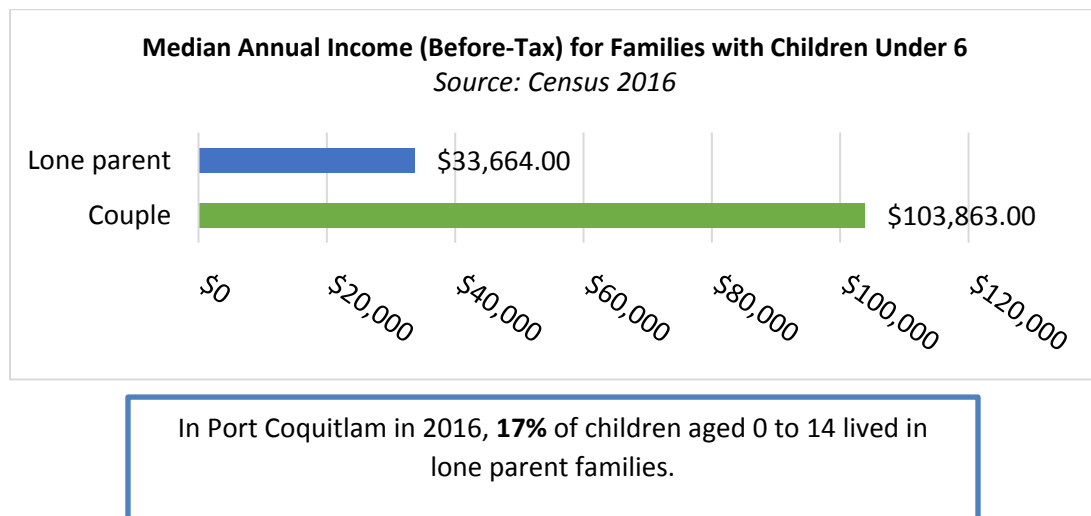
In Port Coquitlam in 2015, 83.1% of couple families with at least one child 0 – 17 years of age had two or more earners (4,760 families). 86.1% of lone parent families with at least one child 0 – 17 years of age had one or more earners (1,280 families)³. We can generally assume these families are primarily working parent households, where some form of care arrangement may be needed for younger children in the family.

Household Income and Child Care Fees

Child care costs are prohibitive for many families, and can contribute to higher rates of poverty among lone parent families in particular. In Port Coquitlam, the annual median income (before-tax) for lone parent families with children under 6 is \$33,664 whereas the median family income for couple families with children under 6 is \$103,863 (Figure 3).

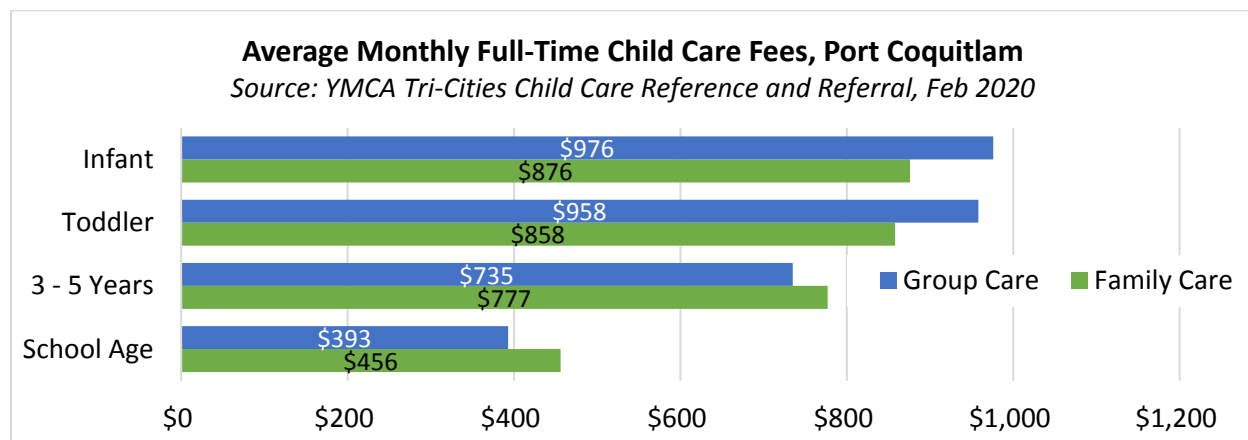
³Statistics Canada. Census Family Total Income Groups (22) in Constant (2015) Dollars, Census Family Structure (7), Family Size of Census Family (4), Ages of Census Family Members (18), Number of Earners in the Census Family (5) for Census Families, 2006, 2016 Census. Downloaded from Community Data Program: <https://communitydata.ca/content/census-family-total-income-groups-22-constant-2015-dollars-census-family-structure-7-family>

Figure 3: Median Annual Income (Before-Tax) for Families with Children Under 6



According to the Fee Survey conducted by the YMCA Child Care Resource and Referral in February 2020, the average monthly fee for family child care in Port Coquitlam is \$876 for infant care, \$858 for toddler, \$777 for 3 to 5-year-olds, and \$456 for school age. The average monthly fee for group care is \$976 for infant care, \$958 for toddler, \$735 for 3 to 5-year-olds, and \$393 for school age (Figure 4).

Figure 4: Average Monthly Full-Time Child Care Fees, February 2020



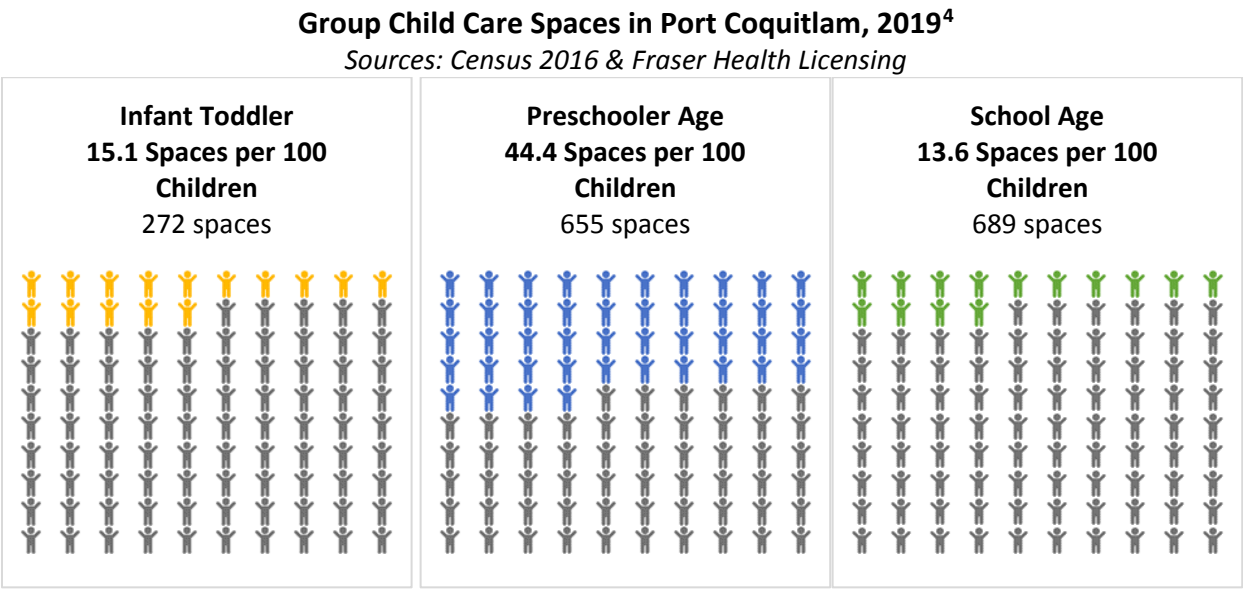
Child Care Spaces

In 2019, there were 2,245 licensed child care spaces in Port Coquitlam. Spaces from part-time preschool, family child care, and multi-age programs accounted for 29% of these licensed spaces, while group child care programs accounted for the remaining 71%. Group child care spaces not only make up the largest share of child care spaces; they are also the programs over which municipalities have the most direct influence to facilitate growth in and are the programs which were identified as the biggest preference in the parent survey. Because of this, the recommendations and actions in this report are focused on group child care. See Appendix A for a glossary of the different types of child care in BC.

Overall, the City of Port Coquitlam had 26.8 child care spaces for every 100 children from birth to 12 years of age. By comparison, Metro Vancouver has 18.6 child care spaces for every 100 children, BC has 18.4, and Canada has 27.2

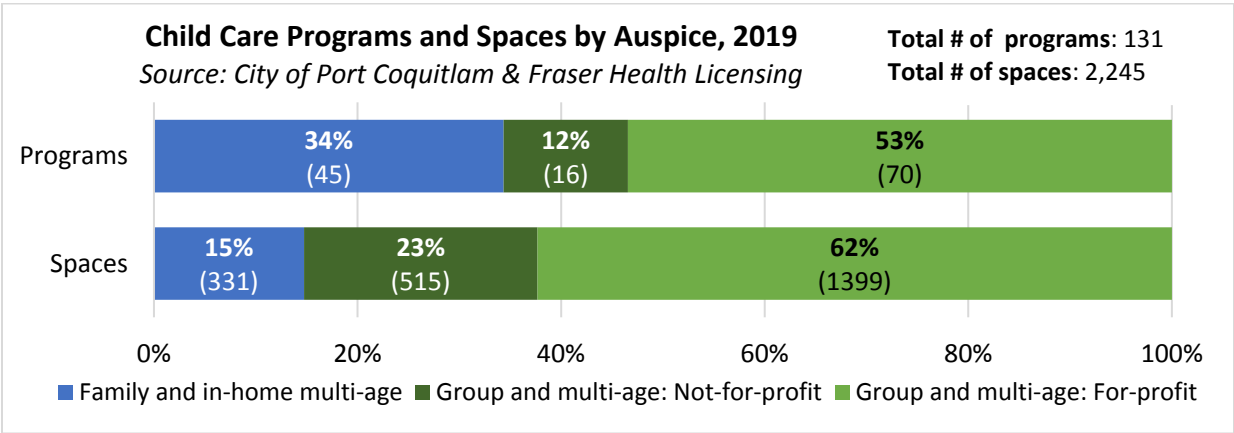
Figure 5 shows the group spaces only per 100 children in Port Coquitlam, by age group. There is no equivalent data by age group and licensing type available for Metro Vancouver, BC, or Canada.

Figure 5: Group Child Care Spaces per 100 Children



Approximately half of all child care in British Columbia is not-for-profit or public, compared with about one-quarter of child care spaces in Port Coquitlam. Figure 6 shows the breakdown of operator auspice for all 131 child care programs in Port Coquitlam, as well as for the 2,245 spaces offered through these programs.

Figure 6: Child Care Programs and Spaces by Auspice



⁴ Age groups are as follow: infant toddler (0 – 2 years); preschooler age (3 and 4-year-olds and half of all five-year-olds); school age (6 to 12-year-olds and half of all five-year-olds).

Highlights from Community Engagement

The following highlights from the community engagement are grouped according to four strategic directions: accessibility, affordability, quality, and partnerships. The first three of these are the primary areas of investment identified by the Provincial government. We have added partnerships as a fourth strategic direction as working together is critical to success.

Accessibility

From the engagement processes, and supported by the data, we can conclude that four major issues should be considered priorities with regard to accessibility of child care:

- Lack of spaces overall;
- The pressing need for more spaces for infants/toddlers and school age children particularly;
- Location (close to home/school/transit and in under-served neighbourhoods); and
- The need for care during non-traditional hours.

The first and biggest issue regarding accessibility is the overall number of spaces available. Child care operators believe that the main challenge facing parents is “finding child care, period”. Wait lists can be very long (up to 250 children for one centre in the Tri-Cities), especially for those facilities which are seen to be high quality or more affordable. Many participants in the engagement processes said that the child care situation in the Tri-Cities is “in crisis”. In addition, programs for infants/toddlers, before and after school care for school-age children, and services for children with special needs are especially scarce. Location was also often identified as an issue. Parents mentioned proximity of care to home, school, and public transportation as very important, but were often not satisfied in this regard. Very few facilities have non-traditional hours of operation and this is an issue for shift workers, weekend workers and others with child care needs beyond 7am to 5pm weekdays, including the many families who commute out of Port Coquitlam for work.

“Should not have taken almost three years to find daycare.”

– Port Coquitlam Parent Survey

Affordability

Forty-two percent (42%) of the 433 respondents to the Port Coquitlam Parent Survey reported a gross income of under \$100,000 and 12% reported an income of under \$50,000. Time and again, in the surveys, the interviews and the community meetings, affordability was a major concern. Cost was also identified as one of the main reasons that families didn’t change their care arrangements, even when they were dissatisfied with their current arrangements. Participants at the Community Open Houses identified affordability as their number one concern. Ironically, key informants suggested the Affordable Child Care Benefit may have allowed many families to seek out child care that they could not afford before, thereby increasing overall demand.

Interestingly, and related to cost, is the fact that child care providers themselves have issues of affordability. Child care operators struggle to find suitable, affordable facility space and to navigate often time-consuming and expensive application processes at the local level. Most significantly, operators must cover labour costs, particularly if they want to pay decent wages to their staff to ensure low staff turnover

and high program quality, hire staff with skills to support special needs children, or offer infant/toddler programs, which require higher staff-child ratios. Most operators are not able to lower their parent fees while still covering these costs.

Many of the people involved in the engagement processes suggested that municipalities could support affordable child care by providing operating and capital grants to eligible not-for-profit operators and by advocating to senior levels of government for their continued and expanded investment.

"I would like to at least be able to put my child in part time care, but with two incomes we still can't afford to have 2 kids in daycare."

– Port Coquitlam Parent Survey

Quality

Seventy-four percent (74%) of the respondents to the Parent Survey said that child care being licensed was very important, perhaps assuming that licensing improves quality. In fact, it has been shown in the research that quality varies and publicly-run and not-for-profit facilities offer consistently higher quality than for-profit centres. Data from the key informant and operator interviews suggested that lower-quality child care programs may be more common now. As one interviewee put it, "parents are desperate" and even the poorest quality programs are full.

The most significant quality issue identified by parents and child care operators alike is the lack of qualified staff. Seventy-four percent (74%) of child care providers reported that staffing challenges have had an impact on their ability to operate their programs and almost half reported a limited supply of applicants. There is an even more limited supply of staff who have the training and skills to work with children with special needs and with children under three-years-old.

A number of survey and interview respondents also expressed that there is inconsistency in the quality of college training for early childhood educators (ECE's); there are language barriers between ECEs and children and their parents; there are owner-operators without any ECE training; and many qualified ECEs have left the field altogether.

Key informant interviewees said much the same thing as child care operators, noting that finding qualified staff and suitable facility spaces are major challenges. Informants from Fraser Health reported an increase in staffing qualification exemptions, which are meant to be temporary, but that providers often have no long-term plan to rectify.

In addition, in the community open houses, attendees identified the following quality-related attributes as very important in a child care operation:

- High quality staff;
- Adequate staff-to-child ratio;
- Quality of programming; and
- Access to outdoor play space on-site.

Open house participants expressed that there are not enough licensed, safe child care programs and that low child care worker wages contribute to high staff turnover. Another significant issue with regard to quality is that many providers find it increasingly difficult to find appropriate, well-designed and safe facilities that are “approvable” by authorities. Lack of suitable and accessible outdoor space is another big concern.

Some ideas offered through the open houses to address these challenges were: providing financial incentives to developers, encouraging an increase of spaces through land use and zoning regulations, providing both capital and operating grants, and developing or actively participating in joint child care task forces.

*“It took years to get a spot in the care center, and honestly my kids hate it.
But we have no other option...”*

- Port Coquitlam Parent Survey

Collaboration and Partnerships

A key theme which emerged in the community engagement work, and which has been acted upon by some other municipalities, is to focus on partnerships and collaboration across sectors such as school districts, local organizations, and the Provincial government. In the Solutions workshop for instance, participants advocated using public partnerships to provide financial stability and maintain child care spaces and in the Actions workshop, elected officials identified the opportunity to work together to advocate for more senior government support. This workshop also highlighted the need for collaborating with Provincial ministries, Fraser Health, school districts, strata councils, and families. Facilitating collaboration between child care providers was an additional idea.

6.0 STRATEGIC DIRECTIONS AND RECOMMENDED ACTIONS

The linchpin for a successful municipal approach to child care improvement is an overarching goal to develop a strong, committed, and comprehensive Child Care Policy, including space creation targets. This, then, is the overall recommendation which provides context for all the other recommendations.

Overall Recommendation

That the City of Port Coquitlam develop a strong, committed, and comprehensive Child Care Policy.

The Child Care Policy should include, but not be limited to:

- A clear statement that child care development is a top priority for the City;
- A commitment to increased accessibility, improved affordability, focus on quality, and developing or expanding partnerships;
- A clear commitment to prioritize support and encouragement for the not-for-profit and public child care sector;
- The identification of space targets and other measurable goals;
- A general overview of resources needed to implement the strategy;

- A commitment to inter-departmental cooperation and effort; and,
- Clear direction regarding action priorities, monitoring, and reporting.

Based on this strategy, following are key recommended actions. These actions are grouped according to four strategic directions: accessibility, affordability, quality, and partnerships. The first three align with the focuses of the Provincial child care strategy and partnerships were a clear additional priority for the majority of people engaged in the planning work.

Strategic Direction #1 – Increase Accessibility

Current Child Care Availability

In the City of Port Coquitlam in 2019, there were a total 2,245 child care spaces, with a population of 8,380 children aged 0 to 12 years. The preschooler age group has the most child care spaces per capita, with 44.4 spaces per 100 children. In contrast, there were 15.1 spaces in group care for every 100 children aged 0 to 2 and 13.6 spaces for every 100 children in school age group care⁵. Overall, the City of Port Coquitlam had 26.8 child care spaces for every 100 children from birth to 12 years of age. By comparison, Metro Vancouver has 18.6 child care spaces for every 100 children, BC has 18.4, and Canada has 27.2.

Figure 7: Child care spaces by program type, City of Port Coquitlam

Age group	Number of children	Share of all children 0-12	Child care program type	Number of spaces	Spaces per 100 children in this age group
0 to 2 years	1,805	21.5%	Group (birth to 36 months)	272	15.1
3 to 5 years and half of all 5-year-olds	1,510	18.0%	Group (30 months to school age)	655	44.4
6 to 12 years and half of all 5-year-olds	5,065	60.4%	Group (school age)	689	13.6
Mixed Ages	n/a	n/a	All others ⁶	629	n/a
Total 0 to 12 years	8,380	100%	Total Child Care Spaces	2,245	26.8

Source: City of Port Coquitlam Child Care Inventory (2019) and Census 2016 population data.

Based on the above data, it is clear group infant-toddler and school age care spaces are only available for a small share of children in these age groups, especially when contrasted with coverage for the preschooler age group. This is consistent with the findings of the parent survey, provider and stakeholder interviews, and the overall trends in BC which all suggest families face the greatest difficulty in finding infant-toddler and school-age care.

⁵ For detailed information about the number and type of child care spaces available in each neighbourhood of Port Coquitlam, please refer to the Needs Assessment Report (Appendix C).

⁶ This includes licensed preschool, family child care, multi-age, and in-home multi-age child care programs.

Hours

Very few facilities have non-traditional hours, which makes it difficult for parents who work non-standard hours to find child care. Out of 95 child care facilities in Port Coquitlam, only eight offer extended hours of care (before 6 a.m. and/or after 7 p.m.). Furthermore, many people commute; of 32,045 employed residents in Port Coquitlam, 62.8% (20,135) work outside the municipality, and therefore may require longer hours of child care service each day. As one respondent to the Parent Survey shared, “it would be more helpful if it was open an extra hour 6:30am-6:30pm, to allow for parent commuting time...”.

Municipal Policies and By-laws

While municipalities do not have a legislated role in child care provision, there are many specific and highly effective things that they can do to support child care, particularly with regard to accessibility. All other things being equal, a supportive city can significantly increase the number of child care spaces. Like other developments, new child care facilities must abide by municipal regulations and follow municipal application review processes. If these regulations and processes are not child care-friendly, potential operators will be dissuaded from trying to develop new spaces. By the same token, if municipalities are not proactive in their support of child care, many opportunities will be missed.

What we heard from the child care provider community about municipal regulations and processes was that they were complicated, expensive, time-consuming, and contradictory. Child care providers have said that finding a space that meets the needs of parents and children, fits the Provincial licensing criteria, and then fits the City criteria is almost impossible.

Port Coquitlam has some useful elements in its current regulations and practices, such as:

- Statements and broad policies within the Community section of the OCP that could facilitate future development of child care;
- Accommodation of child care in several zoning districts of the City, including as a principle use in NC (Neighbourhood Commercial) and CC (Community Commercial) zones, in P1 and P2 Institutional zones and in some CD (Comprehensive Development) zones, and as an accessory use in all Residential zones and the Agricultural zone.
- Information on the City’s website for people who want to establish a child care facility.

In addition, Port Coquitlam participates on the Tri-Cities Early Childhood Development Committee and the Tri-Cities Task Force on Child Care.

Several opportunities exist to enhance and improve the City’s role regarding child care including:

- Community Amenities Contributions: Amend the OCP, supported by Zoning Bylaw provisions, to confirm that child care facilities are a preferred amenity to be pursued from developers through the rezoning process (as built amenities or cash-in-lieu).
- Review the Zoning and Parking Bylaws, to build on the current permissive framework for the establishment of child care facilities in various zones in the city.
- Enhance existing child care information on the City website geared to families who are looking for child care and those looking to open a child care facility .
- Improved coordination and collaboration with Fraser Health (Community Care Facilities Licensing [CCFL]).

- Development and Building Permit Application Review Process to reduce barriers and expedite processing of child care facility applications like putting not-for-profit child care applications at the front of the queue.

Promising Practices in BC Municipalities

In BC, the “Municipal Survey of Child Care Spaces and Policies in Metro Vancouver” (2019) found:

- 8 out of 21 Metro Vancouver municipalities have a stand-alone child care strategy;
- 11 municipalities identify child care facilities as a community amenity in the development approvals process;
- 15 municipalities support child care through the provision of municipal building space (rent-free, reduced lease, or market lease); the space may be made available on a single property or on multiple sites;
- 6 municipalities offer grants for child care capital projects;
- 4 municipalities offer grants for child care operating costs;
- 15 municipalities provide space for child care in municipal facilities; and
- 8 municipalities offer property tax exemptions.

The cities of Vancouver, Richmond and Burnaby all have official child care strategies which pay special attention to partnerships. Collaborations with School Boards have been particularly successful.

Space Targets

It is well recognized that local governments do not have the mandate and resources to address child care needs on their own (i.e., they require support from senior levels of government, community partners, and others to address the gaps in service). That said, it is important to identify targets to guide future planning efforts at a local level for child care. In the absence of Federal or Provincial direction on space targets, or widely accepted standards from the research or other jurisdictions, the consultants were asked to recommend a set of “made in Port Coquitlam” targets – ones that seek to balance pressures to address local needs while also being pragmatic and realistic. The targets are based on the recognition of significant unmet need for child care for children of all ages, as nearly three-quarters of families in the City have working parents or caregivers, with particular gaps in infant-toddler and school age care given the unique challenges of operating these types of child care. The targets also take into account the employment rates for families and projected population growth. By 2030, we propose that Port Coquitlam aims to have 33 spaces per 100 children for infant-toddlers; 42 spaces per 100 for school age and 75 spaces per 100 for preschoolers.

The targets are organized into short, medium, and long-term time horizons⁷.

Overall, to begin to address some of the gaps and challenges in access to child care in Port Coquitlam, SPARC BC is recommending that approximately 1450 new licensed spaces be added over the next 10 years.

While interpreting the detailed information about these space targets provided below, two important points must be noted. First, there are three child care developments in the planning or development approval process in Port Coquitlam. While there is no guarantee that all these developments will

⁷ Short term is 2020 to 2022. Medium term is 2023 to 2025. Long term is 2026 to 2030.

proceed as planned, the proposals would potentially add an estimated 87 - 115 full-time spaces and 32 to 40 part-time preschool spaces to Port Coquitlam's child care inventory. The in-stream applications represent a "kick start" to addressing Port Coquitlam's child care needs.

Second, for the school age targets, we are recommending a focus only on children up to 9 years old for licensed child care as older children typically access other after school activities, such as those offered through the School District or City Recreation programs.

Infant Toddler

By facilitating two to three 12-space infant toddler programs every year for ten years, Port Coquitlam could reach targets of child care spaces for 18% of children from birth to 2-years by 2022, 24% by 2025, and 33% by 2030.

Figure 8: Infant-Toddler Space Targets

	Population	New Spaces	New Programs	Cumulative Spaces	Spaces per 100
Current	1805			272	15.1
Short-term (by 2022)	1830	+60	+5	332	18
Medium-term (by 2025)	1842	+108	+9	440	24
Long-term (by 2030)	1863	+180	+15	620	33

Preschooler Age

By facilitating two to three 25-space preschool age programs every year for ten years, Port Coquitlam could reach targets of child care spaces for 50% of preschool age children by 2022, 60% by 2025, and 75% by 2030.

Figure 9: Preschooler Age Space Targets

	Population	New Spaces	New Programs	Cumulative Spaces	Spaces per 100
Current	1510			655	43.4
Short-term (by 2022)	1533	+125	+5	780	50
Medium-term (by 2025)	1544	+150	+6	930	60
Long-term (by 2030)	1563	+250	+10	1180	75

School Age

By facilitating two to three 24-space school age programs every year for ten years, Port Coquitlam could reach targets of child care spaces for 26% of school age children by 2022, 33% by 2025, and 42% by 2030.

Figure 10: School Age Space Targets

	Population	New Spaces	New Programs	Cumulative Spaces	Spaces per 100
Current	3045			689	22.6
Short-term (by 2022)	3031	+96	+4	785	26
Medium-term (by 2025)	3025	+192	+8	977	33
Long-term (by 2030)	3013	+288	+12	1265	42

Recommendations for Increasing Accessibility

The following actions will facilitate the creation of new child care spaces overall, create new spaces for the most under-served groups and neighbourhoods, and address some locational priorities.

Action	Time Frame ⁸	External Partners
Policy		
1. Endorse the space creation targets* to help guide child care planning efforts for Port Coquitlam to 2030: Infant/Toddler: 348 spaces Preschooler: 525 spaces School Age: 576 spaces *Please refer to Figures 3 – 5.	Short	None
2. Prioritize the creation of spaces for infant/toddler and school age children when facilitating development of new spaces.	Short	Child care providers, School District
3. Identify child care as a priority for Community Amenity Contributions, Density Bonusing, Capital Planning.	Medium/Long (including implementation)	Developers (Consult)
4. Prioritize locating child care spaces in civic facilities and parks, in new developments (especially residential and commercial), along transit hubs and on school properties.	Medium/Long	BC Transit, Fraser Health, School Board, not-for-profit providers
5. Link child care to affordable housing strategies and transit expansion or improvement.	Medium/Long	BC Housing, BC Transit
Planning		
6. Identify one City staff position(s) as a facilitator/point person with overall responsibility for child care, including assisting applicants with City processes and supporting City staff.	Short	None
7. Put not-for-profit child care applications at the front of the queue for processing.	Short	None
8. Identify neighbourhoods with the least spaces per capita and consider those with high childhood vulnerability to prioritize for the creation of new spaces	Short	None
9. Create an inventory of prospective opportunities for child care development by: a) identifying City assets (buildings and land), that are slated for capital redevelopment;	Short	Fraser Health, School District, not-for-profit child care providers, post-secondary

⁸ **Time Frame:** short = 1 to 2 years; medium = 3-5 years; long = 6-10 years.

b) identifying underutilized or vacant spaces or land, including parks that could be repurposed for child care; and c) working with other public and not-for-profit partners to identify potential land or facilities that could be used for child care.		institutions, other not-for-profits
10. Access Provincial Capital funding to build child care spaces and develop a structured partnership with the Province to replicate the process for multiple programs and sites.	Short/Medium	Province, School District, not-for-profit operators
11. Identify and implement changes to City processes and regulations for facilitating child care development, including alignment with Fraser Health Licensing, prioritization of child care as a community amenity, and review of bylaws, as detailed in the Planning Framework and Bylaw Review Report.	Medium	Consultation with applicants, Fraser Health
12. Improve the City website regarding child care information to: a) ensure the information for opening spaces is based on the assumption that applicants have limited prior knowledge; and b) provide links to CCR&R and MCFD child care map for parents looking for child care.	Medium	Child care providers, Fraser Health, Tri-Cities Child Care Resource & Referral Program
13. Work with internal and external partners to develop after-school programs that support children aged 10-12.	Medium	Fraser Health, parks and library staff, not-for-profit sector, School District
14. Work with the Tri-Cities Child Care Task force to explore and then pilot child care that offers longer hours, non-traditional hours and/or flexible hours.	Medium	Province, Fraser Health, Not-for-profit providers, School District

Strategic Direction #2 – Improve Affordability

Many families struggle to afford the high cost of child care. In the City of Port Coquitlam's Parent Survey, only 15% of 433 respondents indicated that they were very satisfied with the cost of their child care. Despite the fact that there are now more financial supports provided by the Province to parents than there used to be, people are still struggling with affordability. Though many parents (35%) were not satisfied with their current care arrangements, most of those who were dissatisfied did not change those arrangements because of cost. In addition, child care operators suggested that because many parents have few child care options, due to lack of availability of spaces and high fees, they are often forced to accept whatever spaces they can get, even if the program seems to be of low quality.

All of these difficulties are exacerbated for certain types of families who face additional challenges to finding appropriate child care: low income families, families with multiple children, recent immigrants, families with children with special needs, foster families, and families where parents do shift work. In the

Port Coquitlam population, 3.4% identify as Indigenous, 33% are first-generation immigrants and, in 2018/19, the percentage of children with special needs in School District 43 elementary schools was 9.6%.

A 2020 survey of child care costs completed by the YMCA Child Care Resource and Referral service identified the following average monthly child care costs, by facility type and age group, for Port Coquitlam.

Figure 11: Average Monthly Full-Time Child Care Fees, 2020

	Infant	Toddler	3-5 Years	School Age
Family Child Care	\$876	\$858	\$777	\$456
Group Child Care	\$976	\$958	\$735	\$393

**Source: Data provided by YMCA Tri-Cities Child Care Resources and Referral*

Recommendations for Improving Affordability

The City has limited opportunities to directly affect the high cost of child care as most of the responsibility for influencing affordability rests with senior levels of government. Furthermore, the current method of funding through operating grants and fee subsidies, within a market system, while helpful, will also not significantly impact affordability. As such, the key action and role for the City will be to advocate to the Province for continued and expanded investment.

Action	Time Frame	Partners
1. Reduce application fees for new or expanded child care operations.	Short	None
2. Create a grant program for not-for-profit child care centres to assist with facility upgrades/maintenance or to offer extended hours.	Medium	Not-for-profit providers
3. Provide municipal space rent-free or at a vastly reduced rent for child care uses.	Medium; on-going	Not-for-profit providers
4. Lobby senior governments for increased funding.	Long; on-going	Child Care Task Force, City of Port Moody, City of Coquitlam, School Board

Strategic Direction #3 – Focus on Quality

While accessibility and affordability of child care are important goals, neither of these guarantee quality. The research is clear that high quality child care is linked to positive outcomes for children, while poor quality care can have negative long-term effects. More generally, parents dropping off their children at a child care centre each working day want to feel secure knowing their children will receive safe, high-quality care.

Quality Child Care Systems

The Province of BC has committed to an ambitious “systems” approach to universal child care with a focus on quality, affordability, and accessibility. *Child care BC: A New Day for Families & Providers in BC* is a

provincial plan specifically focused on establishing a quality child care system and adheres to eight commonly accepted elements of a quality child care system, graphically presented below. These eight elements are: (1) Ideas, (2) Governance, (3) Infrastructure, (4) Planning and Policy development, (5) Financing, (6) Human Resources, (7) Physical environment, (8) Data, Research and Evaluation. All elements are interconnected and fit together to create a strong system; individually, each component has a limited impact. Strong public policy is needed to provide the foundation to build a quality child care system that incorporates all of these components.

Figure 12: Eight Elements of a Quality Child Care System



(Source: Martha Friendly and Jane Beach, (2005). Elements of a high quality early learning and child care system. Childcare Resource and Research Unit.)

Quality Child Care Programs

At the program level, reporting of positive relationships between families and providers, among colleagues, and between children and staff is strongly indicative of quality care. Additionally, when staff have higher levels of education and training, feel appreciated, and are well-supported, the quality of care increases. Planned programming and a strong curriculum that is tailored to meet the diverse needs of children further enhances quality. There is also much evidence that a well-designed indoor/outdoor space is critical to supporting the development of children under five.

In order to facilitate the quality criteria identified, special attention should be paid to staff:

- Staff should have ECE (Early Childhood Education) training;
- At least some staff should have special needs and cultural/ESL skills if required;
- Wages should be decent and commensurate with the level of training;

- There should be written policies and formal procedures which give staff a feeling of worth and certainty, such as: job descriptions, contracts, salary schedule, performance reviews, and a staff manual.

Auspice

Child care auspice is critically important to the quality of child care programs. In BC (and Canada), we have three types of child care auspices:

1. Not-for-profit child care services;
2. For-profit child care services; and
3. Publicly operated child care services (i.e. services directly operated by a public entity such as a city government or school board).

Research on auspice has consistently demonstrated that, as a group, for-profit centres tend to offer lower wages and fewer benefits to their employees and tend to have more untrained staff than non-profit and public centres. For more information about the research on the impact of auspice on quality of service, please refer to Appendix D.

Across British Columbia about 50% of the child care is operated on a not-for profit or public basis. In Port Coquitlam, not-for-profits currently operate about 23% of the total child care spaces. While the research distinguishes for-profit, not-for-profit, and public auspice, we felt it was also important to distinguish for-profit group and multi-age care from family and in-home multi-age care.

Figure 13: Child Care Programs and Spaces by Auspice, 2019

Service Type and Auspice	Number of Programs	Number of Spaces
Family and in-home multi-age	45 (34.3%)	331 (14.7%)
Group and multi-age: For-profit	70 (53.4%)	1,399 (62.3%)
Group and multi-age: Not -for-profit	16 (12.2%)	515 (22.9%)
Total	131	2,245

**Source: Based on data from City of Port Coquitlam and Fraser Health Licensing.*

Recommendations for Increasing Focus on Quality

Much of what needs to occur to build, monitor and assess a quality child care system is outside the scope, mandate and authority of the City; however, by engaging with its public and community partners, the City can create policy and make commitments that contribute to quality, including supporting operators to have the capacity for growth in this area.

The following actions will assist in promoting and influencing the quality of child care.

Action	Time Frame	Partners
1. Support the Province in its “Early Care and Learning Recruitment and Retention Strategy” initiative through joint advocacy.	Short	Not-for-profit providers, School Board, City of Port Moody, City of Coquitlam
2. Confirm a set of principles, values, and criteria or guidelines (consistent with the over-arching Child Care Strategy recommended for the City) that will guide the City’s decisions when developing child care in civic spaces or when securing child care spaces through CAC’s and other means, covering such matters as: a) Minimum and maximum size of the facility to be developed; b) The auspice or ownership of the negotiated or built facility and the process for selecting operators; c) Design expectations (Provincial minimums or higher) for both indoor and outdoor spaces; d) Terms and conditions for leases; and, e) Operating expectations (i.e. affordability, inclusivity, good wages and working conditions).	Short/Medium	Fraser Health, Not-for-profit providers, Child Care Task Force
3. Designate one staff person (may be the “facilitator” identified in “Accessibility” and/or the City/School Board joint position recommended in “Partnerships”) who can assist in finding/brokering quality space, both indoor and outdoor, that meets City and Fraser Health requirements.	Medium; on-going	Not-for-profit providers, Fraser Health
4. Increase the number of licensed, not-for-profit, publicly funded child care operations, including consideration of strategies to recruit not-for-profit operators to come into the City.	Long	Province, Not-for-profit providers, School Board

Strategic Direction #4 – Develop Collaboration and Partnerships

Child care involves many parties playing various roles, which means it requires dedicated relationship-building and collaboration between and across jurisdictions. The Tri-Cities have a long history of collaboration and currently work together on child care through the Child Care Task Force and Child Care Working Group.

Throughout the community engagement conducted for this project, further building and strengthening partnerships was perhaps the most commonly suggested action to increase the quality, affordability and accessibility of child care in Port Coquitlam and the Tri-Cities. For instance, one of the most prevalent themes in community engagement discussions was the potential for the use of public lands and facilities to create more child care spaces. In addition, while there are already 41 child care programs in district schools, by far the most-mentioned potential partnership was between the City and the School District. Libraries and parks are part of the City, but more collaboration between and among City departments also emerged as a strong theme, as did partnerships with other jurisdictions who have authority over other publicly owned lands or facilities, such as post-secondary institutions, hospitals, and local First Nations. In addition to public entities, participants also suggested partnerships with senior centres and large employers who might provide facilities on-site for their employees.

Importantly, there were also comments on the importance of developing stronger relationships with local Indigenous peoples, including incorporating Indigenous perspectives and history in child care planning and curricula.

Beyond facility creation with local partners, many community engagement participants suggested partnerships among neighbouring municipalities and between jurisdictions (i.e. City/School Board and City/Health Authorities) to lobby and advocate to senior levels of government for expanded commitments and financial resources for child care. Partnerships of neighbouring cities and jurisdictions could also develop coordinated approaches to child care delivery.

Recommendations for Increasing Focus on Partnerships and Collaborations

The following recommendations identify actions which can be taken to pursue effective partnerships and collaborations:

Action	Time Frame	Partners
1. Develop a joint position with the School District and other Cities for a community child care coordinator who would focus on unifying goals for spaces; identifying and organizing partnership opportunities to promote accessibility, affordability, and quality; and establishing ongoing communication with officials in the Province and with community partners to address Port Coquitlam's child care needs.	Short	School Board, Port Moody, Coquitlam
2. Increase partnership with the School District to: a) ensure child care is part of all new or renovated school spaces;	Short/Medium	School Board

b) facilitate use of school spaces and grounds for school age care operators; c) improve communication between the City and School District; and, d) Support the move to an enhanced role for the School District in school age child care.		
3. Merge the current Child Care Working Group and Child Care Task Force to eliminate duplication and expand the membership to ensure there is appropriate representation and that resources are used most effectively.	Short	All Task Force and Child Care Working group members
4. Advocate to senior governments to ensure that the needs of Tri-Cities children are a priority for new spaces, effective strategies are in place for recruitment and retention of child care staff, child care fees are affordable for families, and funds are available to support non-traditional hours of care.	Short/Medium	Coquitlam, Port Moody, School Board
5. Increase the partnership with the Child Care Resource and Referral program and other community organizations to: a) bring child care operators together for information sharing, joint training and education; and, b) provide more information for parents about child care, especially targeted at more vulnerable populations.	Short/Medium	Not-for-profit providers, Health, Community Organizations
6. Host joint child care development information meetings on a regular basis with Fraser Health for people who are interested in opening child care centres.	Short	Fraser Health
7. With the Task Force, provide regular briefings to elected officials, including the School Board, and include a commitment to orientation on child care for newly elected City Councillors and School Trustees after each local election.	Short	Child Care Task Force
8. Explore the feasibility of establishing and maintaining a centralized child care wait-list for the Tri-Cities.	Short	Coquitlam, Port Moody, Tri-Cities CCR&R, Child Care Operators, Child Care Task Force

7.0 IMPLEMENTATION, MONITORING AND REPORTING

In order to move these recommendations forward, we suggest that Port Coquitlam and the other two Tri-Cities municipalities work with one community-based Task Force to identify commonalities and areas where on-going collaboration would be most effective. These areas for collaboration could include lobbying, information-sharing, collection and evaluation of data, preparation of regional annual reports, and so on. This Task Force should include representation from all public partners as well as local community agencies and child care operators.

To effectively implement the recommended actions and develop a child care strategy for the City of Port Coquitlam, it is essential for the City to adopt a coordinated and intentional approach. While it may appear logical that implementation begin with short-term actions requiring the fewest resources, this will not always be the case. Although it is important to have some early “wins”, there are other actions which could begin right away, in order to reach fruition in the medium to long term. As an example, consider recommendation #4 in the “Accessibility” category: *“Identify child care as a number one priority for CACs, Density Bonusing, Capital Planning”*. Implementing this recommendation requires, in the first instance, political will and clarity for staff. After that, while fully working out logistics and processes may take some time, child care could be included in the very next rezoning or large development. The same is true of the recommendation regarding partnering with the School Board -- discussions could begin almost immediately, even though developing actual facilities will take more time to achieve.

Karl Pearson, credited with establishing the discipline of mathematical statistics, said:
“That which is measured improves. That which is measured and reported improves exponentially.”

Related, and also true, is that to measure something is to mark its importance. Accordingly, City staff should develop concrete (but not complicated) tools to measure the City’s progress on implementation. Reporting, to be done jointly with the Child Care Task Force and School District, should be done annually to City Council, providing not only statistics but also a discussion of successes, challenges, and lessons learned, with recommendations for further action. After being received by Council, the annual report should be widely shared with the City’s partners, the child care provider community, and other levels of government.

In closing, it is clear that Port Coquitlam is aware that child care is a vital part of the community’s social infrastructure and recognizes that many families in the City have unmet need for child care services. The City is uniquely positioned and has many opportunities to work with its partners to increase the number of child care spaces and to improve the affordability and quality of care. Doing so will greatly benefit children and families in the City of Port Coquitlam and contribute to the economic development and well-being of the entire community.

Appendix A – Glossary of Types of Child Care

There are four types of child care in BC.

Child Care Type	Ages	Max Group Size
LICENSED CHILD CARE Licensed child care facilities are monitored and regularly inspected by regional health authorities. They must meet specific requirements for health and safety, staffing qualifications, record keeping, space and equipment, child-to-staff ratios, and programming.	Group child care – under 3 years	From birth to 36 months 12 children
	Group child care – 2.5 years old to school age	From 30 months to school age (Kindergarten) 25 children
	Group child care – school age (before- and-after school care)	School age (Kindergarten and up) 24 children from Kindergarten and Grade 1 or 30 children from Grade 2 and older with no Kindergarten or Grade 1 children present
	Multi-age child care	From birth to 12 years old 8 children, having no more than 3 children younger than 36 months old and, of those 3, no more than one child younger than 12 months old or having no more than 3 children younger than 36 months old
	In-home multi-age child care	From birth to 12 years old 8 children, having no more than 3 children under 36 months old and, of those 3, no more than one child younger than 12 months old; or having no more than 3 children younger than 36 months old
	Family child care	From birth to 12 years old 7 children, having no more than 3 children younger than 48 months old and, of those 3, no more than one child younger than 12 months old; or having no more than 4 children younger than 48 months old and, of those 4, no more than 2 children younger than 24 months old
	Preschool – 2.5 years old to school age	From 30 months to school age (Kindergarten) 20 children
	Occasional child care	18 months old and up 16 children if children under 36 months are present or 20 children if children under 36 months are not present

<p>REGISTERED LICENSE-NOT-REQUIRED CHILD CARE</p> <p>These are unlicensed care providers. They must have registered with a Child Care Resource and Referral Centre. To register, operators must have completed: criminal record checks (for everyone over age 12 living in the home), character references, a home safety assessment, first aid training, and child care training courses or workshops.</p>	<p>From birth to 12 years</p>	<p>Only 2 children or a sibling group who are not related to them</p>
<p>LICENSE-NOT-REQUIRED CHILD CARE</p> <p>These child care providers can operate legally in B.C. They are not registered or licensed and are not monitored or inspected. Unlicensed child care providers do not have to meet health or safety standards. Parents and guardians are responsible for overseeing the care and safety of their children in these care arrangements.</p>	<p>From birth to any age</p>	<p>Only two children or a sibling group who are not related to them</p>
<p>IN-CHILD'S-OWN-HOME CARE</p> <p>This unlicensed care is when parents arrange for child care at home – like a nanny or a baby-sitter. Children from other families cannot be included in this care. The care provider cannot be a relative who lives in the home. It is not legally required to monitor this care. No specific qualifications are required for the child care provider. Parents or guardians must decide how to screen and hire the child care provider who becomes their employee.</p>	<p>N/A</p>	<p>Children from other families cannot be included in this care.</p>

For further information about staff-to-child-ratios, staff qualifications, and settings for each child care type, as well as additional information, please refer to the [Government of BC website](#).

Appendix B – Summary of all Recommendations

The tables below indicate all recommended actions for the City of Port Moody Child Care Strategy, organized into the four major strategic areas: accessibility, affordability, quality, and partnerships & collaborations.

Recommendations for Increasing Accessibility

The following actions will facilitate the creation of new child care spaces overall, create new spaces for the most under-served groups and neighbourhoods, and address some locational priorities.

Action	Time Frame ⁹	External Partners
Policy		
2. Endorse the space creation targets* to help guide child care planning efforts for Port Coquitlam to 2030: Infant/Toddler: 348 spaces Preschooler: 525 spaces School Age: 576 spaces *Please refer to Figures 3 – 5.	Short	None
2. Prioritize the creation of spaces for infant/toddler and school age children when facilitating development of new spaces.	Short	Child care providers, School District
3. Identify child care as a priority for Community Amenity Contributions, Density Bonusing, Capital Planning.	Medium/Long (including implementation)	Developers (Consult)
4. Prioritize locating child care spaces in civic facilities and parks, in new developments (especially residential and commercial), along transit hubs and on school properties.	Medium/Long	BC Transit, Fraser Health, School Board, not-for-profit providers
5. Link child care to affordable housing strategies and transit expansion or improvement.	Medium/Long	BC Housing, BC Transit
Planning		
6. Identify one City staff position(s) as a facilitator/point person with overall responsibility for child care, including assisting applicants with City processes and supporting City staff.	Short	None
7. Put not-for-profit child care applications at the front of the queue for processing.	Short	None
8. Identify neighbourhoods with the least spaces per capita and consider those with high childhood vulnerability to prioritize for the creation of new spaces	Short	None

⁹ Time Frame: short = 1 to 2 years; medium = 3-5 years; long = 6-10 years.

9. Create an inventory of prospective opportunities for child care development by: a) identifying City assets (buildings and land), that are slated for capital redevelopment; b) identifying underutilized or vacant spaces or land, including parks that could be repurposed for child care; and c) working with other public and not-for-profit partners to identify potential land or facilities that could be used for child care.	Short	Fraser Health, School District, not-for-profit child care providers, post-secondary institutions, other not-for-profits
10. Access Provincial Capital funding to build child care spaces and develop a structured partnership with the Province to replicate the process for multiple programs and sites.	Short/Medium	Province, School District, not-for-profit operators
11. Identify and implement changes to City processes and regulations for facilitating child care development, including alignment with Fraser Health Licensing, prioritization of child care as a community amenity, and review of bylaws, as detailed in the Planning Framework and Bylaw Review Report.	Medium	Consultation with applicants, Fraser Health
12. Improve the City website regarding child care information to: a) ensure the information for opening spaces is based on the assumption that applicants have limited prior knowledge; and b) provide links to CCR&R and MCFD child care map for parents looking for child care.	Medium	Child care providers, Fraser Health, Tri-Cities Child Care Resource & Referral Program
13. Work with internal and external partners to develop after-school programs that support children aged 10-12.	Medium	Fraser Health, parks and library staff, not-for-profit sector, School District
14. Work with the Tri-Cities Child Care Task force to explore and then pilot child care that offers longer hours, non-traditional hours and/or flexible hours.	Medium	Province, Fraser Health, Not-for-profit providers, School District

Recommendations for Improving Affordability

The City has limited opportunities to directly affect the high cost of child care as most of the responsibility for influencing affordability rests with senior levels of government. Furthermore, the current method of funding through operating grants and fee subsidies, within a market system, while helpful, will also not significantly impact affordability. As such, the key action and role for the City will be to advocate to the Province for continued and expanded investment.

Action	Time Frame	Partners
1. Reduce application fees for new or expanded child care operations.	Short	None
2. Create a grant program for not-for-profit child care centres to assist with facility upgrades/maintenance or to offer extended hours.	Medium	Not-for-profit providers
3. Provide municipal space rent-free or at a vastly reduced rent for child care uses.	Medium; on-going	Not-for-profit providers
4. Lobby senior governments for increased funding.	Long; on-going	Child Care Task Force, City of Port Moody, City of Coquitlam, School Board

Recommendations for Increasing Focus on Quality

Much of what needs to occur to build, monitor and assess a quality child care system is outside the scope, mandate and authority of the City; however, by engaging with its public and community partners, the City can create policy and make commitments that contribute to quality, including supporting operators to have the capacity for growth in this area.

The following actions will assist in promoting and influencing the quality of child care.

Action	Time Frame	Partners
1. Support the Province in its “Early Care and Learning Recruitment and Retention Strategy” initiative through joint advocacy.	Short	Not-for-profit providers, School Board, City of Port Moody, City of Coquitlam
2. Confirm a set of principles, values, and criteria or guidelines (consistent with the over-arching Child Care Strategy recommended for the City) that will guide the City’s decisions when developing child care in civic spaces or when securing child care spaces through CAC’s and other means, covering such matters as: a) Minimum and maximum size of the facility to be developed; b) The auspice or ownership of the negotiated or built facility and the process for selecting operators; c) Design expectations (Provincial minimums or higher) for both indoor and outdoor spaces;	Short/Medium	Fraser Health, Not-for-profit providers, Child Care Task Force

d) Terms and conditions for leases; and, e) Operating expectations (i.e. affordability, inclusivity, good wages and working conditions).		
3. Designate one staff person (may be the “facilitator” identified in “Accessibility” and/or the City/School Board joint position recommended in “Partnerships”) who can assist in finding/brokering quality space, both indoor and outdoor, that meets City and Fraser Health requirements.	Medium; on-going	Not-for-profit providers, Fraser Health
4. Increase the number of licensed, not-for-profit, publicly funded child care operations, including consideration of strategies to recruit not-for-profit operators to come into the City.	Long	Province, Not-for-profit providers, School Board

Recommendations for Increasing Focus on Partnerships and Collaborations

The following recommendations identify actions which can be taken to pursue effective partnerships and collaborations:

Action	Time Frame	Partners
1. Develop a joint position with the School District and other Cities for a community child care coordinator who would focus on unifying goals for spaces; identifying and organizing partnership opportunities to promote accessibility, affordability, and quality; and establishing ongoing communication with officials in the Province and with community partners to address Port Coquitlam’s child care needs.	Short	School Board, Port Moody, Coquitlam
2. Increase partnership with the School District to: a) ensure child care is part of all new or renovated school spaces; b) facilitate use of school spaces and grounds for school age care operators; c) improve communication between the City and School District; and, d) Support the move to an enhanced role for the School District in school age child care.	Short/Medium	School Board
3. Merge the current Child Care Working Group and Child Care Task Force to eliminate duplication and expand the membership to ensure there is appropriate representation and that resources are used most effectively.	Short	All Task Force and Child Care Working group members
4. Advocate to senior governments to ensure that the needs of Tri-Cities children are a priority for new spaces, effective strategies are in place for recruitment and retention of child care staff, child care fees are	Short/Medium	Coquitlam, Port Moody, School Board

affordable for families, and funds are available to support non-traditional hours of care.		
5. Increase the partnership with the Child Care Resource and Referral program and other community organizations to: a) bring child care operators together for information sharing, joint training and education; and, b) provide more information for parents about child care, especially targeted at more vulnerable populations.	Short/Medium	Not-for-profit providers, Health, Community Organizations
6. Host joint child care development information meetings on a regular basis with Fraser Health for people who are interested in opening child care centres.	Short	Fraser Health
7. With the Task Force, provide regular briefings to elected officials, including the School Board, and include a commitment to orientation on child care for newly elected City Councillors and School Trustees after each local election.	Short	Child Care Task Force
8. Explore the feasibility of establishing and maintaining a centralized child care wait-list for the Tri-Cities.	Short	Coquitlam, Port Moody, Tri-Cities CCR&R, Child Care Operators, Child Care Task Force

Tri-Cities Child Care Action Planning

City of Port Coquitlam Needs Assessment

Social Planning and Research Council of British
Columbia
April 20, 2020

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Introduction

The main purpose of the Tri-Cities Child Care Action Planning project was to conduct a needs assessment, to engage with community, to develop new child care space creation action plans and to provide strategic directions based on best practices review. Most of the research and analysis pertains to and is of mutual interest to the three Tri-Cities municipalities: Port Moody, Port Coquitlam and Coquitlam.

This needs assessment is intended to inform and facilitate the Tri-Cities Child Care Action Planning process. The work summarized here provides an evidence-base framework from which the Cities can identify priorities for action that best reflect community needs. The report also synthesizes input from a wide range of key stakeholders in the community familiar with the existing and anticipated scope of child care services and gaps therein. Participation from these stakeholders not only helps inform the planning process but may also significantly improve community support for future stages of strategy implementation.

The first component of this needs assessment is a statistical community profile of the City of Port Coquitlam. This profile includes information about demographic trends, household characteristics, child development indicators, and the distribution of existing child care spaces.

Another major component of the project has been community engagement. This was achieved through a variety of means, namely:

- 2 surveys (1 for parents, 1 for child care providers),
- interviews with 16 key informants, 9 child care providers and 8 City staff,
- 3 open houses/community info sessions which attracted 60 people,
- 2 workshops. The first had 28 participants from the 3 cities, the School District, the Provincial government, and not-for-profits. The second also had 28 participants, most of whom were City and School District elected officials and senior staff.

Surveys – Purpose

Child care operators were surveyed through an online instrument in order to understand current and projected child care service gaps, needs as well as vulnerabilities children experience in the Tri-Cities. Concurrently with the above survey, the Cities administered parental / caregiver surveys to understand current and anticipated child care needs in the City from a caregiver perspective. The participation of parents, guardians and operators was sought through a network of Tri-Cities stakeholders and was publicly promoted.

Interviews – Purpose

The interviews with key informants included staff from some large social service and multicultural organizations, along with the School District and Fraser Health. These interviews were designed to help determine the specific issues facing those organizations currently and the issues that they anticipated facing in the future. The interviews also elicited a list of child care targets and strategies from the perspective of frontline workers. This list will help the Cities work toward realizing current and projected targets in terms of number of child care spaces as well as strategies to tap into tools and opportunities to meet projected targets.

Interviews with child care providers took the form of “kitchen table conversations” in order to gather the providers’ perspectives regarding current and anticipated needs and to identify those factors that contribute to a successful child care centre or home-based facility.

Interviews with City staff were instrumental in determining some of the issues that applicants have with City processes, as well as issues the staff have with the quality of applications they receive. Staff were asked to identify challenges for their respective City in dealing with child care and to identify key initiatives that could be taken by the City to improve the situation for child care locally.

Community Information Sessions - Purpose

The purpose of these sessions was to provide residents with an overview of the current provision of child care locally and with information regarding some of the factors influencing the number of spaces available. As well, the sessions were designed to: generate interest in the Child Care Action Plan and the surveys, gather initial input regarding child care needs, and develop a contact list of people who wanted to remain involved in the process.

Workshops – Purpose

The first workshop (Solutions) was designed to understand the current state of child care in the Tri-cities, and explore potential opportunities, strategies and partnerships to address child care gaps. The outcome will help the Cities work toward realizing current and projected targets in terms of number of child care spaces as well as strategies to work toward meeting those targets. The second workshop (Actions) was hosted by the Tri-Cities Child Care Task Force and was similar in nature but with the elected officials. The intent for both workshops was to involve key stakeholders who have influence on the success of the solutions and actions identified. Between the two workshops there were three complementary purposes:

- Confirmation of the current situation and identification of any missing information from the research work
- Identification of potential collaboration opportunities, and
- Initiation of discussions about potential actions to address child care gaps in the community.

Our Community

Background

The Community Profile is primarily based on data from the 2016 Census. It also incorporates data from the City of Port Coquitlam, School District 43, Human Early Learning Partnership, and the UBCM Community Child Care Planning Inventory.

Population of Children in Port Coquitlam

According to the 2016 Census, there were a total of 8,380 children from ages 0 to 12 in the City of Port Coquitlam (Figure 1), out of a total population of 58,612. The largest age group in the city was the 8 year old age group, with 715 children, followed by the 11 year old age group, with 710 children. The smallest age group was the 2 year old age group, with 595 children. The age range with the largest number of children was the 5 to 9 year old group, comprising 40% (3,355 children) of the total child population.

Figure 8: Child population statistics by age range for the City of Port Coquitlam, 2016

Age Range	Age Total	Age %
0 to 4 Years	3,005	36%
5 to 9 Years	3,355	40%
10 to 12 Years	2,020	24%

**Source: Statistics Canada, 2016 Census of Population, Statistics Canada Catalogue no. 98-400-X2016002*

Between 2011 and 2016, the 0 to 12 year old population increased by 95 children, a 1.1% increase (Figure 2). The 5 to 9 year old population increased by 255 children (+8.2% increase), while the 0 to 4 year old population decreased by 40 children (-1.3% decrease) and the 10 to 12 year old population decreased by 120 children (-5.6% decrease).

Figure 9: Changes over the past 2 censuses (2011-2016) in child population by age group, City of Port Coquitlam

Age group	Change in number of children, 2011-2016 (#)	Change in number of children, 2011-2016 (%)
0 to 4 Years	-40	-1.3%
5 to 9 Years	255	8.2%
10 to 12 Years	-120	-5.6%
Total 0 to 12 year olds	+95	1.1%

**Source: Statistics Canada, 2016 Census of Population, Statistics Canada Catalogue no. 98-400-X2016002*

Population Projections

According to projections supplied by the City of Port Coquitlam, by 2035 the population of 0 to 12 year olds is projected to increase by 1% from 2016, from 8,380 children in 2016 to 8,464 children in 2035. The number of children in the 0 to 4 age range is predicted to grow by 4.1% by 2035 (+122 children) and the number of children in the 5 to 12 age range is projected to decrease by 0.7% (-38) (Figure 3).

Figure 10: Child population projections based on City of Port Coquitlam and Statistics Canada data, by age group, 2016 and 2035

Age group	2016	2035		
	# of children	# of children	# change, 2016-2035	% change, 2016-2035
0 to 4 year olds	3,005	3,127	+122	+4.1%
5 to 12 year olds	5,375	5,337	-38	-0.7%
Total 0 to 12 year olds	8,380	8,464	+84	+1.0%

*Source: Statistics Canada, 2016 Census of Population, Statistics Canada Catalogue no. 98-400-X2016002a. City of Port Coquitlam Population Projections.

Children in Lone Parent Families

In 2016, 16.6% of all children aged 0 to 14 lived in lone parent families (1,620 children) (Figure 4). The age range with the greatest number of children in lone parent families was the 10 to 14 year old group, with 770 children in lone parent families (22.7% of all children in this age range).

Figure 11: Number of children in lone parent families, City of Port Coquitlam, 2016

Age Range	Number of Children	Number of Children in Lone Parent Families	Percentage of Children in Lone Parent Families
0 to 4 Years	3,005	265	8.8%
5 to 9 Years	3,355	580	17.3%
10 to 14 Years	3,395	770	22.7%
Total number of children 0 to 14 Years = 9,755			
Total number of children in lone parent families = 1,620			
Total percentage of children in lone parent families = 16.6%			

*Source: Statistics Canada Catalogue No. 98-400-X20106041

Median Family Income

In 2015, the median income (before-tax) for Port Coquitlam families with at least one child under 6 years old was \$95,676 (Figure 5). The median income for couples with at least one child under 6 years old was \$103,863. The median income for lone parents with at least one child under 6 years old was \$33,664.

Figure 12: Median family income (before-tax) by family type with children under 6, City of Port Coquitlam, 2015

Median income, total families with at least one child 0-5 years	Median income, couple families with at least one child 0-5 years	Median income, lone parent families with at least one child 0-5 years
\$95,676	\$103,863	\$33,664

**Source: Statistics Canada. Census Family Total Income Groups (22) in Constant (2015) Dollars, Census Family Structure (7), Family Size of Census Family (4), Ages of Census Family Members (18), Number of Earners in the Census Family (5) for Census Families, 2006, 2016 Census. Downloaded from Community Data Program*

Low Income Measure

In 2015, 14.9% of children aged 0 to 17 (1,790 children) were in low income families based on the low income after-tax measure (Figure 6).

Figure 13: Low income based on low income measure after tax by age group, City of Port Coquitlam, 2015

Age group	Number of children in low income families	Percentage of children in low income families
0 to 17 Years	1,790	14.9%
0 to 5 Years	520	14.3%

**Source: Statistics Canada, 2016 Census of Population, Statistics Canada Catalogue no. 98-400-X2016002*

Housing

In 2016, the median monthly shelter costs for owned dwellings was \$1,480, 30.2% higher than median shelter costs for rented dwellings (\$1,033) (Figure 7).

Figure 14: Median monthly shelter costs, City of Port Coquitlam, 2016

Housing characteristics	Cost (\$)
Median monthly shelter costs for owned dwellings	\$1,480
Median monthly shelter costs for rented dwellings	\$1,033

**Source: Statistics Canada, 2016 Census of Population, Statistics Canada Catalogue no. 98-400-X2016002*

Languages Spoken at Home

Figure 8 below lists the ten most common languages spoken at home in Port Coquitlam, and the total number of individuals that speak each language. There was a total of 66 languages spoken in the city. English (45,440 speakers), Cantonese (1,685 speakers), and Mandarin (1,225) were the most common languages in 2016.

Figure 15: Top ten languages spoken at home, City of Port Coquitlam, 2016

Language	Number of speakers
English	45,440
Cantonese	1,685
Mandarin	1,225
Korean	995
Persian (Farsi)	775
Tagalog (Pilipino, Filipino)	535
Punjabi (Panjabi)	520
Spanish	475
Russian	465
Polish	350

**Source: Statistics Canada, 2016 Census of Population, Statistics Canada Catalogue no. 98-400-X2016002*

Indigenous Population

According to Statistics Canada, Aboriginal identity includes persons who are First Nations, Metis, Inuk and/or those who are Registered or Treaty Indians, and/or those who have membership in a First Nation or Indian band.¹⁰ Persons with Aboriginal identity comprised 3.4% of Port Coquitlam's total population in 2016 (1,985 person of Aboriginal identity) (Figure 9).

Figure 16: Indigenous population, City of Port Coquitlam, 2016

Aboriginal Population	Number	Percentage
Aboriginal identity	1,985	3.4%
Total population	57,895	100.0%

**Source: Statistics Canada, 2016 Census of Population, Statistics Canada Catalogue no. 98-400-X2016002*

¹⁰ For definition of Aboriginal identity, see: <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CSD&Code1=5915039&Geo2=PR&Code2=59&SearchText=Port+Coquitlam&SearchType=Begin&SearchPR=01&B1=Aboriginal%20peoples&TABID=1&type=0#fnb80>

Immigration

In 2016, 33.3% of Port Coquitlam residents were first generation Canadians (19,320 people). 24.4% were second generation (14,155 people) and 42.2% were third generation or more (24,420 people) (Figure 10)¹¹.

Figure 17: Residents– breakdown by generation status, City of Port Coquitlam, 2016

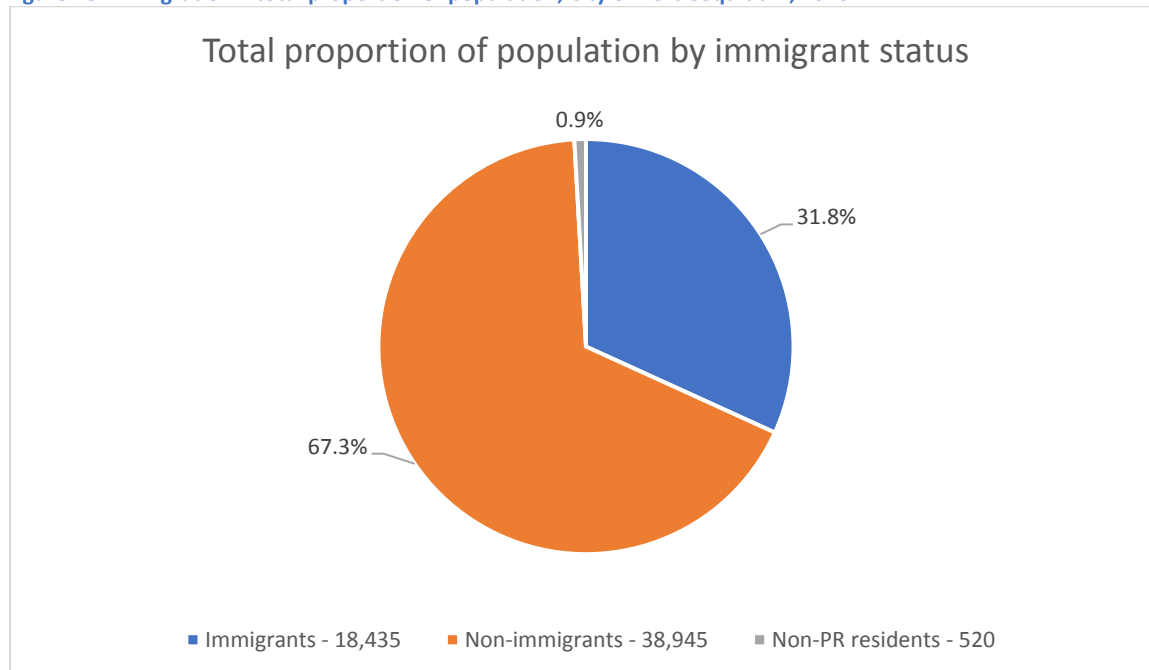
Generation Status	Number	Percentage
First generation	19,320	33.3%
Second generation	14,155	24.4%
Third generation or more	24,420	42.2%
Total	57,895	100.0%

**Source: Statistics Canada, 2016 Census of Population, Statistics Canada Catalogue no. 98-400-X2016002*

The total proportion of immigrants by immigrant status was 31.8% (18,435 immigrants). The total proportion of non-immigrants was 67.3% (38,945 non-immigrants) (Figure 11).

¹¹ Statistics Canada derives generation status from responses to questions concerning the person's place of birth and the places of birth of his or her parents. First generation includes person who were born outside Canada. For the most part, these are people who are now, or once were, immigrants in Canada. Second generation includes person who were born in Canada and had at least one parent born outside Canada. For the most part, these are children of immigrants. Third generation or more includes person who were born in Canada with both parents born in Canada. Source: <https://www12.statcan.gc.ca/census-recensement/2016/ref/dict/pop036-eng.cfm>

Figure 18: Immigration – total proportion of population, City of Port Coquitlam, 2016



*Source: Statistics Canada, 2016 Census of Population, Statistics Canada Catalogue no. 98-400-X2016002

Residential Mobility

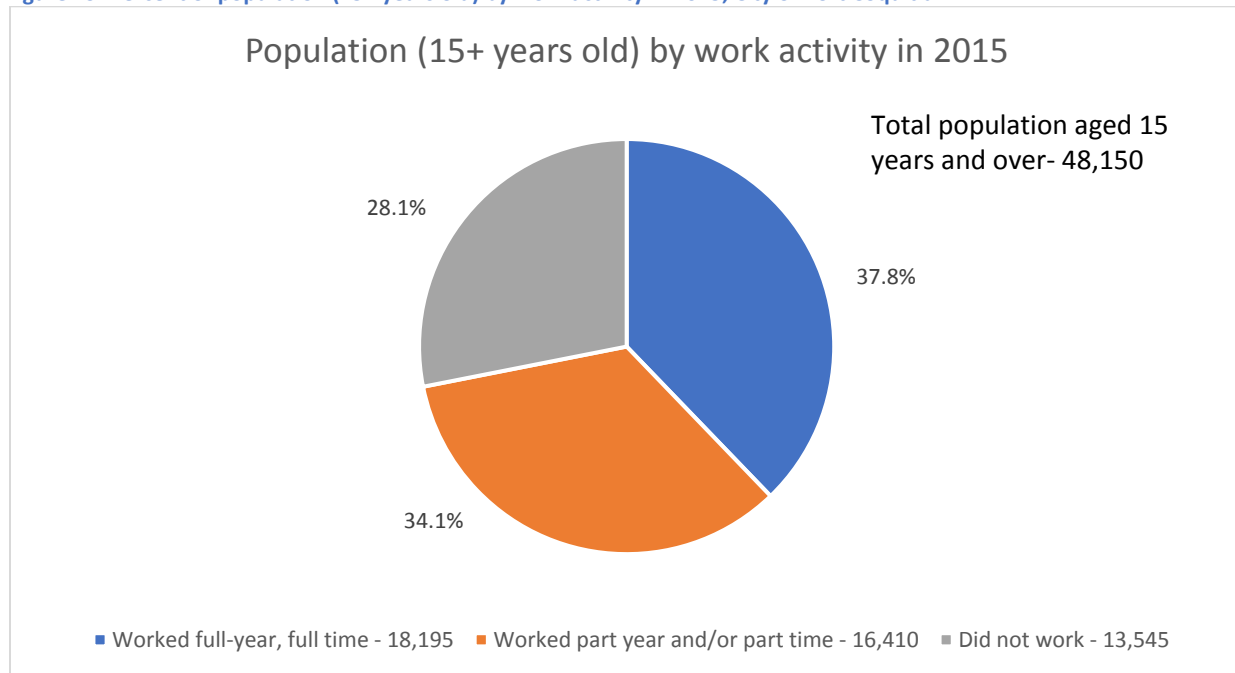
In Port Coquitlam in 2016, the number of people who had moved within the past year was 7,095 (12.4% of all residents) and the number of new people who had moved into the City was 4,230 (7.4%).

The number of people who had moved within the past five years was 20,485 (37.3% of all residents) and the number of new people who had moved into the City was 11,625 (21.2%).

Employment

In Port Coquitlam in 2015, the total population (15+ years old) that had worked full-year, full time was slightly higher (37.8%) than those who had worked part year and/or part time at (34.1%). The population (15+ years old) that had not worked was at 28.1% (Figure 12).

Figure 19: Percent of population (15+ years old) by work activity in 2015, City of Port Coquitlam



*Source: Statistics Canada, 2016 Census of Population, Statistics Canada Catalogue no. 98-400-X2016002

Figure 13 shows the percentage of families with at least one child 0 to 17 years old with no earners, for both couple and lone parent families. 1.3% of couple families with at least one child 0 to 17 years old had no earners (75 families), compared with 13.9% of lone parent families (205 families).

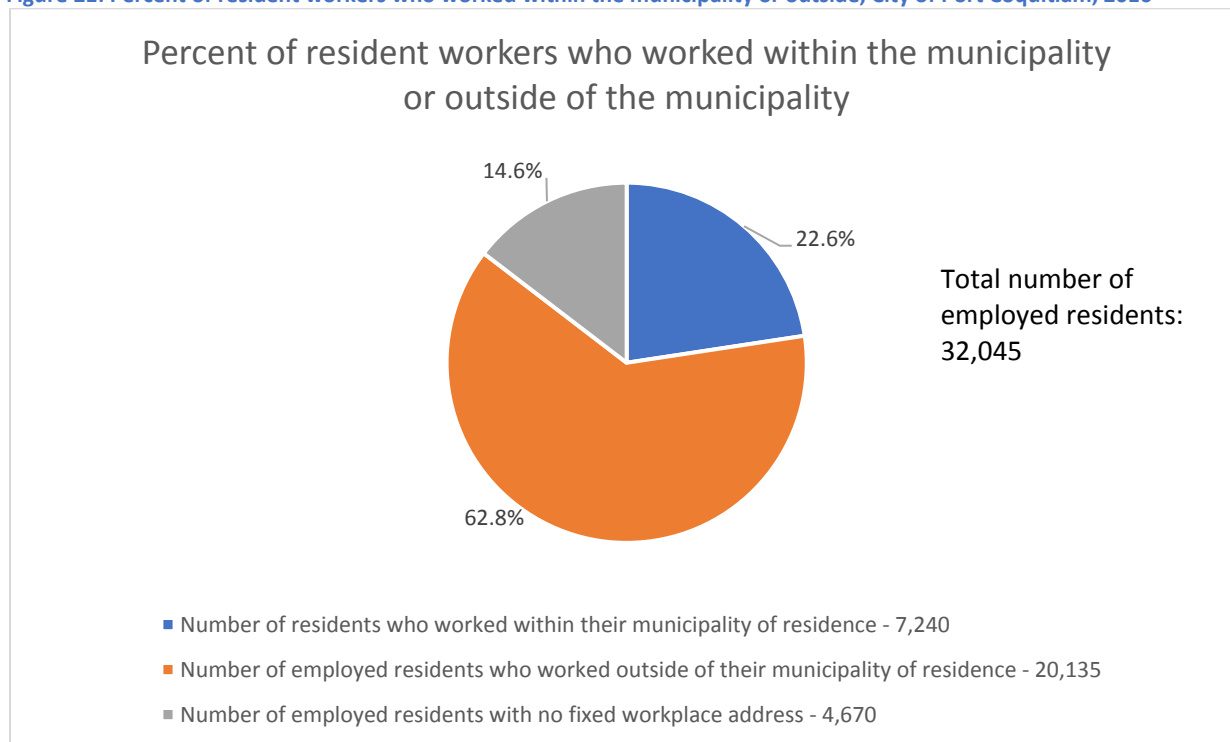
Figure 20: Percent of families, by family type, by number of earners in 2015, City of Port Coquitlam

	Couple family, at least one child 0-17 years old	Lone parent family, at least one child 0-17 years old
Total families	5,730	1,475
Percentage of families with no earners	1.3%	13.9%

*Source: Statistics Canada. Catalogue. No. 98-400-X2016041 Family Characteristics of Children (17), Age (4B) and Sex (3) for the Population aged 0 to 14 Years in Private Households of Canada, Provinces and Territories, Census Divisions and Census Subdivisions, 2016 and 2011 Censuses - 100% Data Downloaded from Statistics Canada website

In 2016, 62.8% of workers residing in Port Coquitlam worked outside the municipality, 22.6% worked within the municipality, and an additional 14.6% had no fixed work address (Figure 14).

Figure 21: Percent of resident workers who worked within the municipality or outside, City of Port Coquitlam, 2016



*Source: Statistics Canada, 2016 Census of Population, Statistics Canada Catalogue no. 98-400-X2016002

Special Needs

In 2018/2019, the percentage of students in School District 43 elementary schools with special needs was 9.6% (1,272 students with special needs out of 13,272 students total) ¹² (Figure 15).

¹² Based on list of School District 43 elementary schools from:
School District 43. School Websites.

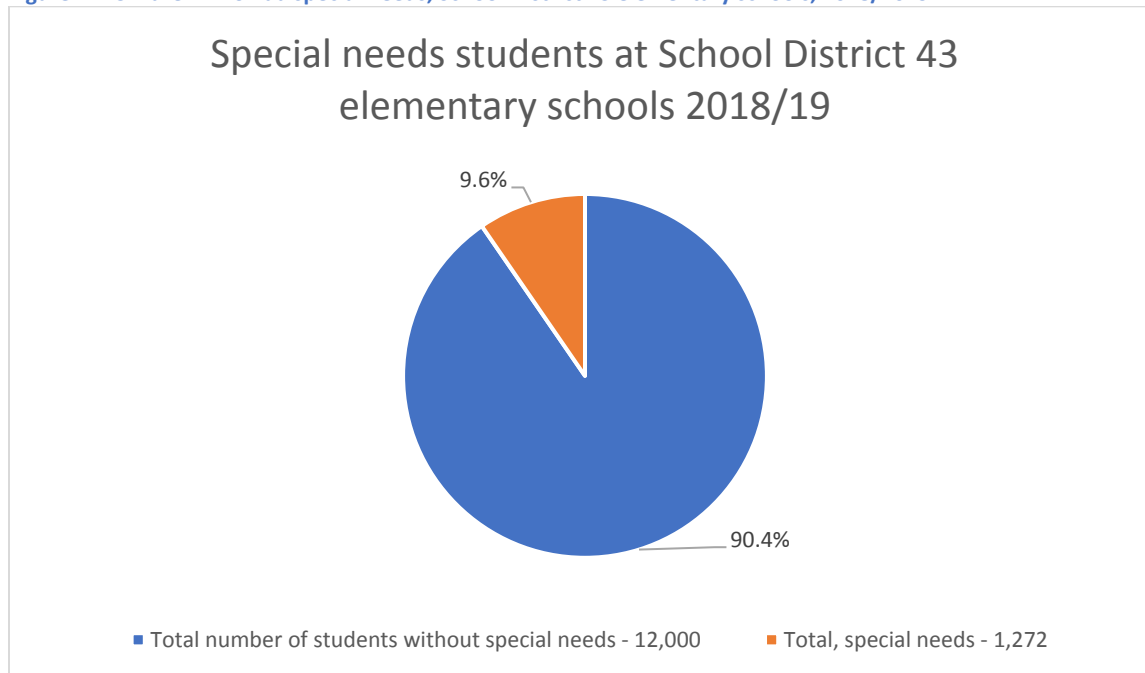
<https://www.sd43.bc.ca/Schools/SchoolSites/Pages/default.aspx#/=>

For this special needs data analysis, School District 43 elementary schools include all public regular elementary schools located within the School District, which includes elementary schools in Anmore, Coquitlam, Port Coquitlam and Port Moody.

According to the BC Government's Ministry of Education, the following categories are special needs: Physically Dependent; Deafblind; Moderate to Profound Intellectual Disability; Physical Disability or Chronic Health Impairment; Visual Impairment; Deaf or Hard of Hearing; Autism Spectrum Disorder; Intensive Behaviour Interventions or Serious Mental Illness; Mild Intellectual Disabilities; Gifted ; Learning Disability; and Students Requiring Behaviour Support or Students with Mental Illness. For more information, please visit BC Government. Ministry of Education. Student Success. Glossary. Special Needs Categories.

<https://studentsuccess.gov.bc.ca/glossary>

Figure 22: Children who had special needs, School District 43 elementary schools, 2018/2019



**Source: BC Government. Open Data Catalogue - Student Enrollment and FTE by Grade*

The Infant Development Program (IDP) and the Aboriginal Infant Development Programs (AIDP) are programs for children birth to 3 years who have a diagnosed disability or are at risk of having a developmental delay. Services are delivered in the home. Supported Child Development (SCD) and Aboriginal Supported Child Development (ASCD) are programs for children, infant through school age, who require extra support in the child care setting they attend. Services are primarily delivered in the child care programs. These services are funded by the Province of BC and in the Tri-Cities are delivered by Kinsight and Spirit of the Children Society. The number of children in the Tri-Cities served and on the wait lists for some these programs are shown in Figure 16.

Figure 23: Children using IDP and SCD services delivered by Kinsight – December 2019

Program	Number of Children Served		Number of Children on Wait List
Infant Development Program	149		0
Supported Child Development	291		Approx. 40
	170 under six	121 school age	

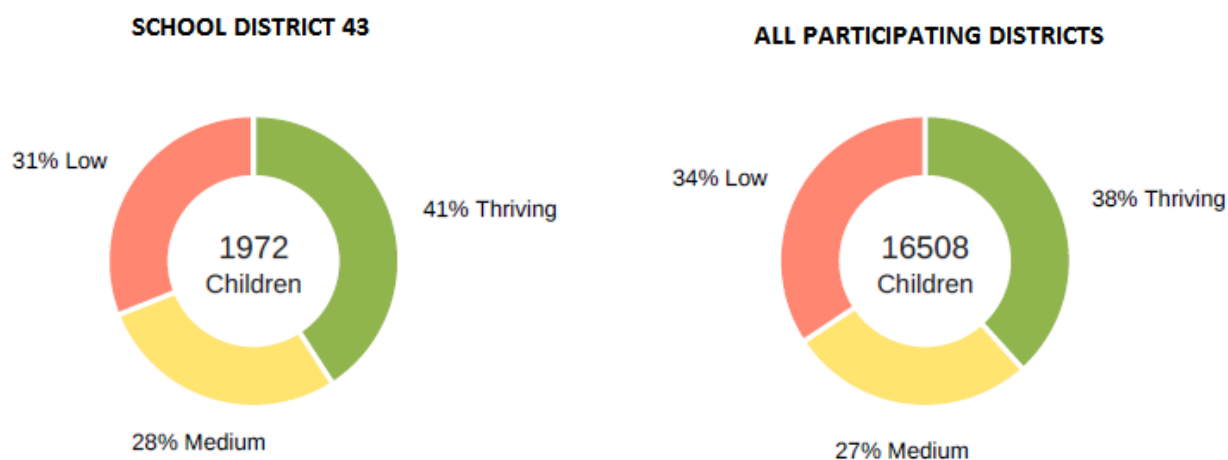
**Source: Kinsight, December 2019.*

MDI (Middle Development Instrument) for School District 43

The Middle Years Development Instrument (MDI) is a survey of children in Grades 4 and 7 developed by the Human Early Learning Partnership (HELP) at UBC to measure children's social-emotional health and well-being. The MDI results are summarized in two indices: the Well-Being Index and the Asset Index.

The MDI Well-Being Index combines measures of Optimism, Happiness, Self-Esteem, Absence of Sadness, and General Health to provide a holistic summary of children's mental and physical health. Index scores are reported by three categories: high well-being or thriving, medium well-being, and low well-being. A complete description of the MDI Well-Being Index can be found at <http://earlylearning.ubc.ca/mdi/>. Overall in School District 43, out of 1972 children surveyed, 41% were thriving, 28% had medium well-being, and 31% had low well-being.

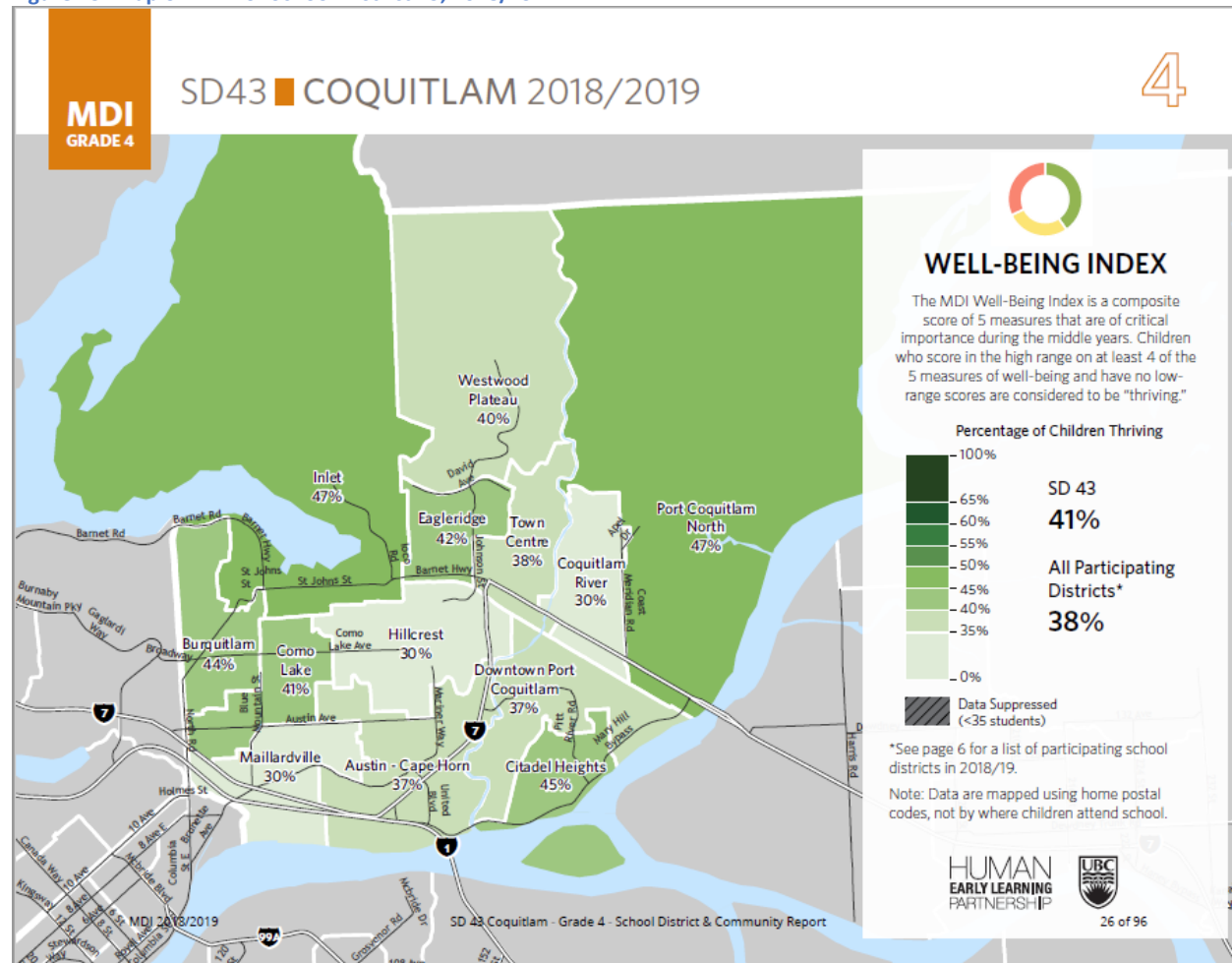
Figure 24: MDI, School District 43, 2018/2019¹³



¹³ This image was borrowed from the UBC (University of British Columbia). HELP (Human Early Learning Partnership). MDI (Middle Years Development Instrument). Website. Coquitlam School District. Community Profile. P.10. http://earlylearning.ubc.ca/media/mdi_sd_and_community_reports_2018_19_complete/g4/mdi-sdandcommunityreport-2018-19-sd43-g4-en-v190703.pdf. Labels have been modified from the original to improve clarity (from "Coquitlam" to "School District 43").

In 2018/2019, the neighbourhoods with the highest percentages of children reported to be thriving were Inlet (47%), Port Coquitlam North (47%), and Citadel Heights (45%). The neighbourhoods with the highest percentages of children experiencing low well-being were Maillardville (45%), Hillcrest (38%), and Coquitlam River (38%).

Figure 25: Map of MDI for School District 43, 2018/19



*Source: For middle years development instrument results: UBC (University of British Columbia). HELP (Human Early Learning Partnership). Middle Years Development Instrument (MDI). Help Data Library.

http://earlylearning.ubc.ca/media/mdi_sd_and_community_reports_2018_19_complete/q4/mdi-sdandcommunityreport-2018-19-sd43-q4-en-v190703.pdf

Figure 26: MDI (by HELP Neighbourhood), Well-Being Index, School District 43, 2018/2019

Neighbourhood	Number of Children	Thriving (%)	Medium to High Well-Being (%)	Low Well-Being (%)
Austin – Cape Horn	116	37	32	30
Burquitlam	125	44	32	24
Citadel Heights	110	45	25	30
Como Lake	108	41	26	32
Coquitlam River	117	30	32	38
Downtown Port Coquitlam	124	37	29	34
Eagleridge	127	42	27	31
Hillcrest	130	30	33	38
Inlet	315	47	25	28
Maillardville	77	30	25	45
Port Coquitlam North	269	47	26	26
Town Centre	188	38	31	31
Westwood Plateau	151	40	29	31
School District 43 Total	1,972	41	28	31
All participating school districts	16,508	38	27	34

*Source: For middle years development instrument results: UBC (University of British Columbia). HELP (Human Early Learning Partnership). Middle Years Development Instrument (MDI). Help Data Library.

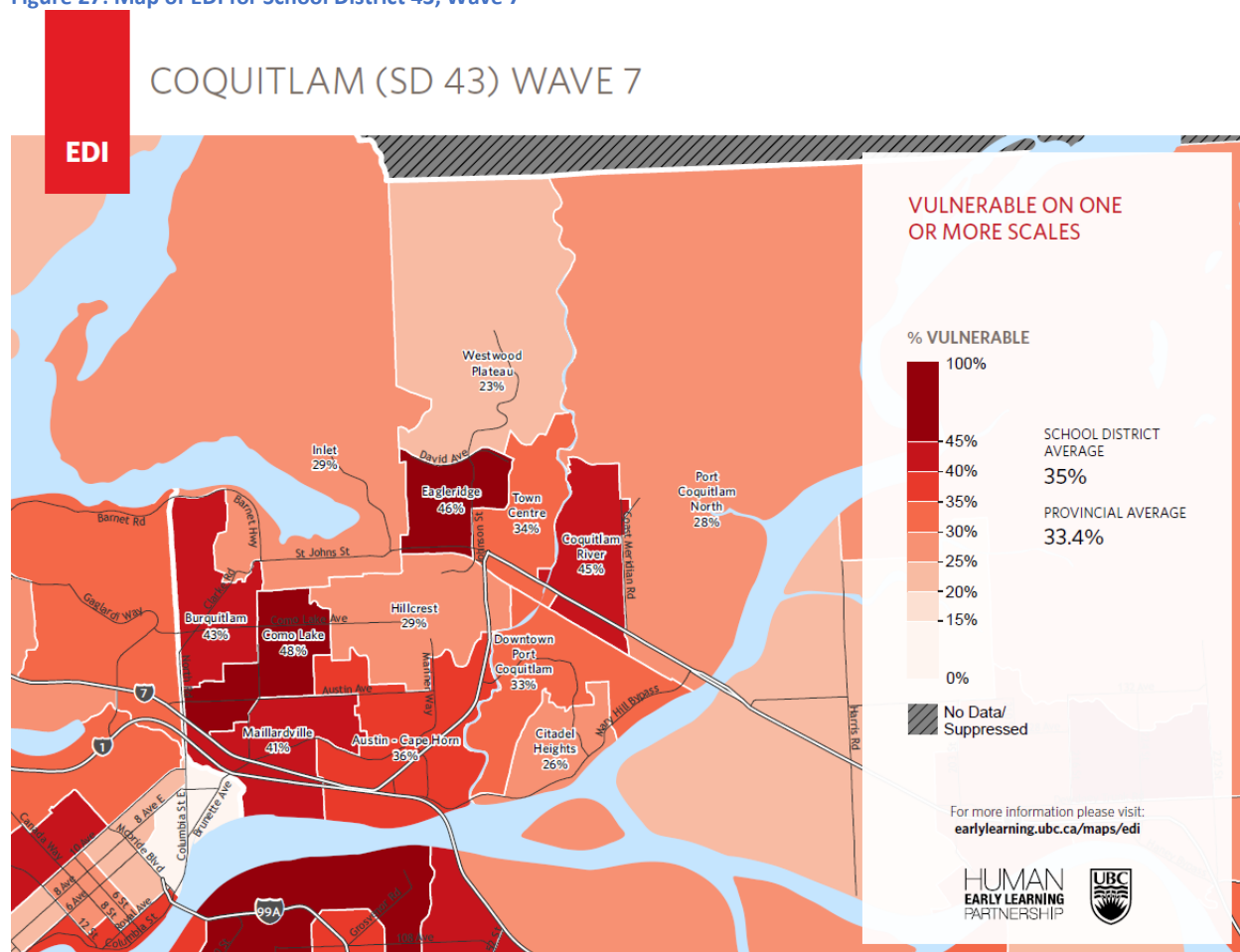
http://earlylearning.ubc.ca/media/mdi_sd_and_community_reports_2018_19_complete/q4/mdi-sdandcommunityreport-2018-19-sd43-q4-en-v190703.pdf

EDI (Early Development Instrument) for School District 43

The Early Development Instrument (EDI) is used to assess childhood vulnerability by surveying kindergarten children around the province. Vulnerable children are defined as those who, without additional support and care, are more likely to experience challenges in their school years and beyond. EDI is measured along five scales: Physical Health & Well-Being, Social Competence, Emotional Maturity, Language & Cognitive Development, and Communication Skills & General Knowledge. A complete description of the EDI can be found at <http://earlylearning.ubc.ca/maps/data/>.

During Wave 7 (2016-2019), 35% of surveyed children (756 children) in the School District of Coquitlam were vulnerable on at least one of the five scales (Figure 20). Como Lake had the highest vulnerability rate at 48%, followed by Eagleridge (46%) and Coquitlam River (45%).

Figure 27: Map of EDI for School District 43, Wave 7



*Source: UBC (University of British Columbia). HELP (Human Early Learning Partnership). EDI (Early Development Instrument). Website. Coquitlam School District. Community Profile.

http://earlylearning.ubc.ca/media/edi_w7_communityprofiles/edi_w7_communityprofile_sd_43.pdf

Figure 28: EDI (by HELP Neighbourhood), School District 43, Wave 7 (2016-2019)

Neighbourhood	Number of Children	Vulnerable on One or More Scales (%)
Austin – Cape Horn	154	36
Burquitlam	152	43
Citadel Heights	88	26
Como Lake	130	48
Coquitlam River	166	45
Downtown Port Coquitlam	117	33
Eagleridge	119	46
Hillcrest	161	29
Inlet	319	29
Maillardville	133	41
Port Coquitlam North	311	28
Town Centre	226	34
Westwood Plateau	117	23
School District 43 Total	2,193	35
All participating school districts	43,377	33

*Source: UBC (University of British Columbia). HELP (Human Early Learning Partnership). EDI (Early Development Instrument). Website. Coquitlam School District. Community Profile.

http://earlylearning.ubc.ca/media/edi_w7_communityprofiles/edi_w7_communityprofile_sd_43.pdf

Child Care 2019

In the City of Port Coquitlam in 2019, there were 95 child care centres in the City of Port Coquitlam offering a total of 131 programs and 2,245 child care spaces. The under-school age group (3 to 4 year olds and half of all 5 year olds) had the most child care spaces per capita, with 44.4 spaces per 100 children. By contrast, there were 15.1 child care spaces in group care (birth to 36 months) for every 100 children aged 0 to 2 and 13.6 spaces in group care (school age) for every 100 children aged 6 to 12 and half of all five year olds. Overall, the City of Port Coquitlam had 26.8 child care spaces for every 100 children from birth to 12 years of age. By comparison, Metro Vancouver has 18.6 child care spaces for every 100 children, BC has 18.4, and Canada has 27.2¹⁴.

Figure 29: Child care spaces by type City of Port Coquitlam (2019) versus City of Port Coquitlam child population (0-12 years old) (2016)

License type	Number of spaces	Age group	# of children	Spaces per 100 children in this age group
Group (birth to 36 months)	272	0-2 year olds	1,805.0	15.1
Group (30 months to school age)	655	3-4 year olds and half of all 5 year olds	1,510.0	44.4
Group (school age)	689	6-12 year olds and half of all 5 year olds	5,065.0	13.6
All others (licensed preschool, group multi-age, family child care, in-home multi-age)	629	General	N/A	N/A
Total child care spaces	2,245	Total 0-12 year olds	8,380.0	26.8

*Source: UBCM for child care inventory, Statistics Canada. 2016 Census for child population.

¹⁴ Source: 2019 Survey of Licensed Child Care Spaces and Policies in Metro Vancouver (August 2019): http://www.metrovancouver.org/services/regional-planning/PlanningPublications/2019_Survey_of_Licensed_Child_Care_Spaces_Policies_Metro_Vancouver.pdf.

Figure 30: Child care spaces by neighbourhood

Neighbourhood	Group (birth to 36 months)	Group (30 months to school age)	Licensed Preschool	Group (school age)	Group Multi-age	Family Child Care	In-home Multi-age
Central PoCo	60	174	20	33	0	21	0
Woodland Acres	19	25	0	24	8	0	8
Glenwood	68	127	49	154	38	42	8
Oxford Heights	0	30	40	83	0	14	0
Lincoln Park	54	112	0	90	32	7	8
Birchland	20	50	49	78	8	12	0
Riverwood	23	41	40	60	16	0	24
Dominion Triangle / Fremont	0	0	0	0	0	0	0
Mary Hill	8	25	16	59	24	63	16
Citadel	20	71	20	108	16	7	13
Total	272	655	234	689	142	166	77

*Source: UBCM for child care inventory, Statistics Canada. 2016 Census for child population.

Elementary Schools and Licensed Child Care

As of September 2019, there were 41 child care operations in or on school sites in the entire School District, which covers the Cities of Coquitlam, Port Coquitlam, and Port Moody. In Port Coquitlam, eight of the twelve elementary schools have child care on site. Figure 25 shows school enrolment and types of child care spaces for the twelve elementary schools in Port Coquitlam. Three schools have group child care for children under 36 months, six have group child care for children aged 3 – 5, four have preschool, and eight have before/after school care.

Figure 31: Public elementary schools within the City of Port Coquitlam, with school enrollment (September 2019) and licensed capacity by child care program type (February 2020)

School Name	Neighbourhood	Enrollment	Child care on site	Group under 36 months	Group 3 -5 years	Preschool	Before / After School
Birchland Elementary	Birchland	174	Yes	12	33	20	49
Blakeburn Elementary	Riverwood	376	No				
Castle Park Elementary	Citadel	337	Yes	12	23	20	38
Cedar Drive Elementary	Riverwood	282	Yes		16	20	35
Central Elementary	Central PoCo	307	Yes				33
Ecole Coquitlam River Elementary	Oxford Heights	305	Yes				38
Ecole Irvine Elementary	Oxford Heights	431	Yes		20	20	45
Ecole Kilmer Elementary	Mary Hill	283	No				
Ecole Mary Hill Elementary	Mary Hill	312	No				
Ecole Westwood Elementary	Woodland Acres	211	Yes	19	25		24
Hazel Trembath Elementary	Citadel	184	Yes		20		40
James Park Elementary	Glenwood	338	No				
Total		3,540	8	43	137	80	302

**Source: SD43 On-Site Child Care Capacities provided by Child Care Resource & Referral, February 2020. School enrollment information provided by School District 43: 2019/2020 Schedule of School District Childcare Operations as of September 12, 2019. Schools identified based on list of elementary schools from School District 43:*

[https://www.sd43.bc.ca/Schools/SchoolSites/Pages/default.aspx#/=](https://www.sd43.bc.ca/Schools/SchoolSites/Pages/default.aspx#/)

In addition to the child care programs listed above, ten schools in Port Coquitlam also hosted recreational city programs (which are not licensed child care), such as Beyond the Bell, Playschool, and summer camp programs.

The City of Port Coquitlam also includes the school Ecole des Pionniers-de-Maillardville, through French School District #93. This school offers group child care for children under 36 months and for children aged 3 – 5 years, as well as before and after school child care on site.

Child Care Auspice

A summary of number of programs and spaces offered by service type and auspice is shown in Figure 25. Family and in-home multi age care accounts for 34.3% of programs (45 programs) and 14.7% of spaces (331 spaces). For-profit group and multi-age care accounts for 53.4% of programs (70 programs) and 62.3% of spaces (1,399 spaces). Non-profit group and multi-age care accounts for 12.2% of programs (16 programs) and 22.9% of spaces (515 spaces) (Figure 25).

Figure 32: Child care programs and spaces by service type and auspice, City of Port Coquitlam, 2019

Service Type and Auspice	Number of Programs	Number of Spaces
Family and in-home multi-age	45 (34.3%)	331 (14.7%)
Group and multi-age: For-profit	70 (53.4%)	1,399 (62.3%)
Group and multi-age: Non-profit	16 (12.2%)	515 (22.9%)
Total	131 (100%)	2,245 (100%)

Source: UBCM for child care inventory

Child Care Fees

According to the Fee Survey conducted by the YMCA Child Care Resource and Referral in February 2020, the average monthly fee for family child care in Port Coquitlam is \$876 for infant care, \$858 for toddler, \$777 for 3-5 year-olds, and \$456 for school age. The average monthly fee for group family care is \$976 for infant care, \$958 for toddler, \$735 for 3-5 year-olds, and \$393 for school age (Figure 26).

Figure 33: Monthly fees for child care by facility type and age group, City of Port Coquitlam

Facility Type	Age Group	Average	Max	Min
Family Child Care	Infant	\$876	\$1250	\$700
	Toddler	\$858	\$1200	\$660
	3-5 years	\$777	\$1068	\$650
	School Age	\$456	\$635	\$350
Group Child Care	Infant	\$976	\$1110	\$800
	Toddler	\$958	\$1100	\$700
	3-5 years	\$735	\$850	\$650
	School Age	\$393	\$425	\$350

*YMCA Child Care Resource and Referral Fee Survey, February 2020.

For comparison, we present here median monthly child care fees by type in five other municipalities in British Columbia, as captured by the Canadian Centre for Policy Alternative's 2019 child care fee survey (Figure 27).

Figure 34: Median monthly fees for child care by facility type and age group, BC municipalities

Municipality	Group Child Care		Family Child Care	
	Infant / Toddler	Preschool-age	Infant / Toddler	Preschool-age
Vancouver	\$1,112	\$950	\$1,275	\$1,290
Richmond	\$1,283	\$955	\$1,000	\$938
Burnaby	\$1,000	\$835	\$1,000	\$950
Surrey	\$1,050	\$875	\$922	\$800
Kelowna	\$825	\$800	\$850	\$830

*CCPA In Progress: Annual Child Care Fee Survey 2019, March 2020.

https://www.policyalternatives.ca/sites/default/files/uploads/publications/National%20Office/2020/03/In%20progress_Child%20care%20fees%20in%20Canada%20in%202019_march12.pdf

The following sections highlight key findings from the community engagement conducted for this needs assessment, including surveys of parents or caregivers and child care operators; interviews with key informants, child care operators, and City staff; community open houses; and two workshops with City and School District staff, elected officials, and community stakeholders.

Parent/Caregiver Survey

Background

Parent respondents in Port Coquitlam reported about 621 children. Of these:

- 36% of children are under 3 years old
- 21% are 3-5 years old (not in kindergarten)
- 44% are from kindergarten age to 12 years old

Ninety-one percent (91%) of respondents reported English as one of the languages most often spoken at home; 76% of respondents work full-time; 54% reported a family gross income of less than \$100,000; 94% were either born in Canada or had been here more than 10 years and 79% reported that they did their paid work during the day.

Key Findings

The most reported primary child care arrangements were:

- 0-2 years: "my spouse or I" (34%) and Licensed group care (39%)
- 3-5 years: licensed group care (36%) and "my spouse or I" (22%)
- 6-12 years: "my spouse or I" (28%) and Licensed before or after school program (34%)

Forty-five percent (45%) of children spend more than 30 hours per week in child care, 42% spend 10-30 hours and 13% spend fewer than 10 hours.

In terms of parent priorities and satisfaction, 74% of Port Coquitlam respondents said that the child care program being licensed was very important. Location near home was also ranked as high in importance (66%), as were the hours of operation (72%). Only 46% said they were very satisfied with quality; 51% were very satisfied with hours of care and only 15% were satisfied with cost. Thirty-five percent (35%)

of respondents would change their child's care arrangement if they could, and of those, 53% would change their "relative other than parents" arrangement and 50% would change their arrangement of "care in a caregiver's home". The most popular alternate choices were licensed before and after school care and licensed group child care. The biggest barriers to changing arrangements were cost, availability of full-time care, location of program, hours of operation and availability of part-time care.

Child Care Operator Survey

Background

One hundred and fifteen (115) operators from the Tri-Cities responded to this survey, the purpose of which was to understand current and projected child care service gaps and needs as well as the vulnerabilities children experience. Of those who responded, 82% either owned, operated or managed a child care facility. The program types (of the 104 respondents who answered this question) break down is shown below. It must be noted many operators offer multiple program types.

- 25% group care under 30 months
- 40% group care 30 months to school age
- 24% preschool
- 38% school age – before school
- 40% school age – after school
- 20% family child care
- 15% in home multi-age care
- 6% multi-age care
- 2% occasional care

Key Findings

The most common type of buildings used as child care facilities were residential buildings (also used as a family home), at 47% of respondents. Only 11% of buildings were purpose-built. School and commercial building accounted for 20%. Out of 106 respondents, 56% own their facility space, 20% lease and 15% rent. Almost half of the programs (48%) have been operating for 11 years or more at their current location, and another 21% for 6-10 years. Close to three quarter of those programs in purpose-built buildings or in school buildings had been in their buildings for 11+ years. Twenty-five percent of respondents would like to expand and 36% would like to open another facility.

Challenges related to facility space were identified as:

- Physical location (difficulty accessing parks; accessibility for parents)
- Size or design of program space

Hours of operation (174 unique programs) are reported as follows:

- 8 operate on Saturday, and 6 on Sunday
- 76% of weekday programs open between 7am and 8am. A little more than half close between 6pm and 7pm and 43% close between 5pm and 6pm.
- Of facilities offering before and after school care, 25% are closed over winter break, 10% over the summer and 8% over spring break.

Population served:

- Seventy-six percent of respondents reported accepting children on a part-time or drop-in basis
- Seventy-four percent of respondents reported a waitlist at their child care facility. Of those 53 respondents who shared average wait times, 13% reported 0-3 months, 15% reported 4-6 months, 38% 7 to 12 months and 34%, more than a year.

Staffing:

- Forty-eight percent (48%) of respondents reported a limited supply of applicants to fill positions. 56% reported a limited supply of applicants with the right qualifications and experience to fill positions. 19% reported high staff turnover. 74% reported that staffing challenges have had an impact on their ability to operate their programs.

Key Informant Interviews

Background

As part of the community engagement process, SPARC BC interviewed seventeen key child care informants from fourteen public and non-profit organizations. This group represented all three municipalities, the Provincial Government, Fraser Health Licensing, the School District and seven not-for-profits. The interviewees were asked a range of questions about the state of child care in their communities and in the province, including the greatest challenges facing parents, operators, and their own organizations. Informants were asked to share their vision for child care in the Tri-Cities and to suggest actions to be taken.

Key Findings

There was consensus that over the last three years, the need for childcare has increased significantly. One of the contributing factors to this is the fact that 8 or 9 child care leases in schools have been terminated due to increased space demands for school programs.

Space requirements are particularly critical for the infant/toddler cohort and before and after care for school-age children. Most available spaces – and even these are in short supply – are family daycare for 3-5 year olds. Hours of operation are an issue, with very few operations offering anything but “traditional” hours, with little flexibility to accommodate needs for part-time, evening and weekends.

Child care operators have a very difficult time recruiting and keeping qualified staff, especially those with the skills to work with kids with special needs. Operators also struggle with finding affordable space and/or appropriate outdoor space.

The greatest challenges for parents, in addition to the basic dearth of spaces, are the lack of enough quality to make them feel comfortable leaving their kids. This relates to the operators’ dilemmas of not being able to find good, affordable space in which to establish child care and not being able to recruit qualified staff. Parents also struggle with the cost of child care, even though there is more financial support than there used to be. And lastly, they have problems with accessibility in terms of hours of operation, locations not near transportation and lack of programs or staff to deal with special needs.

City Staff Interviews

Background

Eight City staff from Coquitlam, Port Coquitlam and Port Moody ranging from Technologists to Planners to Managers in Building, Planning and Licensing were interviewed as part of the Needs Assessment for the Child Care Action Plan Project. A set of 10 questions was asked of each interviewee with respect to their department’s role in child care, challenges faced in relation to child care and possible initiatives to improve child care, both by their own department and at a more senior level.

The staff roles represented included answering inquiries on a range of child care topics, building safety, zoning regulations, the processes for expansion of child care and establishment of new child care operations, accessibility and working with developers to include child care in new developments.

Key Findings

Respondents felt that generally, City processes for child care work well and have political support. There is good inter-departmental communication and timelines for approving applications are decent. There have been some bylaw improvements and policies to reduce barriers for opening new child care facilities.

Having said that, the interviewees also felt that applicant “compliance” was an issue and that the process was seen to be overly bureaucratic. The staff also felt that requirements could be onerous, especially for larger child care operations and that the requirements – particularly Building Code – could be very costly.

Additional challenges identified included: balancing the needs of child care operators in residential areas against their neighbours’ concerns regarding noise and traffic, child care facilities should be better distributed geographically, finding suitable and licensable outdoor space for child care and cost to both operators and parents.

Child Care Providers Interviews

Background

SPARC BC also interviewed child care providers from nine child care facilities. Three providers were interviewed from each of the three municipalities. Two of the child care centres were not-for-profit and seven were for-profit. Most of those interviewed identified as owners or managers and, in some cases, additional staff attended. Five of the operators provide child care at multiple locations. The two not-for-profit centres lease their space for \$1/year (from Metro Vancouver) and \$4000/month (from BC Housing) respectively. For-profit operators tend to either own family homes which are converted for child care or lease commercial space.

Key Findings

Like the Key Informant group of interviewees, providers cited that the need for child care has increased “drastically”, resulting in long wait lists and a child care situation that is “in crisis”, in the words of one operator. Wait lists range from 5 to 250. The immense un-met demand is, once again, particularly notable for the infant/toddler and school age groups of children.

The issue of finding and keeping qualified staff was at the forefront of peoples’ concerns, especially (but certainly not solely) for children with special needs. Finding suitable facility space and commensurate outdoor space was also identified as a major issue. Respondents also identified affordability as a key concern; both for themselves - establishing and operating a child care – and for parents, even with increased fee subsidies. Operators believe that the biggest challenge faced by parents is “finding child care, period”.

With regard to the space challenges, operators note that: 1) finding a space which meets the needs of the operator and children, 2) fits the licensing criteria and 3) then fits the City criteria can be very frustrating. As a result, operators and the families they serve often are forced to cope with sub-standard space, including sub-standard outdoor space.

Community Open Houses

Background

The goal of the Tri- Cities Child Care Action Planning project is to understand current and projected

child care service gaps and to create child care action plans. The findings in this summary are from three community engagement (open house) sessions of 2 hours each, held in Port Coquitlam and Coquitlam on October 9, 24 & 26, 2019. Approximately 60 individuals in total provided their responses across the three sessions. During each of the sessions, parents and caregivers were invited to drop in and speak with SPARC and City staff. Participants were invited to answer specific questions regarding their needs and challenges with their current child care arrangement.

Key Findings

The key findings from the sessions are summarized below.

What is most important for you in a child care program?

1. Affordability
2. Having subsidies. (\$10 a day)
3. Availability of child care spaces
4. Hours of operation for the day care
5. Location
6. Licensed child care
7. Quality of Staff
8. Having adequate staff to child ratio
9. Quality of Programming: more art and music programming
10. Access to outdoor play spaces on site.
11. After school care for school age children
12. Having day care on location in elementary schools.
13. Having meal plans

What difficulties have you faced in finding child care that meets your needs?

1. Availability - not enough spaces for children who require child care
2. Long Waitlists - up to 2. 5 years for an available child care space.
3. Parents on waitlist prior to a child's birth
4. Quality of child care (having adequate licensed safe child care)
5. Families need to be educated on what to look for in a quality day care program (i.e. Licensing requirements, curriculum programming etc.)
6. Before and after-school care was lacking
7. Challenging to find a program willing to accept children under 2.5 years old.
8. No part time child care available
9. Location: often a long commute to available child care
10. Difficulties finding child care willing to accept children with special needs (and accompanying support worker)
11. Challenging to find staff qualified to work with children with special needs
12. Often high staff turnover and low wages
13. Transportation to child care after school (e.g.: parent's work so can't rush for a 3 pm pick up to transport children to after school care)

Solutions Workshops

Background

In December 2019 Port Moody, Port Coquitlam and Coquitlam hosted a "Solutions Workshop" with City staff and community partners. This was the first of two workshops which were part of the process of developing Child Care Action Plans for each of the municipalities. The workshop allowed participants to explore the current state of child care in the Tri-Cities, promising practices, potential opportunities and

short and longer-term actions to address gaps in the system. The approximately 40 participants were asked the following questions:

- What role do you think the Tri-Cities could play to support child care?
- If the Cities or other public partners like the school district were to play a bigger role in child care, what do you think are the most important principles that should guide their decisions and actions?
- What opportunities exist in the Tri-Cities to use or leverage City and other public land and facilities for new child care spaces? What partnership opportunities are there for sharing spaces and facilities?
- How can we address areas of greatest need? What actions could be taken, and by whom, to increase the supply of these types of care and what resources/support might be needed?

Key Findings

Question 1

With regard to “role” in the short term (up to five years), key solutions identified included:

- Undertake strategic planning and research
- Identify child care as an amenity and provide incentives to new developments
- Consider by-law exemptions for child care (e.g. parking)
- Concretely support child care in suitable and affordable spaces
- Provide better information to providers and streamline approval processes
- Direct city revenue to child care
- Collaborate and advocate

In the longer term (5-10 years):

- Many ideas regarding directing both capital and operational funding to child care, including CACs, density bonusing, DCCs, public partnerships to support ongoing funding, grant programs, reserve funds, build and operate child care in public spaces
- Promote high quality early childhood education, promote cultural understanding and incorporate Indigenous history in space design and curriculum
- Update zoning bylaw and building codes to make child care development easier; expedite licensing process
- Dedicate municipal staff to work on child care
- Undertake proactive planning based on demographic needs

Question 2

Most important principles:

- Child care should be valued as an essential service
- All child care should be high quality, with high quality staff paid adequately
- There should be appropriate spaces and access to quality outdoor space
- Children should be safe
- There should be universal accessibility and inclusion
- There should be child care in convenient locations, with flexible hours of operation
- Child care should be targeted to areas and families most in need
- Child care should be affordable
- There should be coordination with appropriate municipal departments/school boards/provincial departments

- Public spaces should be used for child care
- Municipalities should provide direct child care services

Question 3

Opportunities to use or leverage public lands for child care:

- Community centres, recreation centres and libraries
- City Parks
- City buildings
- Consider employer sponsored child care for city employees
- Schools and School district lands
- Post-secondary institutions (e.g. Douglas College)
- Partnerships with Seniors Centres
- Strata community rooms
- Redeveloped surface parking areas

Question 4

How can we address areas of greatest need? (Infant/toddler care):

- Support family, in-home licensed child care
- Remove restrictions regarding mixing ages
- Employer-provided care on site
- Be innovative about types of available space
- Lower cost
- Identify creative funding sources
- Support decent ECE wages
- Provide grants
- Update zoning/building/licensing requirements in order to streamline
- Provide tax breaks for developers and providers

How can we address areas of greatest need? (School age care):

- Assess use of public facilities with a view to creating child care spaces
- Look at multi-use and multi-time possibilities (e.g. school spaces outside of school hours)
- Partnerships between cities, schools and community
- Remove licensing barriers
- Expand existing programs

How can we address areas of greatest need? (Longer and non-traditional hours):

- Employer-provided care. Large employers like hospitals could make care available to other shift-workers in the community as well
- Provide care directly by city/parks/school
- Support and provide incentives for quality, well-trained staff
- Parent-led co-ops
- Subsidize part-time care
- Incentivize child care development and operation
- Apply for capital funding
- Collaborate with senior governments

Action Planning Workshop

Background

As part of Child Care Action Planning work for Coquitlam, Port Moody and Port Coquitlam, the Tri-Cities Task Force on Child Care hosted a workshop at Centennial Secondary School in Coquitlam on January 22, 2020. The workshop was a chance for the Task Force to meet with elected officials and staff from the Tri-Cities and the School District to explore the current state of child care in the Tri-Cities, to hear about promising practices and examples from other jurisdictions, and to provide input into short and longer-term actions to address child care gaps. These suggested actions are summarized below.

Key Findings

Short-Term Actions

- The municipalities can create space inventories and set space targets.
 - Create an inventory of existing spaces (city facilities, community centres, etc.) where child care programs can be offered or expanded, including potentially during non-traditional hours.
 - Set space targets tied to needs. Prioritize areas where need is highest.
- Incentivize developers to include child care facilities in new developments (e.g. density bonusing, community amenity contributions, etc.).
- Work with Fraser Health to update licensing requirements and make them more flexible, especially for school aged care on school property.
- Create local coordinator roles to help providers navigate the permits and licensing process. Remove municipal regulatory or administrative obstacles for child care providers.
- Provincial governments could increase capital funding grants to School Districts and offer pilot operational money to allow the School District to explore delivering child care.

Medium-Term Actions

- Explore medium-term actions to increase amount and types of space available for child care.
- Explore medium-term actions to increase the number of qualified child care workers, including by continued support for wages.
- Continue collaboration between the Tri-Cities and with all stakeholders.
- Create a child care coordinator position at the School District.

Long-Term Actions

- Incorporate child care in all long-term municipal and project planning, ensuring it is included in new developments and in schools.
- Create facilities that offer child care during extended and non-traditional hours – potentially even offering 24/7 care.
- Incorporate child care into the Ministry of Education and provide adequate funding to provide enough spaces to meet need.

Appendix: Community Engagement Participants

Key Informants Interviews

Organizations	Name / Position
Kinsight	Gareth Williams, Director of Family & Children's Services
Spirit of the Children Society	Carly Quinlan, Early Years Program Manager
Step by Step Child Development Society	Amy Reid, Director
SUCCESS	Abigail Cameron, Manager, Tri-Cities Local Immigration Partnership
YMCA Child Care Resource and Referral Program	Reagan Stewart, Area Program Manager
Westcoast Family Centres	Tanya Valois, Associate Director
SHARE Community Services	Jody Wickens, Director of Child & Youth Programs
Fraser Health Child Care Licensing	Jody Mishuda, Practice Consultant & Tricia Stephenson, Regional Supervisor of Child Care Licensing
School District 43	Chris Nicolls, CFO/Secretary-Treasurer & Sharon Thompson, Assistant Director of Procurement Services
City of Coquitlam	Paul Penner, Social Planner
City of Port Coquitlam	Natalie Coburn, Planning Analyst
City of Port Moody	Liam McLellan, Social Planner
City of Port Coquitlam – Recreation Department	Janice Dancs, Children Services Co-ordinator
Ministry of Children and Family Development	Susan Foster, Community Developer & Cassia Mcaffey, Director of Operations for Early Years

City Staff Interviews

Municipality	Name / Position
City of Port Coquitlam	Graeme Muir, Planner
	Karen Nicols, Licensing Clerk
City of Coquitlam	Sylvia Adamson, Planning Technician
	Pat Lau, Coordinates Planning & Development Staff
	Glen Spence, Bylaw, Licensing & Animal Control Supervisors
	Mark Reed, Building Technologist
City of Port Moody	Mary De Paoli, Manager of Policy Planning
	Robyn Macleod, Manager of Building, Bylaw & Licensing

Child Care Provider Interviews

Child Care Centre	Municipality
PoCo Daycare Society	Port Coquitlam
Caring Hearts Child Care	Port Coquitlam
Hazelwood Early Learning Centre	Port Coquitlam
Kids Cottage Daycare Society	Coquitlam
Alpha Bees Child Care	Coquitlam
Funshine Learning Centre	Coquitlam
Block 8 Academy	Port Moody
Parkside Child Care	Port Moody
Heritage Mountain Daycare	Port Moody

Solutions Workshop - Hosted by the Tri-Cities (December 10, 2019)

Organization	Name / Position
BCCA Kids Club Child Care Centre	<ul style="list-style-type: none"> Theresa Lee, Director Jungmi Park
City of Coquitlam	<ul style="list-style-type: none"> Andrew Merrill, Manager Community Planning Paul Penner, Social Planner Sarah Bird, Business Services Liaison Pat Lau, Planner 3 Sylvia Adamson, Planning Technician 2 Councilor Bonita Zarillo
City of Port Coquitlam	<ul style="list-style-type: none"> Natalie Coburn, Planning Analyst Janis Dancs, Children Services Coordinator
City of Port Moody	<ul style="list-style-type: none"> Mary De Paoli, Manager of Policy Planning Robyn MacLeod, Manager of Building, Bylaw and Licensing Jess Daniels, Policy Planner
Kinsight	<ul style="list-style-type: none"> Gareth Williams, Director Family & Children's Services Yvonne Kwok, Coordinator Supported Child Development
Ministry of Children and Family Development	<ul style="list-style-type: none"> Susan Foster, North Fraser Early Years Community Developer
School District #43	<ul style="list-style-type: none"> Patricia Gartland, CEO/ Superintendent Chris Nicolls, CFO / Secretary Treasurer Sharon Thompson, Assistant Director Procurement and Contract Administration Harpreet Esmail, Curriculum Coordinator - Early Learning Terri Galligos, Indigenous Education Resource Teacher
Step-by-Step Child Development Society	<ul style="list-style-type: none"> Amy Reid, Director Heather Nowak, Board
SUCCESS	<ul style="list-style-type: none"> Eunju Kim Ada Sin
Westcoast Family Centres	<ul style="list-style-type: none"> Michelle Flett, Administrative Coordinator
YMCA – Child Care Resource and Referral Program	<ul style="list-style-type: none"> Raegan Stewart, Program Manager Tazeen Bharucha

Actions Workshop - Hosted by School District 43 - Child Care Task Force (January 22, 2020)

Organization		Participant
School District 43	Board	<ul style="list-style-type: none"> • Chair Kerri Palmer-Isaak • Trustee Jennifer Blatherwick • Trustee Michael Thomas • Trustee Carol Cahoon • Trustee Lisa Park • Trustee Christine Pollock • Trustee Keith Watkins
	Staff	<ul style="list-style-type: none"> • Superintendent Patricia Gartland • Secretary Treasurer Chris Nicolls • Principal Nicole Daneault, Ecole Glen Elementary • Principal Frank Pearse, Seaview Elementary
MLA		<ul style="list-style-type: none"> • Joan Isaacs, Coquitlam-Burke Mountain
City of Coquitlam	Council	<ul style="list-style-type: none"> • Mayor Richard Stewart • Councillor Chris Wilson • Councillor Bonita Zarillo
	Staff	<ul style="list-style-type: none"> • Paul Penner, Social Planner • Jennifer Keefe, Manager Community Recreation and Culture Services • Tina Mack, Manager of Recreation and Culture Facility Planning
City of Port Moody	Council	<ul style="list-style-type: none"> • Councillor Amy Lubik
	Staff	<ul style="list-style-type: none"> • Mary DePaoli, Manager of Planning
City of Port Coquitlam	Council	<ul style="list-style-type: none"> • Mayor Brad West • Councillor Steve Darling • Councillor Laura Dupont • Councillor Glenn Pollock
	Staff	<ul style="list-style-type: none"> • Natalie Coburn
Village of Belcarra	Council	<ul style="list-style-type: none"> • Councillor Carolina Clark
Ministry of Children and Family Development	Staff	<ul style="list-style-type: none"> • Susan Foster
Community Agencies		<ul style="list-style-type: none"> • Raegan Steward, YMCA CCRR

Tri-Cities Child Care Action Plan - Municipal Government Child Care Planning

Key Findings from Research &
Promising Practices December
2019

Social Planning and Research Council of British
Columbia

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1. Introduction

Municipalities across British Columbia are developing child care strategies and action plans to address each communities' child care needs. In order to better understand current promising practices and key research findings related to quality child care systems and the role of municipal governments in child care this document and literature review was undertaken. The purpose of this review is to answer the following guiding questions:

1. What are the elements/indicators of a high-quality early learning and child care system?
2. What does the research tell us about Quality Child Care at the Individual Program Level?
3. What does the research tell us about auspice –who is operating the child care programs?
4. What is the broader context for child care in Canada?
5. What does the research tell us about the role of local governments in the delivery of a high quality child care system?
6. What are some examples of promising practices for local planning and service delivery?

By reviewing each question, municipalities will be equipped with information to inform their child care strategies and action plans.

2. What are the indicators/elements of a quality early learning and child care system?

Overall

There is an innate benefit of having a system in place in order to meet the needs of the community, families, and individuals. A system can be defined as an established framework that creates interrelationships between and among different groups with the purpose of meeting an identified need, in this case, quality, affordable and accessible child care.¹

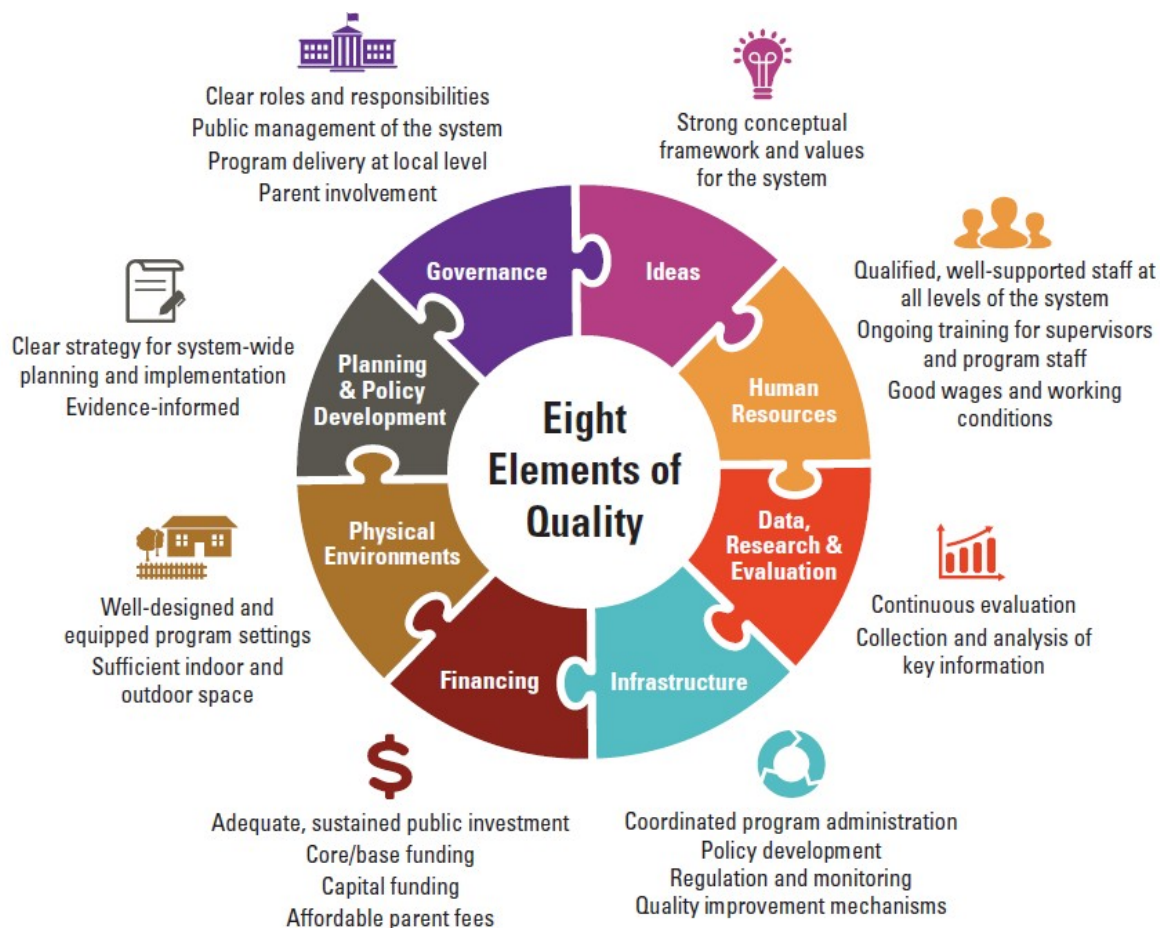
It is well accepted that there are eight elements of a quality early learning and child care **system**: (1) Ideas, (2) Governance, (3) Infrastructure, (4) Planning and policy development, (5) Financing, (6) Human resources, (7) Physical environment, (8) Data, Research and Evaluation.² Each element is interconnected and fit together to create a strong system, but individually do not have as much impact. These eight characteristics are the basis of a quality child care *system*. Strong public policy is needed to provide the foundation to build the system. Furthermore, in Canada, child care is viewed as a provincial jurisdiction. Canada presently does not have comprehensive public policy on quality child care and therefore child care in Canada is described by the Organisation for Economic Co-operation and Development (OECD) as, “fragmented, often of dubious quality and characterized by unequal access”.³ Nonetheless, within

¹ Arnold, R.D., & Wade, P.J. (2015). A definition of systems thinking: A systems approach. *Procedia Computer Science*, 44, 669-678.

² Friendly, M., & Beach, J. (2005). High quality early learning and child care system. *Child Resource and Research Unit*, 1-8.

the literature and amongst early childhood professionals, consensus has been reached on the important aspects of an early learning and child care system. Notably, the Province of British Columbia has committed to an ambitious “systemic” approach to universal child care with a focus on quality, affordability, and accessibility. [Childcare BC: A New Day for Families & Providers in B.C](#) is a provincial plan specifically focused on establishing a quality child care system and adheres to the eight elements outlined by Friendly and Beach (2005).

The following graphic presents a summary of each of the eight elements of a quality child care system^{3,4}:



(Source: Martha Friendly and Jane Beach, (2005). Elements of a high quality early learning and child care system. Childcare Resource and Research Unit.)

³ Friendly, M., Doherty, G., & Beach, J. (2005). Quality by design: What do we know about quality in early learning and child care, and what do we think? A literature review. *Childcare Resource and Research Unit*, 1-32.

⁴ Region of Waterloo Children’s Services. (2016). *Early Learning and Child Care Service Plan: 2016-2020 Executive Summary*. <https://www.regionofwaterloo.ca/en/living-here/resources/Documents/Childrens-Services-/ELCC-Service-Plan-Executive-Summary-access.pdf>

As stated, planning and policy is one of the eight elements of a quality system and an important driver for social change. In 2012, the OECD released the [Starting Strong III: A Quality Toolbox for Early Childhood Education and Care](http://dx.doi.org/10.1787/9789264123564-en) which is a document that includes, “five policy levers that are likely to enhance quality” of child care.⁵ These categories are:

- Policy Lever 1: Setting out quality goals and regulations
- Policy Lever 2: Designing and implementing curriculum and standards
- Policy Lever 3: Improving qualifications, training and working conditions
- Policy Lever 4: Engaging families and communities
- Policy Lever 5: Advancing data collection, research and monitoring

This toolbox could be used when considering implementing policy that is aimed at creating quality child care. In addition, this toolbox should be referenced to support policy decisions at the municipal level especially, when developing an action plan that recognizes the importance of quality child care.

Inclusion and Accessibility

When developing a quality early learning and child care system, it is critical to ensure the system meets the diverse needs of children, in particular, children who statistically belong to vulnerable and/or marginalized groups. While there is no “one size fits all” framework that can be implemented, there are promising practices that consistently arise when inclusivity and accessibility are put into practice. For example, a comprehensive, global, literature review that has been conducted on the accessibility of early childhood education for children from ethnic minority and low-income families, documents some of these promising practices.⁶ Based on the literature review, Vanderbroeck and Lazzari (2012) propose three levels from which an inclusive and accessible system can be built:

1. Policy Level: Ex. availability of services, quality regulations, monitoring
2. Provisions level: Ex. services available for irregular work hours, number of spaces meets the demand, waitlist criteria
3. Parental level: Ex. access to informal network and information about ECE, language, and cultural considerations

To address challenges associated at each level, there are five principles of good practice to be considered:⁷

1. Availability – Do families have access to child care in their neighborhood?
2. Affordability – Are fees based on income?

⁵ OECD. (2012). Starting Strong III: A Quality Toolbox for Early Childhood Education and Care, OECD Publishing. <http://dx.doi.org/10.1787/9789264123564-en>

⁶ Vandenbroeck, M., & Lazzari, A. (2012). Accessibility of Early Childhood Education and Care (ECEC) for children from ethnic minority and low-income families.

⁷ (Vanderbroeck & Lazzari, 2012)

3. Accessibility – Are there language, cultural, and/or physical barriers? Is outreach being conducted to reach marginalized and vulnerable population groups who might not have access to information or a trusting relationship with child care centres?
4. Usefulness – Are there flexible opening hours? Are families involved in the child care centre decision making processes?
5. Comprehensibility – Are the values, beliefs and educational practices of the organization comprehensive and reflected of diverse needs? Do diverse staff work at the centre?

Furthermore, in Canada, there has been a national Indigenous Early Learning and Child Care Framework developed to ensure child care systems meet the needs of Indigenous children and families. This Framework was created with Indigenous partners across Canada through a national engagement strategy and culminates with nine principles that strengthen Indigenous Early Learning and Child Care. This Framework can be found here: <https://www.canada.ca/en/employment-social-development/programs/indigenous-early-learning/2018-framework.html>

Workforce

A strong quality workforce is required in order to operate a quality child care system. In recent years, there have been many studies and reviews on what constitutes a quality workforce.^{8,9} The latest, comprehensive, national labour market review on a quality child care workforce, which was completed in 2004, determined, “a skilled, stable workforce is the critical determinant of high quality in child care settings, and the quality of child care environments influences child development outcomes.”¹⁰ Despite this clear outcome statement, the present day workforce still faces similar challenges workers faced over fifteen years ago at the time of the last national literature review. Bertrand (2004) highlighted that workers were negatively impacted by many factors such as low wages, which resulted in a lack of incentive to obtain higher education, increasing job stress, and difficulty meeting the needs of all children. These issues were compounded with the fact that there was a lack of public investment to mitigate the negative experiences the workforce encountered, resulting in child care that lacked quality.¹¹ Over recent years, however, there have been child care advocates that continue to strive towards creating a child care system that is considered “high quality.” Fundamental to a high-quality

⁸ Bertrand, J. (2004). Working for change: Canada’s child care workforce. *Child Care Human Resources Sector Council*, 1-75.; Early Childhood Educators of BC. (N.D.). BC Childcare Sector Labour Market Partnership: Phase 1 Final Engagement Report. Retrieved from https://www.ecebc.ca/programs/files/1218_Childcare%20SLMP%20-%20Final%20Report%20.pdf;

⁹ Forer, B. (2018). 2018 Wages and working conditions survey: Vancouver centre-based child care programs, Westcoast Child Care Resource Centre and the City of Vancouver. Retrieved from https://www.wstcoast.org/application/files/1215/3776/1533/WCCRC_Vancouver_child_care_wage_survey_exec_sum_web_10_pg_Sept_19_2018-web.pdf

¹⁰ (Bertrand, 2004, p.13)

¹¹ (Bertrand, 2004)

system is a workforce that is appropriately remunerated, has access to affordable education and professional development opportunities, and is supported through public policy.¹²

Recently, the Canada-British Columbia Labour Market Development Agreement funded a study on the [BC Childcare Sector Labour Market Partnership](#) and the City of Vancouver completed a survey on [Wages and Working Conditions in Vancouver centre-based child care programs](#). Both of these studies validated the findings from Bertrand's 2004 literature review: low wages remain, education and professional development are difficult to obtain, and retaining or recruiting skilled employees is a challenge.¹³ In an attempt to address the concerns raised by the early childhood educator workforce in BC, the Ministry of Children and Family Development created an [Early Care and Learning Recruitment Strategy](#). The strategy outlines a plan to:

1. Increase compensation for ECE's working in facilities that are participating in BC's Child Care Fee Reduction Initiative
2. Expand funding to the ECE post-secondary programs, bursaries available to students, and funds to facilities to support employees while they participate in education/training
3. Create more professional development opportunities

Creating a more sustainable and supported workforce will take time, however, the path forward is clear based on the ample research conducted nationally, provincially and locally. Investment in the child care workforce is essential in creating a quality child care system.

3. What does the research tell us about quality child care at the individual program level?

Much has been written about quality at the individual child or program level, but as discussed in the last section, there is increasing recognition that there are essential elements at the broader systems level necessary to ensure that quality at an individual or program level is the norm rather than the exception. These systems level elements include infrastructure, financing, governance, planning, human resources, physical environments, research, data collection and evaluation. Most aspects of quality fall within provincial jurisdiction and are outside the scope of a local municipal government, however it is important to recognize what indicates quality child care at the individual program level.

High quality at an individual program levels means honouring children where they are at, supporting children and giving them opportunities to develop and learn through play and a safe environment.¹⁴ In 2019, the British Columbia Ministry of Education released an [Early Learning Framework](#) that outlines the key factors that contribute to quality programs including different practices that can be implemented

¹² (Bertrand, 2004)

¹³ (BC Childcare Sector Labour Market Partnership: Phase 1 Final Engagement Report, 2018; Forer, 2018) ¹⁴ British Columbia Early Learning Framework. Ministry of Education. 2019 <https://www2.gov.bc.ca/gov/content/education-training/early-learning/teach/early-learning-framework>

to advance child learning. This framework should be referenced when developing or evaluating child care programs. Furthermore, extensive research has been done to establish the contributing factors that foster a high-quality program which Friendly, Doherty, and Beach (2005) briefly outline in their literature review of quality child care. For instance, at a relational level, reporting of positive relationships between families and providers, among colleagues, and between children and staff is indicative of quality care. Additionally, when staff are more educated, feel appreciated and are well supported, the quality of care increases. Planned programming and a strong curriculum that is tailored to meet the diverse needs of children further enhances the quality of care.

In addition to establishing an overall positive environment for children, employees and families, along with the implementation of a strong curriculum, there has been evidence that illustrates the importance of a well-designed indoor/outdoor space in supporting the development of children under five.¹⁵ Although standards for child care spaces are developed provincially, municipalities are able to establish child care design standards that are more in line with best practices, such as the “7C’s” (character, context, connectivity, change, chance, clarity, and challenge). For example, the provincial standards recommend less than 7m² of outdoor space per child, but the City of Vancouver, in their [Design Guidelines](#) has increased that requirement to 14m² per child (globally, standards are as high as 32m² per child). The City of Vancouver has also recognized the correlation of well-designed outdoor space with quality individual programs and has taken important steps to improving child care quality through municipal policy. The design of indoor spaces is important, as, “the arrangement of furniture, structures, and objects in a space sends messages about how people can move and relate to others.”¹⁶ How space is designed and used, inevitably impacts the individual program quality.

As demonstrated, the research indicates that there are several factors contributing to the development of high quality individual child care programs. Centres that focus on building quality indoor and outdoor spaces, developing relationships with families, creating a positive work environment and implementing structured curriculum have greater success in meeting the needs of children and establishing a quality child care centre.

¹⁵ Herrington, S., Lesmeister, C., Nicholls, J., & Stefiuk, K. (N.D.). 7Cs: An Informational Guide to Young Children’s Outdoor Play Spaces. Retrieved from <https://sala.ubc.ca/sites/sala.ubc.ca/files/documents/7Cs.pdf>

¹⁶ (Ministry of Education, 2019, p. 23)

4. What does the research tell us about auspice – who is operating the child care programs?

Doherty, Friendly, and Forer (2002)¹⁷ describe the term ‘child care auspice’ as those who run or operate the child care market service. Research has shown that the operator of child care facilities plays a major role in the quality of provision. In Canada there are three types of child care auspice:¹⁸

1. Not-for-profit child care services
2. For-profit child care services
3. Publicly operated child care services (i.e. services directly operated by a public entity such as a city government or a board of education)

There is a substantial amount of research on these three auspices from Canada, the United States, Britain, and New Zealand where child care is delivered as a market commodity. Analysis of research data from Canada-wide studies on the quality of licensed child care centres have indicated that as a group:

- a) For-profit centres were of lower quality than not-for-profit and publicly operated centres¹⁹
- b) For-profit centres lower quality is not only related to lower access to public funds and resources but also due to a multitude other issues related to for-profit care^{20,21}
- c) The highest quality child care was found in municipally operated public child care centres²²

Research on auspice has consistently demonstrated that for-profit centres are of lower quality and perform worse on global evaluation scales compared to not-for-profit and publicly operated centres.^{23,24} Using British Columbian data, researchers found that for-profit centres are disproportionately more likely to close, and not-for-profit centres are 97% times more likely to continue to operate.²⁵ Table 1 shows that in contrast to not-for-profits, for-profits provide less teaching support, salary schedule, staff policies, job performance appraisals, and grievance procedures. These contributing factors could result in the high staff turnover and lower morale present within for-profits.

¹⁷ Doherty, G., Friendly, M., & Forer, B. (2002). Child care by default or design? An exploration of differences between non-profit and for-profit Canadian child care centres using the “you bet I care!” data sets. *Childcare Resource and Research Unit, Centre for Urban and Community Studies*, 75.

¹⁸ (Doherty, Friendly, & Forer, 2002)

¹⁹ (Doherty, Friendly, & Forer, 2002)

²⁰ Childcare Resource and Research Unit, (2011). Briefing Note: What Research Says About Quality in For-Profit, Non-Profit and Public Child Care.

²¹ Cleveland, G., & Krashinsky, M. (2009). The nonprofit advantage: Producing quality in thick and thin child care markets. *Journal of Policy Analysis and Management*, 28(3).

²² Cleveland, G. (2008). *If It Don't Make Dollars, Does That Mean That It Don't Make Sense? Commercial, Nonprofit and Municipal Child Care in the City of Toronto*. City of Toronto, Children's Services Division.

²³ (Childcare Resource and Research Unit, 2011)

²⁴ Kershaw, P., Forer, B. & Goelman, H. (2004). Hidden fragility: Closure among child care services in BC. Vancouver: Human Early Learning Partnership, University of British Columbia.

²⁵ (Childcare Resource and Research Unit, 2011)

Table 1 Comparison between Non-Profit and Commercial Child Care Written Policies and Formal Procedures*

Variable	Auspice	Average percent %
Teaching staff have written job descriptions	Non profit	73.4
	Commercial (for-profit)	46.5
Teaching staff have written job contracts	Non profit	41.7
	Commercial (for-profit)	22.2
There is a written salary schedule	Non profit	29.2
	Commercial (for-profit)	12.1
There is a staff manual outlining staff policies	Non profit	70.9
	Commercial (for-profit)	57.2
Teaching staff receive regular written job performance appraisals	Non-profit	38.5
	Commercial (for-profit)	11.2
There is a formal grievance procedure	Non- profit	31.5
	Commercial (for-profit)	15.3

*Table Source: Staff questionnaire from both YBIC! data sets for all centres in Alberta, British Columbia and New Brunswick combined. From Doherty, Friendly and Forer (2002). Note: Data from 147 non-profit and 163 commercial centres.

Other reasons that for-profit centres have higher turnover and lower morale is because they have a higher proportion of untrained staff, lower wages, higher child to staff ratios²⁶, and minimal benefits concerning sick leave. Less in-service training, holidays and pensions, are additionally noted²⁷; therefore, staff turnover rates are lower in not for-profit, non-religiously affiliated centres and highest in for-profit independent centres.

Lastly, the highest quality child care auspice was found in municipally operated public child care centres. According to Doherty, Friendly and Forer (2002), municipal centres actively support non-profit agencies that serve their residents and therefore, have the best quality across all age groups. Further, Section 25 of the BC Community Charter states that there are legislative prohibitions on local government assistance to businesses²⁸, and due to this, city-owned child care facilities can only be operated by the municipality or by not for-profit operators, and not by for-profits.

²⁶ (Doherty, Friendly, & Forer, 2002)

²⁷ Penn, H. (2012) Childcare markets: Do they work? Occasional Paper No. 26. Childcare Resource and Research Unit.

²⁸ British Columbia (2019). Community Charter, SBC 2003 Chapter 26.

5. What is the broader context for child care?

Understanding the broader context for child care is a key pillar to developing a child care strategy that is feasible at a local, municipal level. This part of the review will examine the broader international context for child care, the federal role in child care and the provincial role of child care provision. By having a full picture of the child care context, local governments can be more equipped to adequately position themselves in the conversation.

International Context

Accessing child care and establishing child care arrangements is a universal need for families and, as a result, multi-country studies have been conducted to contribute to the global child care context.^{29,30} From these international studies, there are key findings to be gleaned. Most notably, when Canada participates in international reviews, the country is determined to have an unfavourable system and receives among the lowest scores on quality child care. For example, in 25 OECD countries, child care systems were reviewed on ten benchmarks, and Canada tied for the lowest score with Ireland. Sweden was the only country to reach all benchmarks. The benchmarks were as follows:³¹

1. A minimum entitlement to paid parental leave: At least 1 year at 50% of salary, with provision for unemployed or self-employed individuals
2. A national plan with priority for disadvantaged children
3. Minimum level of child care provision for children under 3 years of age: Subsidized, regulated services for at least 25% of children under 3
4. Minimum level of access for 4-year-olds: At least 80% of 4-year-olds participate in publicly subsidized and accredited early childhood services for at least 15 hours/week
5. Minimum level of training for all staff: At least 80 percent of staff having significant contact with young children have relevant training
6. A move towards pay and working conditions in line with wider teaching or social care professions: At least 50% have a minimum of at least three years of post-secondary education, with recognized qualification in early childhood
7. Minimum staff to children ratio: Maximum group size of 24 for 4-year-olds
8. Level of public funding for children 0-6 of at least 1% of GDP
9. Child poverty of less than 10%
10. Universal outreach

²⁹Organisation for Economic Co-operation and Development. (2019). Early Childhood Education and Care Country Information. Retrieved from <http://www.oecd.org/education/school/ecec-country-information.htm>

³⁰UNICEF Innocenti Research Centre. (2008). The child care transition: A league table of early childhood education and care in economically advanced countries. Retrieved from <https://www.unicef-irc.org/publications/507-the-child-care-transition-a-league-table-of-early-childhood-education-and-care-in.html>

³¹(UNICEF Innocenti Research Centre, 2008). Proxy measure for basic health services: the rate of mortality is less than 4 per 1,000 live births; proportion of low birthweight babies is less than 6%; the rate of immunization for children 12-23 months is greater than 95%.

When these benchmarks are reached, countries experience greater gender equality, lower poverty rates and ultimately protect the rights of children. As quality, accessible, affordable, child care systems and services are being developed in British Columbia and implemented at a municipal level, it is imperative for municipalities to understand the positive impacts reaching these validated benchmarks has on communities and strive to create environments where reaching these milestones are possible.

Figure 1 Early Childhood Services Report Card - UNICEF Innocenti Research Centre report *The Child Care Transition*

Benchmark		1	2	3	4	5	6	7	8	9	10
	Number of benchmarks achieved	Parental leave of 1 year at 50% of salary	A national plan with priority for disadvantaged children	Subsidized and regulated child care services for 25% of children under 3	Subsidized and accredited early education services for 80% of 4-year-olds	80% of all child care staff trained	50% of staff in accredited early education services tertiary educated with relevant qualification	Minimum staff-to-children ratio of 1:15 in pre-school education	1.0% of GDP spent on early childhood services	Child poverty rate less than 10%	Near-universal outreach of essential child health services
Sweden	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Iceland	9		✓	✓	✓	✓	✓	✓	✓	✓	✓
Denmark	8	✓	✓	✓	✓		✓	✓	✓	✓	
Finland	8	✓	✓	✓		✓		✓	✓	✓	✓
France	8	✓	✓	✓	✓	✓	✓		✓	✓	
Norway	8	✓	✓	✓	✓			✓	✓	✓	✓
Belgium (Flanders)	6		✓	✓	✓		✓			✓	✓
Hungary	6		✓		✓	✓	✓	✓		✓	
New Zealand	6		✓	✓	✓	✓	✓	✓			
Slovenia	6	✓	✓	✓		✓	✓				✓
Austria	5		✓	✓	✓	✓	✓	✓		✓	
Netherlands	5		✓	✓	✓	✓	✓	✓			
United Kingdom*	5		✓	✓	✓	✓	✓				
Germany	4		✓		✓		✓	✓			
Italy	4		✓		✓	✓	✓				
Japan	4		✓		✓	✓					✓
Portugal	4		✓		✓	✓	✓				
Republic of Korea	4		✓			✓	✓				✓
Mexico	3		✓			✓	✓				
Spain	3				✓	✓	✓				
Switzerland	3					✓		✓		✓	
United States	3			✓			✓	✓			
Australia	2			✓			✓				
Canada	1						✓				
Ireland	1						✓				
Total benchmarks met	126	6	19	13	15	17	20	12	6	10	8

*Data for the United Kingdom refer to England only.

Federal Role

Although child care in Canada is primarily a provincial responsibility, the federal government plays an important role in the child care system. For instance, the federal government provides direct child care funding support to three specific population groups: First Nations, Metis and Inuit children and families; families serving in the Canadian military; and some newcomers to Canada enrolled in language programs. Different levels of support are provided for each population group. Some examples include providing resources for Aboriginal Head Start on Reserve program, emergency child care for military families, and child care for immigrant or newcomers enrolled in language classes. The federal government furthermore provides maternity and parental benefits through Employment Insurance to eligible parents. These benefits enable eligible people to stay home with their newborn for up to 18 months, with a reduced rate. Additionally, the Federal government has allocated funds to implement the [Multilateral Early Learning and Child Care Framework](#) and the [Indigenous Early Learning and Child Care Framework](#). BC has a bilateral agreement and received \$153 million in 2018, with the following priority areas of investment:³²

1. Enhance the accessibility of child care options by increasing the number of spaces
2. Increase affordability of child care, beginning with infant/toddler care
3. Enhance the quality of licensed child care programs by supporting the training and professional development of early childhood educators
4. Enhance equity through targeted investment in underserved communities – Indigenous families, families with children with special needs, and young parents completing their secondary education – improving access to inclusive, affordable, and flexible child care programs

Provincial Role

In Canada, provinces and territories maintain primary responsibility for child care oversight and management. In British Columbia, the system is complex and spans across three main ministries: the Ministry of Children and Family Development, the Ministry of Health and the Ministry of Education. Table 2 outlines the different responsibilities across each Ministry.

³² Government of Canada. (2018). Canada-British Columbia Early Learning and Child Care Agreement Retrieved from <https://www.canada.ca/en/early-learning-child-care-agreement/agreements-provinces-territories/british-columbia.html#h2>

Table 2 Provincial Ministry Responsibilities

Ministry of Children and Family Services Responsibilities	Ministry of Health Responsibilities	Ministry of Education Responsibilities
1. Child care policy including cooperating on the Early Learning Framework	1. Child care legislation	1. Led the development of Early Learning Framework
2. Child care programs and services funding	2. Licensing and Monitoring (implemented by regional Health Authorities, follows the BC Child Care Licensing Regulation)	2. StrongStart BC
3. Fee subsidies		
4. Early Childhood Registry		
5. Capital funds		

After the 2017 provincial election, creating universal, affordable, quality child care was established as a priority. Since the election, the government has completed/created the following:

1. Committed to reconciliation by providing funding for Aboriginal Head Start programs to include child care
2. Developed the [Child Care Fee Reduction initiative](#)
3. Created [The Affordable Child Care Benefit](#)
4. Committed to create 22,000 new spaces by 2021
5. Established [Universal Child Care Prototype Sites](#)
6. Distributed Capital funding via:
 - a. [Childcare BC New Spaces Fund](#)
 - b. UBCM Community Child Care Space Creation Program
7. Announced wage increases for Early Childhood Educators

The Province plays an important role in advancing accessible, affordable, quality child care programs and the current government has demonstrated a desire to enhance the existing system in British Columbia through a multitude of new initiatives. Ultimately, however, child care services are provided at a local, community level and municipalities hold immense responsibility in fostering a system that provides affordable, accessible, and quality child care.

6. What does the research tell us about the role of local governments in the delivery of a high quality child care system?

The local government plays an important role in the delivery of high-quality childcare systems. Planning, managing, designing, and implementing programs are common roles and responsibilities of the local government.³³ Similarly, school districts collaborate with the local government to create policy

³³ (Friendly, Doherty, & Beach, 2005)

documents and strategic plans in order to implement change at the district level.³⁴ Local community members are encouraged to voice their opinions and concerns in regards to the services offered within the community.³⁵ By collaborating with community partners, local governments are able to determine the strengths, weaknesses, and gaps present within the services and address change accordingly.³⁶

Research suggests over time, local governments roles within the child care sector in Canada have diminished, allowing provincial governments to act as key decision makers.³⁷ Within Canada, most provinces, except Ontario, only allow local governments to participate in select decision making processes. For example, in British Columbia, municipalities can choose to invest in child care, but there is no legislated municipal role. This poses challenges for the local government when trying to meet the demands of the local citizens.³⁸ Challenges such as, accessibility, affordability, and equality are barriers preventing local governments from providing high quality childcare services.³⁹ Therefore, evidence suggests that building strong intergovernmental relationships can help eliminate many of these challenges and help local governments provide more equitable, high-quality childcare services.⁴⁰

Several [recommendations](#) have been made by the Province, for municipalities to help support the local childcare needs.⁴¹ These include:

1. Having experienced staff members who are familiar with the processes and municipal requirements for child care providers
2. Updating bylaws in accordance with legislation to help eliminate confusion
3. Creating land bylaws to increase new childcare spaces
4. Work with school districts to promote joint use of space
5. Assemble a cross-sectoral child care planning team

Evidence suggests lowering municipal fees and increasing the numbers of not for-profit child care facilities can help support local child care demands. Other actions that municipalities can take include drafting child care plans, creating a child care planning body, streamlining processes, and offering employees child care services.⁴² By following these recommendations, municipalities can help create high quality, accessible, and affordable child care services.

³⁴ Provincial Office for the Early Years. (N.D.). Early years in BC school districts: A scan of promising practices.

³⁵ (Friendly, Doherty, & Beach, 2005)

³⁶ (Friendly, Doherty, & Beach, 2005)

³⁷ McNeil, C., & Cory, G. (2017). The future of childcare in London: Devolving funding for greater affordability, access and equality. *Institute for Public Policy Research*, 17-27.

³⁸ Jensen, J., & Mahon, R. (2002). Bringing cities to the table: Child care and intergovernmental relations. *Canadian Policy Research Network*, 26, 2-9.

³⁹ (McNeil, & Cory, 2017)

⁴⁰ (Jensen & Mahon, 2002)

⁴¹ Provincial Office for the Early Years. (N.D.). Municipalities: Top 13 Actions to Support Local Child Care Needs. <http://nanaimoearlyyears.org/resources/Research%20and%20Resources/municipalities%20top%2013%20actions%20for%20child%20care%20needs.pdf>

⁴² (Provincial Office for the Early Years, N.D.)

7. What are some examples of promising practices for local planning and service delivery?

In Canada, municipalities have implemented a variety of strategies to plan for and provide quality child care. To date, no research has been completed on “best practices” of child care in Canadian municipalities, but in this section, “promising practices” will be explored. To begin this section, promising practices across Canada will be explained followed by promising practices currently underway in British Columbia.

Promising Practices in Canada

Insights about quality child care can be acquired from municipalities around Canada. Although provincial legislation dictates the role of local municipalities immensely, the Region of Waterloo and City of Toronto are two cases of municipalities that have taken initiative in creating a quality child care system at the local level. For instance, the [*Region of Waterloo’s Early Learning and Child Care Service Plan \(2016-2020\)*](#) is a prime example of a quality focused child care plan in action. Waterloo created their child care plan around four pillars: availability, affordability, accessibility, and accountability.⁴³ Action items were then developed that centred around those four pillars. The action items prioritize inter-government relationship, reducing fees for families, supporting diverse needs, and building relationships with school boards to offer public child care. In regards to public delivery of child care, the City of Toronto is one of the highest providers of publicly operated centres.⁴⁴ Toronto was able to become a leader in public child care by financing “20% of the budget for fee subsidies, wage grants, families resource programs and resources for special needs children, and 50% of administration costs”.⁴⁵ The province subsequently pays the remainder of costs. The Region of Waterloo and City of Toronto are two municipalities that have leveraged provincial legislation to meet the needs of their respective communities regarding quality child care.

Furthermore, across the country, municipal governments are hoping to foster environments that create quality child care. In 2016, the Muttart Foundation in Alberta developed a report: [*Engaging Alberta Municipal Level Governments in Support of Early Learning and Care*](#) which served the purpose of building a conversation around promising practice for municipal governments. This report takes a comprehensive look at municipal practices in Alberta, Ontario, and Saskatchewan, and culminates in offering suggestions about Albertan municipal roles and responsibilities around regional management and planning, support for services and service delivery, and research and public awareness.⁴⁶ This report can be used by municipalities to understand the context of promising practices in municipalities nationally.

⁴³ (Region of Waterloo, 2016)

⁴⁴ (Public child care profile: Toronto, Ontario, 2009)

⁴⁵ (Public child care profile: Toronto, Ontario, 2009, p.1)

⁴⁶ The Muttart Foundation. (2016). *Engaging Alberta municipal level governments in support of early learning and care*. Retrieved from <https://www.muttart.org/wp-content/uploads/2017/02/Engaging-Alberta-Municipal-Level-Governments-122016.pdf>

When reviewing promising practices in Canada, it is vital to recognize that city planners play an important role in creating quality child care. Holt (2018) has summarized some of promising practices surrounding planning policies and their effect on child care development. Although the report is geared towards Winnipeg, Holt (2018) effectively explores the impact of policies, financing, zoning and regulatory requirements and partnerships have on the child care system at the municipal level and stated the following as trends in promising practices:⁴⁷

1. Municipalities recognized that access to early learning child care services contribute to the social and economic wellbeing of communities; it helps to support families, healthy child development and future economic growth and prosperity
2. Municipalities provided financial incentives to support child care services
3. Municipalities took steps to encourage ELCC spaces through land use and zoning regulations
4. Collaborations and partnerships played a vital role in creating quality child care

Promising Practices in British Columbia

Many municipalities in British Columbia have undertaken important steps towards building quality child care. In Metro Vancouver, in order to better understand landscape of municipal child care policies and regulations, the [Municipal Survey of Child Care Spaces and Policies in Metro Vancouver](#) was conducted.⁴⁸ Key findings from this report were as follows:⁴⁹

- 8 Metro Vancouver municipalities have a stand-alone child care strategy
- 11 municipalities identify child care facilities as a community amenity in the development approvals process
- 15 municipalities support child care through the provision of municipal building space (rent-free, reduced lease, or market lease); the space may be made available on a single property or on multiple sites
- 6 municipalities offer grants for child care capital projects; 4 municipalities offer grants for child care operating costs
- 15 municipalities provide space for child care in municipal facilities
- 8 municipalities offer property tax exemption

Three examples of municipalities with child care strategies include the [City of New Westminster](#), [City of Richmond](#), and [City of Vancouver](#). These strategies can be used to review promising practices at the local level and help inform future child care plans. The most recent plan was developed by the City of Richmond and within this plan is a municipal promising practices review focused on the City of Vancouver and City of New Westminster. This review examines strategies these municipalities have used

⁴⁷ Holt, C. (2018). Planning for child care: The impact of planning policies and strategies on the development of early learning and child care spaces in Winnipeg, Manitoba.

⁴⁸ Metro Vancouver. (2019). 2019 Survey of Licensed Child Care Spaces and Policies in Metro Vancouver.

⁴⁹ City of Richmond. (2016). 2017-2022: Richmond Child Care Needs Assessment and Strategy.

to create spaces, inform planning and policy developments, and build partnerships. In order to inform planning and policy developments, prior to action plans being created, conducting a needs assessment within the municipality is a key promising practice which was undertaken both by New Westminster and Richmond. When needs assessments are conducted, municipalities are able to have a better understanding of existing gaps and strengths.⁵⁰ In regards to space creation, both the City of Vancouver and New Westminster have provided funding through grants which enable not-for-profit centres to expand, renovate, or repair facilities and Richmond proposed to follow suit in their action plan. This funding, in turn, provides families with more access to quality, accessible, and affordable child care.

The final promising practice discussed in the Richmond child care strategy was to focus on building partnerships and collaborate across sectors (ex. school districts, local organizations, provincial government). Arguably, building partnerships is the way, “municipalities can make the most of their resources to address child care issues.”⁵¹ Notably, the City of Vancouver and the City of Burnaby have made relationship-building a priority. Vancouver established the Joint Child Care Council (JCC) in 2004 which brings together the City of Vancouver, the Vancouver Parks Board the Vancouver Board of Education, Vancouver Coastal Health and the Vancouver Public Library, along with community agencies and business representatives in order to create quality child care. As a result, the JCC has collaborated on the creation of over 1000 new child care spaces including the creation of a number of child care centres at schools.

Furthermore, the City of Burnaby developed a Child Care Facilities Memorandum and Agreement (MOA) in 2014 with School District 41 in order to, “build up to twelve child care facilities in modular building on School District lands.”⁵² This agreement is one of the first of its kind across the province and a pivotal relationship in establishing quality child care. In addition, in October 2019, the Burnaby School District School District confirmed a partnership to increase the number of before and after school child care spaces, as outlined in their project definition report [Before and After School Childcare: Creating a Plan for Childcare Opportunities within the Burnaby School District](#).⁵³

Although each municipality across British Columbia has unique needs, there are many trends and promising practices which can be applied to any municipal child care plan. By reviewing existing plans, municipalities are able to better understand the promising practices that will meet the child care needs of their community, and strive towards creating a quality, affordable and accessible child care system.

⁵⁰ (City of Richmond, 2016)

⁵¹ (City of Richmond, 2016, p. 23)

⁵² (City of Richmond, 2016, p. 23)

⁵³ Burnaby School District 41. (2019). Project Definition Report: Before and After School Childcare: Creating a Plan for Childcare Opportunities Within the Burnaby School District.

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1431 Barberry Drive – Rezoning Application

RECOMMENDATION:

That Committee of Council recommend to Council:

1. That the zoning of 1431 Barberry Drive be amended from RS1 (Residential Single Dwelling 1) to RD (Residential Duplex).
2. That prior to adoption of the amending bylaw, the following conditions be met to the satisfaction of the Director of Development Services:
 - (a) Demolition of the building;
 - (b) Completion of design and submission of securities and fees for off-site works and services; and
 - (c) Registration of a legal agreement to restrict secondary suites.

PREVIOUS COUNCIL/COMMITTEE ACTION

None.

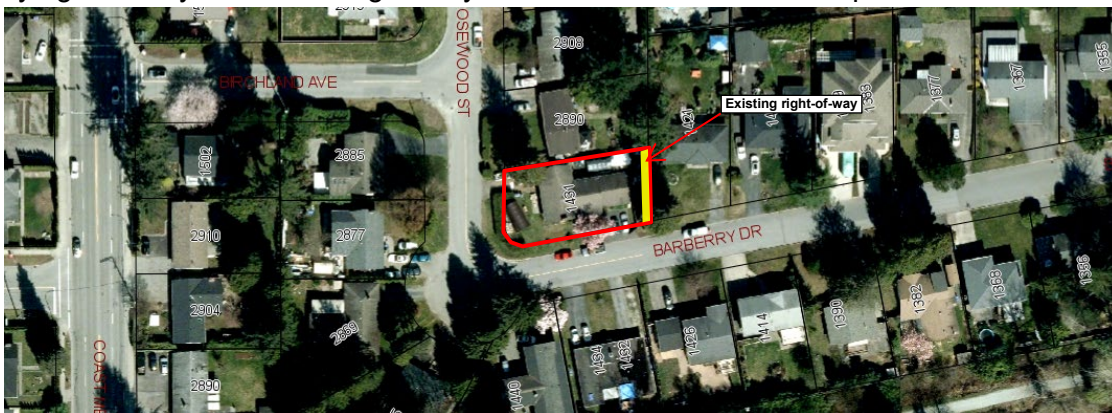
REPORT SUMMARY

This report provides for consideration of a rezoning application to amend the zoning at 1431 Barberry Drive from RS1 (Residential Single Dwelling 1) to RD (Residential Duplex) to allow for a duplex use. As the proposed development would be in keeping with policies of the Official Community Plan which encourage additional dwellings in established neighbourhoods, new forms of housing and infrastructure improvements, it is recommended for approval.

BACKGROUND

Proposal: The owner, Kevin Tam, has proposed to redevelop the property located at the corner of Barberry Drive and Rosewood Street with a two-storey duplex at 1431 Barberry Drive.

Context: The 698 m² (7,520 ft²) site is currently developed with an older one storey single-residential home. Surrounding land uses are comprised of single-residential homes with two duplexes to the north and south along Barberry Drive. At the rear of the property, there is a 1.8 m statutory right-of-way for an existing BC Hydro and telecommunications pole.



Location map

1431 Barberry Drive – Rezoning Application

Policy and Regulations: The land use designation in the Official Community Plan for the site is Residential. The property is zoned RS1 – Residential Single Dwelling 1. Through the development permit process, the proposal would be subject to guidelines within the Intensive Residential and Environmental Conservation Permit Areas. These objectives include the orderly development of the area and to encourage coordination of the siting, form, and volume of intensive residential buildings and areas for parking, storage, and landscaping.

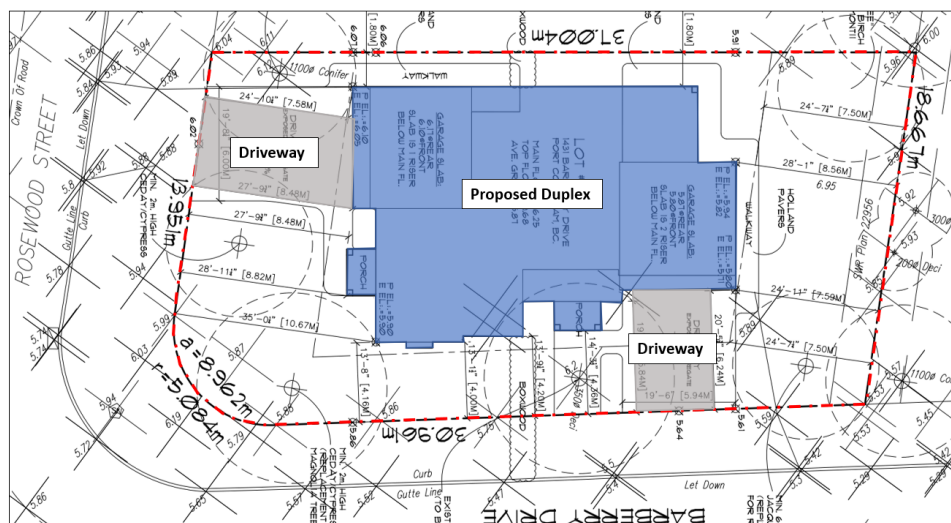


Current OCP Land Designations



Current Zoning

Project Description: The proposed duplex would be two stories in height; each unit would have an area of approximately 182 m² (1960 ft²) with an attached garage and no basement. As the property is a corner lot, one unit would be oriented towards Barberry Drive and one unit would be oriented towards Rosewood Street with individual driveway entrances. The right-of-way to the east of the site will not impact the proposed duplex and will be covered with landscaping. The landscaping will be a mix of trees, shrubs, and groundcover. Pavers have been proposed around the north and east edges of the duplex to increase the pervious surface area.



Site Plan

1431 Barberry Drive – Rezoning Application

The architectural style of the duplex is craftsman and the applicant advises that detailed consideration has been given to ensure the building would fit the context of the site. Variable roof lines are incorporated in the design to breakdown the building massing. The rendering below illustrates the proposed design. Each unit can accommodate two cars within the garage.



Proposed rendering of the duplex at 1431 Barberry Drive

Project Profile

	RD Bylaw Regulations ¹	Proposed ²
Site Area	500 m ²	698 m ²
Floor Area Ratio	0.55	0.52
Lot Coverage	40%	32%
Impervious surfaces	65%	53%
Setbacks (to principle building)		
Front (Rosewood St)	7.5 m.	7.58 m.
Rear (east)	7.5 m.	7.59 m.
Interior side (north)	1.8 m.	1.8 m.
Exterior side (Barberry Dr)	3.5 m.	4.0 m.
Building Height	9.0 m.	7.89 m.
Parking Spaces	4 (2/unit)	4

¹ Refer to Zoning Bylaw No. 3630 and Parking and Development Management Bylaw No. 3525

² Information provided by applicant

1431 Barberry Drive – Rezoning Application

Two non-significant trees are to be removed and replaced with a deciduous and conifer. A tree cutting permit has been approved for the red cedar tree at the northwest corner of the site and this tree will be replaced by a Himalayan Birch. A Magnolia tree along Barberry Drive was assessed and found to be in declining health. The applicant explored relocating the tree but, in consultation with the City's arborist, it was determined that relocation may further impact the tree's health due to its size and the financial cost would be significant. This tree will be replaced by a Cedar.

The design of the building and landscaping would be confirmed in Committee's future consideration of the development permit, if the rezoning is approved.

Offsite Infrastructure and Services

Provision for off-site improvements prior to adoption of the rezoning bylaw is recommended to ensure the requirements of the Subdivision Servicing Bylaw would be met. The required improvements would include road and service upgrades as necessary. The site is to be serviced with underground Hydro and telecommunication connections.

DISCUSSION

The proposal complies with policies of the Plan for proximity to other sites zoned Residential Duplex as the subject property is on a corner lot. The proposal would also result in off-site infrastructure improvements and achieve a superior quality of landscape design to fit with the established neighbourhood.

If the rezoning is approved, the design and character of the duplex would be regulated through issuance of a Development Permit. The applicant has submitted a development permit application which indicates the form and character of the proposed development would comply with these guidelines.

The proposed design is not currently showing the potential construction of secondary suite. However, in keeping with normal practices, it is recommended that a legal agreement be registered on title in accordance with the City's Zoning Bylaw to ensure that future owners are aware that secondary suites are not permitted.

The proposed rezoning is in keeping with the land use policies of the Official Community Plan and recommended for approval.

PUBLIC CONSULTATION


A sign providing notification of the application is posted on site. To date, no comments have been received.

1431 Barberry Drive – Rezoning Application

FINANCIAL IMPLICATIONS

The redevelopment will likely increase the assessed value of the property, resulting in increased property taxation for the City.

OPTIONS (✓ = Staff Recommendation)

	#	Description
	1	Recommend to Council that the zoning of 1431 Barberry Drive be amended from RS1 to RD and that the specified conditions be met prior to adoption of the rezoning.
	2	Obtain additional information prior to making a decision on the application
	3	Advise Council that Committee does not recommend rezoning 1431 Barberry Drive to allow for a duplex.

Lead author(s): Graeme Muir

Burns Road Culvert Grant

RECOMMENDATION:

That Committee of Council confirm support for the Burns Road Culvert Replacement project and provision of overall grant management for \$750,000 in grant funding from the Union of British Columbia Municipalities (UBCM).

PREVIOUS COUNCIL/COMMITTEE ACTION

As part of budget deliberations on November 4, 2020, Committee of Council approved funding for the Burns Road Culvert Replacement.

REPORT SUMMARY

This report provides information to support a Council resolution for \$750,000 in grant funding from the Union of British Columbia Municipalities (UBCM) for the Burns Road Culvert Replacement project. A Council resolution indicating support for the proposed activities and willingness to provide overall grant management is one of the application requirements.

BACKGROUND

As part of budget deliberations on November 4, 2020, Committee of Council approved \$120,000 in 2021 for design and \$1,845,000 in 2022 for replacement of the Burns Road Culvert, funded by the General Capital Reserve.

Burns Road carries traffic from Lougheed Highway to the cities of Port Coquitlam and Coquitlam. The 16.9m long culvert under Burns Road has failed in some sections and needs to be replaced due to significant deterioration. The culvert protects the road and surrounding areas with residential, industrial and commercial development from flooding. The culvert also allows adequate drainage and fish passage for a Class A watercourse (Dominion Avenue Slough) under the road. The need to replace the culvert was identified as part of regularly scheduled culvert inspections and recommendations in the Hyde Creek Watershed Management Plan. Temporary repairs were made following a partial collapse in 2019 to extend the life of the culvert until its replacement in 2022.

DISCUSSION

The Community Emergency Preparedness Fund is a suite of funding programs intended to enhance the resiliency of local governments in responding to emergencies, and includes a funding stream for structural flood mitigation. Funding is provided by the Province of British Columbia and is administered by UBCM.

Burns Road Culvert Grant

The intent of the Structural Flood Mitigation funding is to support eligible applicants to prevent, eliminate or reduce the impacts of hazards through construction of flood mitigation projects such as culvert replacements. Flooding is a significant natural hazard in BC that can damage important infrastructure, cause serious economic losses, and create social disruption. Flooding in British Columbia is often due to climatic conditions (intense rainfall, rapid snowmelt, storm surges), geomorphic processes (debris flows, tsunamis, landslides) and structural failures (dike, dam or culvert failures).

The Structural Flood Mitigation funding can contribute a maximum of 100% of eligible activities to a maximum of \$750,000. Staff applied for grant funding on November 20, 2020, however, a council resolution is required prior to consideration by UBCM.


NEXT STEPS

Pending approval from Council, a resolution will be submitted to UBCM to finalize the City's grant application. A response from UBCM is anticipated in February 2022.

FINANCIAL IMPLICATIONS

If successful, the UBCM grant of \$750,000 will be applied to the culvert construction costs in 2022 and free up the corresponding amount of general capital reserve funding.

OPTIONS

#	Description
1 	That Committee of Council confirm support for the Burns Road Culvert Replacement project and provision of overall grant management for \$750,000 in grant funding from the Union of British Columbia Municipalities (UBCM).
2	Request further information.

Attachment 1: Burns Road Capital Project Sheet

Lead author: Melony Burton

BURNS RD CULVERT REPLACEMENT

Department	Engineering & Public Works	Starting Quarter	2021 Q1
Project Manager	Manager Capital Projects	Completion Quarter	2022 Q4
Asset Group	Infrastructure	Estimated Life	50 Years
Project Type	Direct Replacement	Reference	21-80-07

Estimate of Capital Costs	2021 (Approved)	2022	2023	2024	2025
Culvert Design	120,000	-	-	-	-
Culvert Construction	-	1,845,000*	-	-	-
Total Capital Costs	\$120,000	\$1,845,000	-	-	-

Funding Sources	2021 (Approved)	2022	2023	2024	2025
General Capital Reserve	120,000	1,845,000	-	-	-
Total Funding Sources	\$120,000	\$1,845,000	-	-	-

*Forecast cost.

Project Description

The culvert located under Burns Road, just north of Dominion Avenue is a 16.8m long 3980 x 2690mm structural plate corrugated pipe arch culvert. The culvert has failed in some sections and needs to be replaced due to significant deterioration. The need to replace this culvert was initially identified in 2010 but temporary measures have been implemented to extend the life. Additional repairs were made in 2019 to support the culvert until it can be replaced in 2022.

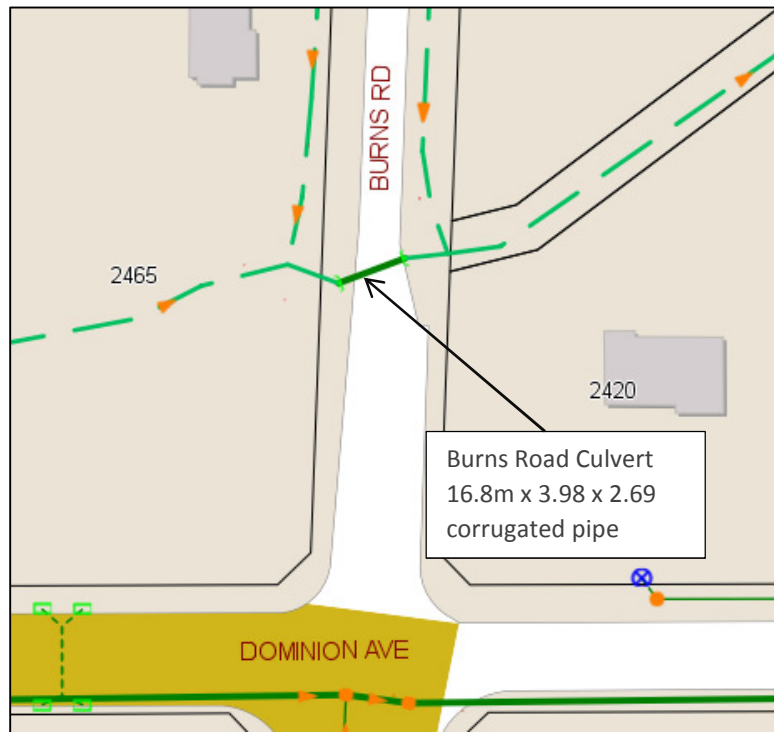
Replacement will take into consideration the future Fremont Connector, which may include building the culvert to the ultimate road width or ensuring the design allows for expansion at the time of road construction.

The following items need to be investigated before the design can be prepared:

- Confirmation of hydraulic requirements
- Depth and location of Telus fibre-optics along Burns Road
- Land requirements
- Application with regulatory bodies (DFO, MoE)

Preliminary engineering to confirm the above items can be completed for \$15,000 in 2020, funded from Engineering Studies money in the Engineering budget. The results will inform the design and determine if lower cost solutions can be implemented (e.g. reduced culvert sizing, land requirements or utility relocation costs). The ultimate costs may vary significantly pending the assessment outcome.

Detailed design is planned for 2021 with construction to follow in 2022.

Burns Road Culvert Replacement

RECOMMENDATION:

None.

PREVIOUS COUNCIL/COMMITTEE ACTION

At the April 13, 2015, Council passed the following motion to approve the declaration of the right of a healthy environment:

Municipal Declaration the Right To A Healthy Environment

Whereas the City of Port Coquitlam understands that people are part of the environment, and that a healthy environment is inextricably linked to the well-being of our community;

The City of Port Coquitlam finds and declares that:

1. All people have the right to live in a healthy environment, including:

- The right to breathe clean air*
- The right to drink clean water*
- The right to consume safe food*
- The right to access nature*
- The right to know about pollutants and contaminants released into the local environment*
- The right to participate in decision-making that will affect the environment*

2. The City of Port Coquitlam has the responsibility, within its jurisdiction, to respect, protect, fulfill and promote these rights.

3. The City of Port Coquitlam shall consider the precautionary principle: where threats of serious or irreversible damage to human health or the environment exist, the City of Port Coquitlam shall evaluate cost effective measures to prevent the degradation of the environment and protect the health of its citizens. Lack of full scientific certainty shall not be viewed as sufficient reason for the City of Port Coquitlam to postpone such measures

4. The City of Port Coquitlam shall assess full cost accounting methodologies: when evaluating reasonably foreseeable costs of proposed actions and alternatives, the City of Port Coquitlam will consider costs to human health and the environment.

5. By December 31, 2016, when creating or updating bylaws, policies, programs or initiatives the City of Port Coquitlam shall consider residents' right to a healthy environment, including priority actions to: a. *Ensure equitable distribution of environmental benefits and burdens within the*

municipality, preventing the development of pollution “hot spots”; b. Ensure infrastructure and development projects protect the environment, including air quality; c. Address climate change by reducing greenhouse gas emissions and implementing adaptation measures; d. Responsibly increase density; e. Prioritize walking, cycling and public transit as preferred modes of transportation; f. Ensure adequate infrastructure for the provision of safe and accessible drinking water; g. Promote the availability of safe foods; h. Reduce solid waste and promote recycling and composting; i. Establish and maintain accessible green spaces in all residential neighbourhoods.

By December 31, 2016, the City of Port Coquitlam shall consider setting objectives, targets, timelines and actions to support this Declaration, including options for public consultation and a formal review process every five (5) years.

And be it further resolved that the City of Port Coquitlam call on the Province of British Columbia to enact a provincial environmental bill of rights to fulfill the right of every resident to live in a healthy environment by supporting favourable consideration of this matter at the Union of BC Municipalities 2015 Convention.

REPORT SUMMARY

Since declaring the right to a healthy environment in 2015, the City of Port Coquitlam has completed many environmental initiatives that support the objectives set out in the declaration. Additionally, Council's 2020-2022 Priorities further address these commitments with a number of additional significant initiatives. This report will provide an update on the objectives, targets, timelines and actions to support this declaration and conclude with the work currently scheduled which further supports this initiative.

BACKGROUND

Spearheaded by the David Suzuki Foundation, the Blue Dot Movement is a national effort to raise awareness for the right to a healthy environment. The Blue Dot Movement started as a grassroots movement focused on securing the right to a healthy environment, including the rights to fresh air, clean water and safe food, within the Canadian constitution. In 2014, the Blue Dot Tour was launched, requesting municipal support in order to demonstrate leadership to the senior levels of government with the ultimate goal of amending the Canadian Charter of Rights and Freedoms.

On April 13, 2015, Council approved the declaration of the right of a healthy environment. By approving the declaration, the City of Port Coquitlam acknowledged that people are part of the environment, and that a healthy environment is inextricably linked to the well-being of our community.

Further, the Blue Dot program recognizes and promotes the following rights; however it should be noted that a number of these fall outside of municipal jurisdiction:

- The right to breathe clean air
- The right to drink clean water
- The right to consume safe food
- The right to access nature
- The right to know about pollutants and contaminants released into the local environment
- The right to participate in decision-making that will affect the environment

One of the Blue Dot commitments includes a review process every five years to evaluate progress towards fulfilling this declaration. In the past five years the City of Port Coquitlam has approved business plan items and capital projects that support the fulfillment of this declaration.

DISCUSSION

As a result of declaring the right of a healthy environment, the City of Port Coquitlam committed to considering residents' rights to a healthy environment when creating or updating bylaws, policies, programs or initiatives. In addition, the program recommends the following priority actions:

- Prioritize walking, cycling and public transit as preferred modes of transportation
- Ensure infrastructure and development projects protect the environment, including air quality
- Address climate change by reducing greenhouse gas emissions and implementing adaptation measures
- Responsibly increase density
- Ensure adequate infrastructure for the provision of safe and accessible drinking water
- Promote the availability of safe foods
- Reduce solid waste and promote recycling and composting
- Establish and maintain accessible green spaces in all residential neighbourhoods.

Since the declaration in 2015 the City has committed to numerous projects aligned with the priority actions noted above. The sections below highlight work complete, ongoing or scheduled to complete prior to Q4 2022.

Complete:

- **Support Car Share Programs:** provided dedicated parking for Modo car share.
- **Sidewalks and Pedestrian Improvements:** Priority projects completed annually
- **Active Transportation Improvements:** Priority projects completed annually

- **Increased Transportation Options:** Supported TransLink's Rapid Bus project and bus priority measures along Lougheed Highway.
- **Tree Bylaw Update:** Recent updates include greater preservation measures for healthy trees by lowering the minimum threshold (from 60cm to 45cm) for "significant trees"
- **Organics Diversion from Landfill:** The City was an early adopter of green waste diversion from landfills. The current diversion rate is 66%.
- **Waste Stream Education:** Community ambassadors have provided focused education on organic diversion, recycling and bear awareness. In addition, ambassadors have promoted re-use and re-purposing through the Repair Café initiative.
- **EV Charging Readiness:** Require all developers to rough in infrastructure for electric vehicles.
- **Alternative Power Readiness:** Require all newly constructed homes be solar power ready.
- **Require new buildings to utilize green building practices and reduce energy use:** Set environmental conversation goals and objectives in the official community plan and review each development application to determine how the building meets our goals and objectives for higher performance buildings.
- **Amended the building bylaw to implement the provincial step code:** These regulations set progressively higher requirements for the construction of buildings, including single family dwellings to use less energy and contribute to reducing green house gas emissions.
- **Integrated Watershed Management Plans:** The City is split into five watersheds. Integrated Watershed Management Plans review a particular watershed and identify actions to preserve its health, while meeting storm water management needs. They also strive to improve fish health and fish habitat. Complete – Hyde Creek
- **Blakeburn Lagoon Remediation:** A former sanitary detention facility that was transformed into an 11 hectare ecological nature preserve and open space for public recreation.

Ongoing:

- **Master Transportation Plan Update:** Update to the long-range plan that will identify strategic, prioritized investments needed over the next 20 years to create a safe and sustainable transportation network. Ongoing – Anticipated completion date is Q4 2021.
- **Bike Share Program:** encourage active transportation through a third-party cycle provider partnership to help connect people to transit networks and recreation opportunities throughout the municipality. Ongoing – Report to Committee anticipated in Q1 2021.
- **Increased Rapid Transportation Options:** Advocating to TransLink for rapid transit to Port Coquitlam's downtown. Ongoing – Anticipated completion date is Q2 2021.

- **Updated Tree Canopy Analysis:** Revise the tree canopy coverage calculation and propose options to achieve a 30% tree canopy. Ongoing – Report to Committee anticipated in Q4 2020. This work will inform the Urban Forest Management plan in 2021.
- **Integrated Watershed Management Plans:** The City is split into five watersheds. Integrated Watershed Management Plans review a particular watershed and identify actions to preserve its health, while meeting storm water management needs. They also strive to improve fish health and fish habitat. Ongoing – Maple Creek.
- **Revisions to Pesticide Bylaw:** Updated bylaw to ensure elimination of health risks and environmental. Although used for "targeted pest", many beneficial organisms, like ladybugs and bees, are very susceptible to pesticides. Other organisms, like fish and invertebrates, can also be affected if pesticides are unintentionally washed into creeks and streams. Ongoing – Anticipated completion date is Q1 2021.
- **Annual Water Quality Report:** The purpose of this report is to fulfill the requirements set out in the British Columbia Drinking Water Protection Act by giving an overview of the water distribution system, describing the maintenance conducted, detailing some of the unique features of the system and providing the results of Port Coquitlam's water quality testing program. Ongoing (annual) – 2019 report is complete and submitted to the health authority.
- **Conversion of Street Lighting to LED:** The City is nearing completion of a 4-year program to replace all high pressure sodium street lights to LED technology. This program concludes in 2021 and will result in significant energy savings and provide increased lighting coverage.
- **Establish and Maintain Green Spaces in Neighbourhoods:** Ongoing parks service level
- **Fleet Replacement:** consider environmental impacts when replacing our fleet, including downsizing, elimination of non-essential equipment, or replacing with lower emission alternatives.

Scheduled:

- **Updated Greenhouse Gas Emission Targets:** Update the community and organizational GHG targets. Scheduled – Work will inform the Climate Change Mitigation and Adaptation Plan in 2021.
- **Climate Change Mitigation and Adaptation Plan:** Develop mitigation strategies to limit climate change impacts by reducing GHGs and prepare adaptation strategies to help the City adapt to a changing climate, taking advantage of opportunities to build resilience and prepare for impacts. Scheduled – 2021.
- **Urban Forest Management Plan:** Develop an Urban Forest Management Plan to review, assess and maintain the City's natural forest assets. Scheduled – Work will support the Climate Change Mitigation and Adaptation Plan (CCMAP) in 2021.

- **Integrated Watershed Management Plans:** The City is split into five watersheds. Integrated Watershed Management Plans review a particular watershed and identify actions to preserve its health, while meeting storm water management needs. They also strive to improve fish health and fish habitat. Scheduled – South (2022), North (2023) and West (2025)

In summary, the City of Port Coquitlam has fulfilled its municipal declaration to the right to a healthy environment and has undertaken and/or scheduled a number of exciting projects which align with the priority actions and support the rights established in 2015.

FINANCIAL IMPLICATIONS

None, all projects are approved Capital projects or currently funded business plan items.

ATTACHMENTS

Att#1: Council Strategic Priority Document

Att#2: Port Coquitlam Environmental Summary Sheet

Lead author(s): Dave Kidd

Contributing author(s): Doug Rose, Meghan Woods



CITY COUNCIL 2018-2022

Left to right:

Cllr. Laura Dupont
Cllr. Glenn Pollock
Cllr. Darrell Penner
Mayor Brad West
Cllr. Steve Darling
Cllr. Dean Washington
Cllr. Nancy McCurrach

Getting the Basics Right

Council Priorities for 2020-2022

Council has selected the three priorities to the right to guide the City's budget and service-delivery, based on community feedback received throughout the year and through the annual budget survey and other public consultation. These priorities will translate into budgeted activities with tangible results, organized into six key focus areas.

Overall, the focus is on **getting the basics right** – planning and providing core municipal services (such as roads, utilities and other infrastructure, safety and recreation) that matter to residents and businesses. These are the building blocks for a safe, family-friendly community with affordable places to live at all stages of life, good-paying jobs, thriving businesses, and desired amenities and services.

How We Work

The work of Council and City staff is guided by the following principles:

Building a Strong Organization

Our culture is focused on providing the best service possible by working collaboratively, choosing the right people for the job, and staff training and development.

Spending Responsibly

We're committed to making the best use of taxpayers' dollars. This includes planning for the future, targeting our resources and continually working to be more efficient and effective.

Getting It Done

When we budget for a project or service, we follow through to make sure it is delivered.

Engaging our Community

We regularly engage the community to keep the public informed and ensure they have a say in decision making.

Current Priorities

- 1 Improving our customer service
- 2 Investing in our infrastructure
- 3 Enhancing community safety

Key Focus Areas

See next page for related budgeted activities:

- > Managing City Finances and Assets Responsibly
- > Creating a Vibrant Downtown
- > Focusing on Safety
- > Planning for the Future
- > Improving Transportation and Mobility
- > Enhancing our Environment

Key Focus Areas 2020-2022

Please note: Focus areas and activities may be adjusted over time to address emerging issues or changing circumstances.

Managing City Finances and Assets Responsibly

GOAL: Provide long-term value for tax dollars through sound management of finances and assets.

ACTIVITIES:

- > Complete annual review of core service levels.
- > Create neighbourhood road rehabilitation standards.
- > Develop 10-year capital and financial plans.
- > Complete asset management plans.
- > Update servicing regulations.
- > Review development cost charges.
- > Create a City land management plan.
- > Evaluate management of cash, investments, debts, land and use of reserves.

Creating a Vibrant Downtown

GOAL: Revitalize the downtown, creating a welcoming, pedestrian-friendly destination where people gather, celebrate, shop, work, live and access services.

ACTIVITIES:

- > Implement actions in the Downtown Concept Plan.
- > Increase arts and culture activities and festivals.
- > Construct supporting infrastructure (road, streetscape and pedestrian improvements).

Improving Transportation and Mobility

GOAL: Ensure drivers, pedestrians and cyclists have safe, effective options for getting around the City.

ACTIVITIES:

- > Invest in neighbourhood rehabilitation.
- > Plan and advocate for SkyTrain.
- > Advocate for railway separation projects at the Kingsway, Westwood and Pitt River crossings.
- > Update the Transportation Master Plan.

Planning for the Future

GOAL: Plan for future growth and services in a way that meets community needs and supports quality of life and investment in our community.

ACTIVITIES:

- > Complete the Port Coquitlam Community Centre.
- > Invest in trails, park, field and playground upgrades.
- > Update the Official Community Plan.
- > Improve housing options for families.
- > Consider higher density near transit hubs.
- > Improve development application turnaround times.
- > Attract more businesses with high-paying jobs.

Focusing on Safety

GOAL: Ensure citizens feel safe in their homes and throughout the community.

ACTIVITIES:

- > Address speeding and school zone safety.
- > Invest in pedestrian and cycling safety.
- > Review options for delivery of police services.
- > Evaluate regulations and bylaw enforcement levels.
- > Plan for replacement of Fire Hall #2.

Enhancing our Environment

GOAL: Plan for a healthy environment and a changing climate.

ACTIVITIES:

- > Create a climate change mitigation/adaptation plan.
- > Develop a forest management plan and tree canopy target and strategy.
- > Assess and improve watercourse health.
- > Update greenhouse gas targets; reduce emissions.

Naturally PoCo

Port Coquitlam has a long-standing commitment to the environment, including adopting an environmental strategic plan in 2011 and designating **Enhancing Our Environment** as one of Council's 2019-2022 budgeted priorities. Here are some highlights of our work to ensure a healthy, livable and sustainable community.

TREES & NATURAL AREAS

Planned/in progress

- Urban Forest Management Plan
- Tree canopy target/strategy
- More watercourse protection

Completed

- Bylaw to protect/promote trees
- National award: Blackburn Lagoons remediation

234
trees
planted
2019 to
mid-2020

CLIMATE CHANGE

Planned/in progress

- Climate Change Adaptation Plan
- Set and met City/community greenhouse gas targets
- City-wide LED streetlights

Completed

- Electric or fuel-efficient City fleet
- EV charging rough-ins required

3,000
streetlights
converted
to LED
2018-2021

FOOD SECURITY

Planned/in progress

- Micro community gardens
- Pesticide bylaw update

Completed

- Pesticide/pollinator education
- Farmland protection reg/policies
- Farmers Market
- Two community gardens

692
acres of
farmland
in city

WASTE DIVERSION

Planned/in progress

- Public education and support to increase diversion of waste from landfill

Completed

- User-friendly waste-sorting tools
- Education and outreach in person, in print and online

66%
household
waste
diverted
in 2019

DEVELOPMENT

Planned/in progress

- Implementation of BC Energy Step Code

Completed

- Planning for denser development to reduce sprawl
- Energy efficiency construction rules

80
new multi-
family
homes in
2019

TRANSPORTATION

Planned/in progress

- Advocating for SkyTrain
- Expanded path/trail network

Completed

- Bike/car-sharing partnerships
- Upgrades to bus shelters, benches and accessibility
- Infrastructure for RapidBus

120
bus stops
upgraded
in 2018-
2019

RECOMMENDATION:

None.

PREVIOUS COUNCIL/COMMITTEE ACTION

This study was identified in the 2020 Capital Budget deliberations as the Pitt River Weir Assessment and subsequently funded through the budget approval process.

REPORT SUMMARY

This report summarizes a study completed in 2020 that assessed the ecological health of a portion of the Fremont Natural Area Stormwater Management Region known as the Reach 6 sub-catchment area that includes land that drains into the Reach 6 watercourse which is bound on the north by Dominion Avenue, Fremont triangle development area to the West, and a berm that extends to the Pitt River Dike to the East. The study also considered the Dominion watercourse sub-catchment including the land areas that drain to the Dominion watercourse and then into a large retention pond known as the Dominion Retention Pond. Included in this report is a brief discussion of the findings of the study, options for interventions, and recommendations made by the consultant retained to conduct the study.

BACKGROUND**Study Area**

The Fremont Natural Area is a 23-hectare, diked stormwater management region on the west shore of the Pitt River near the Pitt River Bridge. The area is characterized by flat terrain, native riparian forests, and watercourses located between mixed-use urban development and the tidally influenced freshwater of the Pitt River. The entire area is within the floodplain of the Pitt River, but being located behind the Pitt River dike, it is not subjected to regular flooding. Water from the entire Dominion catchment, which includes large impervious areas, drains to the Fremont Natural Area.

Much of the catchment has been developed to residential, agricultural, and commercial uses. Half of the impervious surfaces are attributed to the CP Railyard and the Dominion Triangle development, and the remaining impervious surfaces are mostly located within the residential neighbourhoods along Cedar Creek.

For the purposes of this study, the Dominion catchment was further divided into two sub-catchments that drain to different sections of the Fremont Natural Area:

- The Reach 6 sub-catchment, and
- The Dominion Watercourse sub-catchment

The study was conducted in the areas that drain water from these larger catchments. A more granular look at the study area can be seen in Figure 1 below.



Figure 1. Map of Reach 6 Dominion watercourse natural areas

Water Quality Concerns

Recently, concerns were raised about the water quality and quantity in the subject area, particularly during summer low-flow periods. Subsequently, staff were directed to explore whether or not installation of a weir would improve the water quality in the Reach 6 watercourse. In 2020, the City retained Kerr Wood Leidal Associates Ltd. (KWL) to conduct an environmental assessment of the area and propose options for potential on-site or off-site interventions that may increase ecosystem health, primarily through water quality and quantity. Through their initial observations, it was determined that a weir would not address the underlying water quality and quantity realities in the watercourse, however, they were able to identify the cause of the degraded water quality and other potential solutions.

DISCUSSION

Summary of Findings

KWL identified the following key findings following a review of background information and on-site field visits in June 2020:

- Ochre (a natural iron product that is formed when groundwater is mixed with buried organic matter) was identified as a primary source of water quality impairment in the Fremont Natural Area. In addition to being aesthetically displeasing due to a reddish-brown colouring, high quantities of ochre in waterways can reduce oxygen levels resulting in a negative effect on riparian vegetation and potential fish habitat.
- An additional source of water quality impairment could be attributed to contaminants in stormwater runoff due to the high percentage of impermeable surface in the area.
- The Dominion Pump Station does not currently allow for safe fish passage. Any plans for improving the aquatic ecological health and/or fish accessibility of the watercourses drained by the Dominion Pump Station need to carefully consider this issue. Further, the need for year-round drainage pumping and retention of water for irrigation in the Dominion drainage catchment is a significant influence on watercourse character, ecological health, and possible options to improve health.
- Dominant species observed in the Reach 6 floodplain forest include native trees and shrubs capable of tolerating seasonal floods. This will be beneficial if tidal or seasonal inflows from the Pitt River are restored, as recommended in order to improve ecological health and create fish habitat

Ochre Formation

Ochre was identified as the likely primary source of water quality impairment in the Fremont Natural Area. Ochre is a natural iron product that is formed when groundwater is mixed with buried organic matter. This process is shown in Figure 2. Ochre loading likely occurred due to historical practices of filling drainage channels and elevating developed land over organic soils.

Ochre can produce chronic effects on ecological watercourse health. At high levels, ochre formation can depress aquatic oxygen and adversely impact invertebrates and vegetation. Suspended ochre can impair the vision of fish and reduce foraging ability. Ochre impairment was found to be much more significant within the Dominion Watercourse as compared to the Reach 6 area, although water quality monitoring within Reach 6 and in the Dominion Retention Pond should be conducted before any interventions are selected.

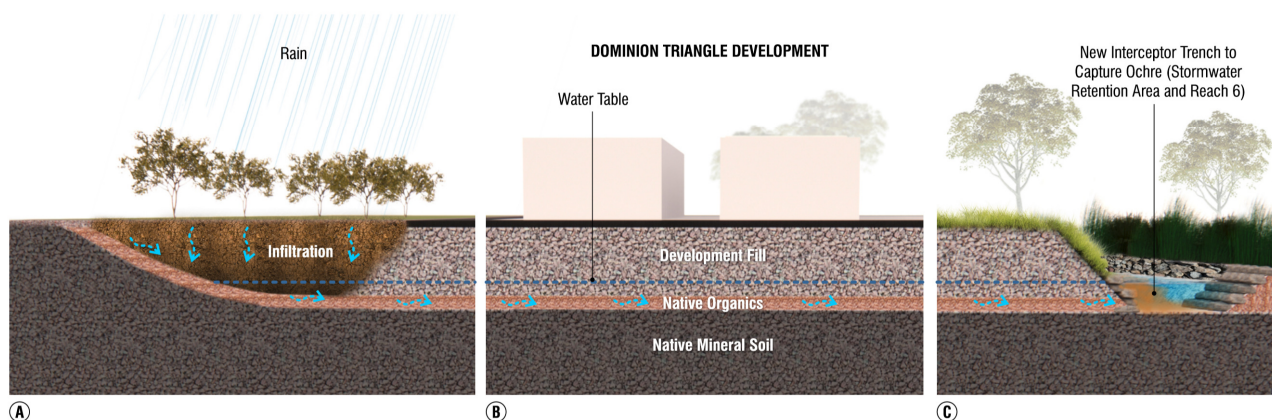


Figure 2. Ochre formation in Fremont Natural Area (with recommended interceptor trench)

Exploration of Options

KWL assessed a number of potential on-site and off-site interventions at both the Dominion Watercourse site and the Reach 6 area and provided high-level cost estimates and anticipated environmental outcomes for each intervention. A full assessment of these options are included in the KWL study attached to this report. Assessed actions included:

	Potential On-site Actions	Potential Off-site Actions
Dominion Watercourse	<ul style="list-style-type: none"> Chemical treatment Filtration plant 	<ul style="list-style-type: none"> Removal of golf course fill Groundwater interception
Reach 6 Natural Area	<ul style="list-style-type: none"> Ochre interceptor trench New floodbox (tides + fish) Two new floodboxes (tides + fish + stormwater separation) New setback dike and pump station Excavate additional tidal channels 	<ul style="list-style-type: none"> Green infrastructure upgrades in Dominion Triangle

KWL Recommendations for Dominion Watercourse

Despite assessing potential actions, no specific recommended actions were made for Dominion Watercourse at this time. Given the estimated extent of the iron-rich groundwater currently entering the watercourse and the large cost of identified mitigation options, a long-term strategy for improvements is preferred. This strategy may include the following actions:

- Assess future remediation opportunities as land develops;
- Conduct long-term monitoring of stormwater collection system to assess the degree of ochre contribution from stormwater pipes; and
- Targeted green infrastructure development that may include green roofs, increased permeable surfaces, tree planting etc.

KWL Recommendations for Reach 6 Natural Area

KWL recommends that a combination of explored options could be implemented within Reach 6 to maximize ecological health of the Fremont Natural Area including:

1. Installation of an ochre interceptor trench which would expose groundwater to aerobic conditions to encourage formation of ochre within a trench that is isolated from fish habitat.
2. Construct a new fish friendly flood box in order to restore fish connectivity between the Reach 6 areas and the Pitt River. This connection would serve several ecological purposes: first, it would restore the natural hydrology to Reach 6; and second, it would allow safe fish access from the Pitt River into Reach 6.
3. Excavating tidal habitat channels 1m wide by 1m deep from the northern zone of Reach 6 in order to increase the amount of aquatic habitat available for fish within the Reach 6 Natural area.

These three recommendations would work together towards maximizing the intended ecological benefits of the area including supporting fish and wildlife habitat. High level cost estimates for these recommendations are included in the KWL Study attached to this report. During a detailed design phase of the projects, recommended actions can be refined with more accurate cost estimates to determine if all three measures are still appropriate. Certain measures however, will work in concert with one another to achieve the best possible result. For example, without the installation of the fish-friendly floodbox, there would be little benefit derived from excavating tidal channels. In turn, the effectiveness of the floodbox in restoring fish habitat is bolstered by the habitat created by the new tidal channels. Conversely, both the floodbox installation and the ochre interceptor trench could be standalone projects, although the benefits achieved by moving forward with just one of these projects may not be sufficient to justify the cost.

While it has been beneficial to complete this review and determine potential improvements to Reach 6, staff are recommending that committee receive this report for information at this time. These recommendations will be revisited upon completion of the Climate Action Plan in 2021, where they can be prioritized against the balance of all recommended projects.

FINANCIAL IMPLICATIONS

Cost estimates for the study's recommended options for the Reach 6 Area total \$875,000 plus \$130,000 for design and construction administration for a total estimated cost of \$1,005,000. As discussed, there are currently no recommended actions for the Dominion Watercourse. These costs are not included in the City's financial plans, and as stated above are recommended to be considered together with all Climate improvement initiatives at future capital plan deliberations.

Attachment 1: Fremont Natural Area Recommendations

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Fremont Natural Area Assessment

Recommendations for Improving Ecological Health and Function

Final Report

July 30, 2020

KWL Project No. 646.045-300

Prepared for:





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Submission

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- Appendix B: Slides from Options Videoconference

1. Introduction

Kerr Wood Leidal Associates Ltd. (KWL) was retained by the City of Port Coquitlam (the City) to develop and assess options to improve water quality and quantity in the Fremont Natural Area. The City requires an improved understanding of current conditions and ecological function of watercourses that serve as stormwater management infrastructure in the Fremont Natural Area. KWL understands the City will use the findings to support a proposal to City Council for interventions that address City goals of increasing green municipal infrastructure and improving ecosystem services.



The purpose of this report is to:

- Describe the drainage catchment and other factors contributing to current water quality conditions in the Fremont Natural Area;
- Present intervention options to improve water quality and/or quantity in the Fremont Natural Area;
- Review and assess the options against a set of evaluation criteria; and
- Recommend one or more preferred options for the City to proceed with that are most likely to achieve the City's goals for the project.





2. Existing Conditions in the Fremont Natural Area

The Fremont Natural Area is a 23-ha diked stormwater management region on the west shore of the Pitt River near the Lougheed Highway Bridge in Port Coquitlam, British Columbia. The area is characterized by flat terrain, native riparian forests, and watercourses located between mixed-use urban development and the tidally influenced freshwater of the Pitt River. The entire area is located within the floodplain of the Pitt River, but is located behind the Pitt River dike and is not subjected to regular flooding. The Fremont Natural Area is drained by the Dominion catchment within the Pitt River floodplain and covers approximately one-quarter of the land area of the City (Figure 1).

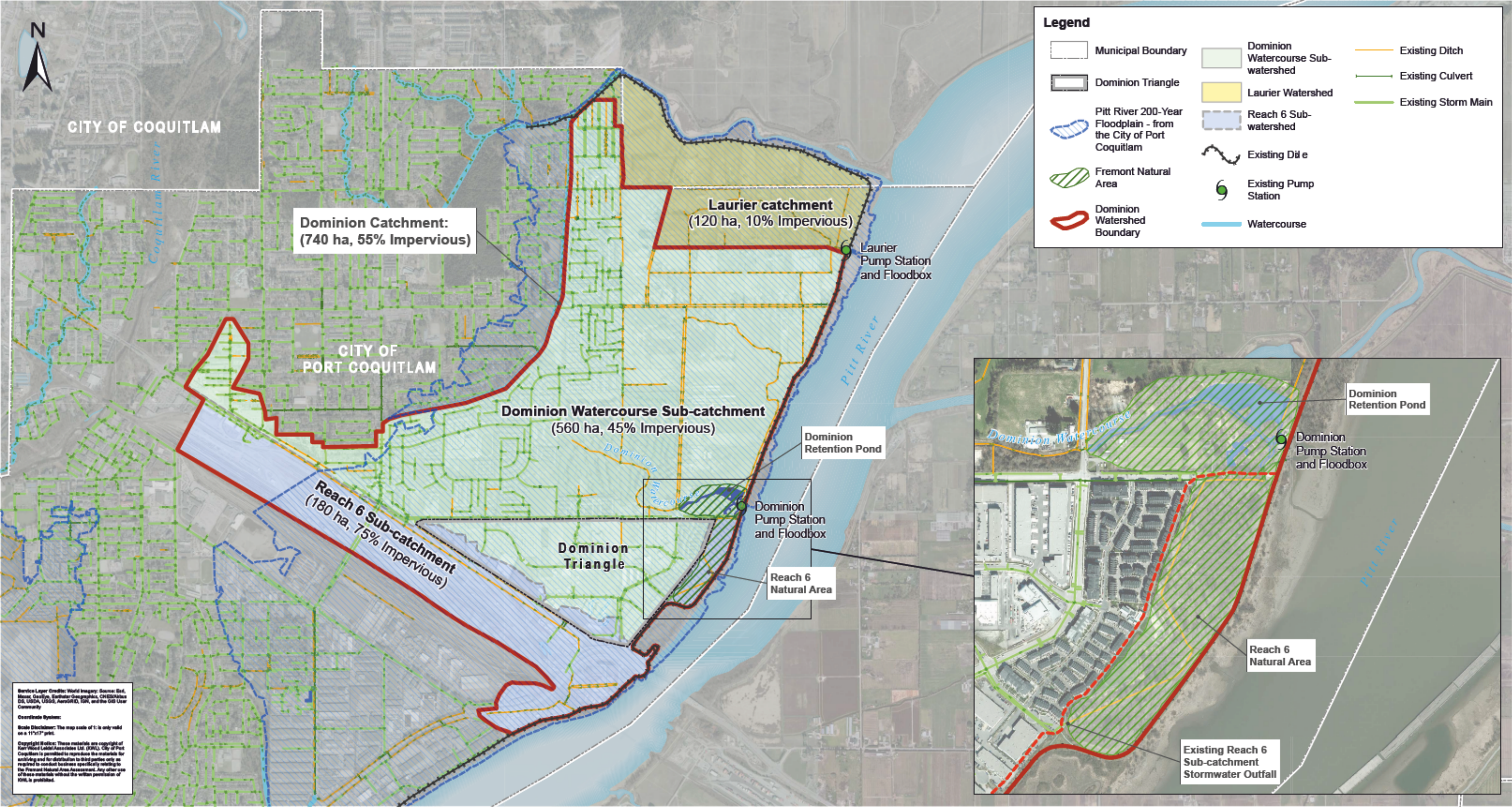
2.1 Historical Context

Prior to settlement and diking of the Pitt River, watercourses in the Dominion catchment were predominantly slough-like in character and shaped by freshwater tidal inflows and local surface and groundwater outflows. The catchment is almost fully within the 200-year floodplain and contains no watercourses draining nearby uplands. Historical vegetation communities in the Dominion catchment were grass and shrub prairies, similar to pre-development conditions in the Lower Fraser River delta on Lulu Island in the City of Richmond and low-lying areas in the City of Delta.¹ These communities were maintained as prairie by seasonal inundation during spring freshet.

The historic catchment for Reach 6 was substantially reduced by the installation of stormwater collection infrastructure during the development of the Dominion Triangle. Historically, the Reach 6 channel was the principal drainage conduit for much of the Dominion Triangle and the railyard to the south. After development, drainage from the Triangle was routed to bypass Reach 6 and flow directly to the Dominion Retention Pond. Drainage into Reach 6 was substantially altered by installation of a large diameter pipe approximately 1000 m in length which drains only surface waters within the southernmost reaches of the Dominion catchment into the Fremont Natural Area (Figure 1).

Urbanization of the Dominion catchment has had long-term impacts on groundwater quality in the Fremont Natural Area (see Section 2.5). Iron ochre is a naturally occurring substance currently found in elevated concentrations in the Fremont Natural Area, due to historical practices of filling drainage channels and elevating developed land over organic soils.

¹ North ME., Decker LA, Teversham JM. 1979. Vegetation of the Southwestern Fraser Lowland, 1858 – 1880. Government of Canada.



Project No. 646.045
Date July 2020
Scale 1:25,000
0 200 400 600 m

Fremont Natural Area Drainage Catchments and Features

Figure 1
151

2.2 Existing Stormwater Management

An Integrated Stormwater Management Plan (ISMP) has not yet been developed for the Dominion catchment. ISMPs are guidance documents for drainage system modifications and upgrades, land use planning, and environmental protection and enhancement within developing or developed watersheds. In the absence of environmental protection criteria specific for the watershed, most stormwater runoff within the watershed is likely discharged with minimal treatment. Current stormwater management practices for the City are outlined in Bylaw No. 2241 and include stormwater storage alternative such as roof storage, parking lot storage, and dry detention basins. The bylaw allows for the use of perforated drains below sidewalks to infiltrate water, although green infrastructure is currently not specified in the bylaw.

Observations made during the site visit indicate that most parking lots in the Dominion Triangle directly drain to catch basin sumps and into the City's piped stormwater collection network. Green infrastructure has been installed in some of the newer parking lots within the Dominion Triangle to trap sediment and provide stormwater treatment. Within the residential neighbourhoods, most rooftop downspouts directly connect into the stormwater collection system. These direct connections create rapid runoff responses to downstream receiving waters. Runoff from the remaining hard surfaces within residential areas were observed to be intercepted by catch basins along curbed roadways with no visible green infrastructure, even within the newer developments of the Dominion Triangle.



2.3 Dominion Drainage Catchment Characteristics

The Dominion drainage catchment is composed of approximately 740 ha of low-lying lands in northeast Port Coquitlam, including predominantly the Riverwood neighbourhood but also portions of the Central Port Coquitlam, Glenwood, Lincoln Park, and Oxford Heights neighbourhoods (Figure 1). The catchment drains west to east and connects to the Pitt River through the Dominion Pump Station and floodbox. KWL delineated catchment and sub-catchment boundaries using the City's topographic data and municipal drainage infrastructure in ArcGIS². These boundaries represent surface water flows into the Fremont Natural Area and not subsurface water flow. To the north of the Dominion catchment, an additional 120 ha drains to the Laurier Pump Station. Although most runoff within the Laurier catchment drains to the Pitt River through the Laurier Pump Station and floodbox, some volume may be diverted into the Dominion drainage catchment through subsurface pipes. The Dominion and Laurier catchments are bounded on the east by the Pitt River Dike. The Dominion catchment is bounded on the west side by a berm along Cedar Creek Drive. The southern portion of the catchment includes Highway 7 and a portion of the Canadian Pacific Railway (CP Rail) railyard.

² ESRI 2018. ArcGIS Desktop: Release 10.6.1. Redlands, CA: Environmental Systems Research Institute.

Stormwater runoff within the catchment is conveyed through storm sewers and a short remnant watercourse to a retention pond. Flows either drain by gravity into the Pitt River through a floodbox or are pumped into the river during tidal and seasonal high water levels through the Dominion Pump Station.

The overall imperviousness for the drainage catchment is approximately 55% and nearly the entire catchment has been developed to residential, agricultural, and commercial uses. Half of the impervious surfaces are attributed to the CP Rail railyard and the Dominion Triangle development, and the remaining impervious surfaces are mostly located within the residential neighbourhoods along Cedar Drive Creek. The imperviousness of each catchment was estimated by delineating similar land cover types and calculating the percentage of impervious area within each land cover type using aerial photography.

The Dominion catchment can be further sub-divided into two sub-catchments which drain into different portions of the Fremont Natural Area:

- The Reach 6 sub-catchment, and
- The Dominion Watercourse sub-catchment.

The Reach 6 sub-catchment includes the land areas that drains into the Reach 6 watercourse which is bound on the north by Dominion Avenue and a berm that extends to the Pitt River Dike. Reach 6 is an 800 m channel that conveys stormwater flows through a 10-ha flood basin and natural area characterized by a floodplain riparian forest. Waters drain out of Reach 6 through a culvert into the Dominion Retention Pond before flowing through the Dominion Pump Station and flood box into the Pitt River. The Reach 6 sub-catchment is approximately 180 ha in size and is estimated to be 75% impervious and includes sections of the highway and railyard. Upland areas along Highway 7 and within the CP Rail railyard drain into Reach 6 through a 1000 m culvert running beneath Fremont Street and Nicola Place.

The Dominion watercourse sub-catchment includes the land areas that drain to the Dominion watercourse and then into the Dominion Retention Pond. At 560 ha in size, this sub-catchment is three times larger than the Reach 6 sub-catchment and is estimated to be approximately 45% impervious. Stormwater from the Dominion Triangle is collected by a 2400 mm x 2100 mm concrete box culvert that discharges to the Dominion Retention Pond, bypassing Reach 6. However, subsurface drainage from the Dominion Triangle area likely still contributes to Reach 6 through groundwater infiltration. A key uncertainty in contributions to water quality and quantity from Dominion Triangle into the Dominion Watercourse is the extent of groundwater seepage into the stormwater collection system and, therefore, the amount of ochre contribution through the stormwater system.



The catchment delineations are approximate and should only be used for high-level planning purposes, as they do not include private drainage infrastructure and have not been verified through field investigations of key drainage structures. Investigations of the drainage infrastructure within the CP Rail railyard would provide a more accurate drainage area for the Reach 6 sub-catchment.



2.4 On-Site Field Visit

KWL conducted an on-site field visit on June 30, 2020. Alan Jonsson, Fish Habitat Specialist, and Jeffrey Marvin, Stormwater Engineer, walked through the site to observe fish and wildlife species present, water quality and quantity in the system, and drainage conditions through the Fremont Natural Area.

Fish and Fish Habitat

The floodplain riparian forest within the Reach 6 Natural Area provides high quality terrestrial habitat, with an abundance of native species and minimal invasive plants. The forest structure is well-developed and provides valuable fish habitat functions to Reach 6. Dominant species in the forest are floodplain specialists, capable of tolerating seasonal floods.

No fish were observed in Reach 6 or in the stormwater retention pond at the downstream end of the Dominion watercourse, although fish would likely have been difficult to detect because of the turbid water conditions at the time of the site visit. Based on experience with similar watercourses in the lower mainland, fish populations are likely comprised of native non-salmonids and invasive non-native species. Species tolerant of high water temperatures, low dissolved oxygen, and high turbidity include three-spined stickleback (*Gasterosteus aculeatus*), common carp (*Cyprinus carpio*), pumpkinseed (*Lepomis gibbosus*), and weather loach (*Misgurnus anguillicaudatus*). Water temperature and dissolved oxygen may be suitable for salmonids between October and May during years with suitable water quality. However, flap gates, ochre turbidity, the Dominion Pump Station, and the absence of headwater spawning habitat decrease the likelihood of salmonid presence. The barrier effects of the flap gates are intensified due to the frequency of pump station operation and impoundment of water during the irrigation season.

Wildlife

No wildlife was observed during the field visit, although bear scat was seen on the dike crest. Lowland riparian urban-fringe habitats, such as present in the Fremont Natural Area, are typically occupied by mink (*Mustela vison*), river otter (*Lontra canadensis*), coyote (*Canis latrans*), skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), beaver (*Castor canadensis*), and muskrat (*Ondatra zibethicus*). Occurrence and density of these species is likely driven by food resources and tolerance to human activities in the Fremont Natural Area.

Native and invasive amphibians are likely present in watercourses and riparian habitats in the Fremont Natural Area. The Dominion Retention Pond is ideal habitat for invasive green frog (*Rana clamitans*) and American bullfrog (*Lithobates catesbeianus*), potentially to the detriment of native species.

Water Quantity and Quality

Water quality and quantity assessments were limited to a visual inspection during the field visit. At the time of inspection, Reach 6 was flowing at what could be described as a fluvial geomorphic "average flow". This means it was confined to the channel with reasonable freeboard. Rain was falling during the field visit although antecedent conditions were several days of dry weather. Without flow monitoring data, it is not possible to comment on what proportion of the flow was precipitation-based stormwater runoff versus groundwater seepage infiltrating the storm system. However, based on the predevelopment hydrology, the formation of ochre within the storm network, and emergence of groundwater in the area, it is certain that there is some groundwater component to the flows.

Understanding water inputs into this watercourse is important as groundwater comprises the base flow that sustains aquatic conditions between precipitation events and during the summer dry season. Baseflows also act to moderate extreme summer and winter water temperatures. From an aquatic health and productivity perspective, baseflow is essential. The proportion of baseflow to storm runoff also affects aquatic health from both a water quality and quantity perspective.

Reach 6 Sub-catchment Water Quality and Quantity

Reach 6 water was observed to be moderately turbid with suspended ochre and iridescence at the southern storm culvert discharge and showed greater ochre turbidity at the north end prior to passing under Dominion Avenue. Localized ochre growths were observed along the channel and were the likely source for increasing levels of turbidity downstream (north). However, ochre turbidity within Reach 6 was less than that found in the Dominion Retention Pond.

The lower levels of ochre turbidity observed relative to the Dominion Retention Pond may be indicative of surface run-off dilution. Imperviousness within the Reach 6 sub-catchment was estimated to be 75%. This high level of imperviousness would cause fast runoff characteristics, would limit infiltration of groundwater, and may contribute to stream erosion. Reach 6 was visibly flowing during the field visit after a short period of rain and several preceding days of dry weather, as would be expected with fast upstream drainage characteristics. However, no indication of ongoing erosion was identified along Reach 6 during the site visit. The low gradient of the channel likely mitigates rapid runoff erosion.

Groundwater flowing into Reach 6 along its channel likely originates from outside of the Dominion Triangle. The high level of imperviousness and lack of any storm drainage features that infiltrate water to ground prevent the Triangle from contributing surface runoff to groundwater. Groundwater inputs to the Reach 6 channel are indicated by ochre growths in the channel.

Dominion Watercourse Sub-catchment Water Quality and Quantity

The Dominion Retention Pond was observed to be very turbid with ochre. Ochre is a highly visible indicator of impaired water quality in the Dominion system. A distinct boundary in the waters was visible where the Reach 6 waters flow into the retention pond. Retention pond waters and waters entering the pond through the principal channel from the west were opaque with ochre.

The Dominion Retention Pond provides poor habitat for fish. The presence of high concentrations of ochre has reduced visibility and potentially dissolved oxygen levels within the pond. Furthermore, fish access to and from the Pitt River is highly compromised. The Dominion Pump Station and flap-gated gravity drainage culverts act as barrier to fish entry in two ways: first, the flap gates only open when the water level in the pond exceeds that of the Pitt River; second, the narrow opening of the gates may create a velocity barrier to fish entry. When Pitt River water levels are at or above the retention pond water level maximum, the flap gates will not open. More importantly, the Dominion Pump Station is not fish-friendly and conveys high volumes of water through the vertical impeller pumps that are likely to cause high levels of fish mortality. Any fish that does find itself inside the closed flap gate may voluntarily enter or be involuntarily entrained into the pumps. Injury or death is typically caused by blade strike within the pump that conveys water.





City staff have expressed concern about potential toxicity and aesthetic concerns of ochre-colored water in the Dominion Watercourse. Although ochre does have chronic effects on watercourse ecological health, it is only one of multiple potential water quality impairments impacting the Dominion catchment. Based upon observations and information gathered, the Dominion catchment likely suffers from seasonally high temperatures and low dissolved oxygen, with potential additional impacts from toxins originating from untreated stormwater inputs. Water quality impairment is further exacerbated by a loss of pre-development tidal hydrology that would have provided periodic nutrients and flushing.

It is understood that high water levels are held within the Dominion Retention Pond during the summer months for irrigation purposes. This management practice likely impairs water quality by increasing temperature in the pond, which may lead to reduced dissolved oxygen, aquatic weed overgrowth, nutrient retention, and algal blooms.

2.5 Notable Findings from Background Review

Ochre Formation

Iron ochre is a gelatinous bacterial substance that can develop because of chemical and biological processes within iron-containing low oxygen groundwater that enters surface waters and is exposed to oxygen in the atmosphere. Under these conditions, chemically, the iron dissolved in the groundwater may oxidize, forming iron hydroxide. Biologically, bacteria can further oxidize iron dissolved in water and create gelatinous slime as a by-product. These rusty-colored mats are often accompanied by an iridescent surface sheen that may be confused with petroleum contamination. The iridescence is caused by microcrystalline iron compounds that diffract light. Unlike petroleum, the sheen will break apart into patches when touched.

Ochre formation requires surface emergence of groundwater with high levels of dissolved iron. Iron found in natural mineral sediments is dissolved by groundwater that is acidic and anoxic. These conditions occur in groundwater because of bacterial decomposition of organic matter at depth. This process is naturally found in estuaries, bogs, and swamps buried by landslides or flood sediments. In fact, iron ochre can be seen in some surface waters on Douglas Island. Iron ochre can also be anthropogenically induced through the burial of organic matter, such as topsoil and vegetation, and through exposure of acid rock during mining operations.

Ochre and iridescent sheen are natural iron products with chronic rather than acute toxicity to aquatic life. At high levels, ochre formation can depress aquatic oxygen and adversely impact benthic invertebrate production. Suspended ochre can impair the vision of fish and reduce foraging ability. Very high suspended levels may impair respiration. Effects of iron are dependant upon dissolved organic carbon levels and pH. High levels of dissolved organic carbon (commonly observed as "tea staining" in bogs and wetlands) can mitigate the effects of iron on aquatic life. Dissolved organic carbon commonly accompanies with ochre in natural occurrences.

Notes on Ochre Management

Field observations suggest that ochre is a primary source of water quality impairment in the Fremont Natural Area. However, a literature review about the likely nature of the ochre formation within the Dominion catchment make it difficult to manage or mitigate. The bacterial mats coat surfaces and block pores of perforated pipes, geotextile, and granular filters. Mobilized ochre particles are close to the density of water and do not easily settle in standing water. Once settled, they are easily resuspended by any water movement. Settling and filtering processes typically require chemical manipulation and

mechanical filtration methods. Treatment plants for ochre have been successfully operated at decommissioned mines.

Another approach to deal with ochre is to address the conditions that relate to formation of iron rich water. This requires prevention of contact between oxic groundwater and the buried organic matter in one of several ways. In locations of discrete organic burial, excavation and removal of the organic matter is effective. Where removal is not possible, isolation of the organics from groundwater is an option. An impermeable barrier or groundwater interceptor trench is typically used. This is a well-developed technology employed at sanitary landfills, mine tailings stockpiles, and other contaminated sites.

Urban Stormwater

The effects of urbanization on watercourse health are well-studied. The combination of watershed imperviousness and piped drainage networks can have significant adverse impacts on aquatic ecological health. Imperviousness and closed pipe stormwater systems negatively affect both the quality and quantity of water that flows into streams.

Imperviousness describes what percentage of watershed area prevents precipitation from being able to flow into the soil. Surfaces such as pavements and roofs act as complete water barriers which has two effects: first, it prevents infiltration to recharge groundwater; and second, the water flows off impervious surfaces very quickly. This means that in watersheds with high imperviousness, rainfall rapidly discharges to streams and groundwater is not recharged to sustain continuous surface water flows. In the most extreme case, a stream will only flow during and shortly after precipitation. From the water quality perspective, impervious surfaces allow any pollutant that lands on them to be flushed, by and with rainwater, into the receiving stream. Road and parking areas are sources of automotive hydrocarbons, metals, and other waste products.



Although flows from impervious areas can be directed to enter soil and infiltrate, most traditional urban development relies upon subterranean stormwater collection networks for drainage. Pipes have much the same effects as surface imperviousness: impairing groundwater recharge, speeding up run-off, and conveying pollutants to streams.

Streams can be impaired by as little as 10% imperviousness within their watersheds. As imperviousness increases, flows within streams become more extreme, with higher highs and lower lows. Channel forming flows, which naturally erode the banks and bed of a stream, may change in frequency from about once every 18 months to once per month. Streams may then erode uncontrollably, with loss of critical gravel substrates and riparian vegetation. Degraded water quality reduces both the diversity and numbers of benthic invertebrates. These invertebrates are a principal food source for salmonids and other native fish. The overall imperviousness for the Dominion drainage catchment is approximately 55%, with 75% imperviousness in the Dominion watercourse sub-catchment and 45% in the Reach 6 sub-catchment.



Aside from the chronic water quality and quantity impacts, urban stormwater systems also present the threat of toxic spills. Because storm sewer pipes are hydraulically efficient, any toxin that is accidentally or deliberately poured into them is quickly conveyed to the receiving watercourse. Fish kills from toxins are a regular occurrence within lower mainland urban and suburban streams.

Summary of Findings

The following points summarize the findings of the on-site field visit and review of background information:

- KWL identified ochre as a primary source of water quality impairment in the Fremont Natural Area. An additional source of water quality impairment could be attributed to contaminants in stormwater runoff. Water quality monitoring within Reach 6 and in the Dominion Retention Pond should be conducted before interventions are selected.
- The most relevant adverse impacts of urban stormwater runoff and collection are reduced saturation of precipitation into groundwater, fluctuating volumes of runoff into Reach 6, and the potential for chronic and acute contaminant inputs.
- The Dominion Pump Station is not fish-friendly. Any plans for improving the aquatic ecological health and/or fish accessibility of the watercourses drained by the Dominion Pump Station need to carefully consider this issue. Further, the need for year-round drainage pumping and retention of water for irrigation in the Dominion drainage catchment is a significant influence on watercourse character, ecological health, and possible options to improve health.
- Dominant species observed in the Reach 6 floodplain forest include native trees and shrubs capable of tolerating seasonal floods. This will be beneficial if tidal or seasonal inflows from the Pitt River are restored, as re-establishing a predevelopment hydraulic regime would not kill these species but would help to suppress or kill any non-flood tolerant invasive plants.



3. Interventions to Improve Ecological Health

This section describes ten potential intervention options to improve ecological health in the Fremont Natural Area. Interventions are described at a conceptual level, with the following assessment criteria outlined for each option:

- A description of the intervention;
- An estimated order of magnitude cost to design and construct;
- An estimated timeline for implementation, including steps required to carry out each option;
- A high-level evaluation of the economic, environmental, and social benefits and costs; and
- Expected regulatory approvals required for implementation.

KWL developed the following options for evaluation:

- Dominion Watercourse (on-site):
 - Option 1: In-situ chemical treatment;
 - Option 2: Filtration plant;
- Dominion Watercourse sub-catchment (off-site):
 - Option 3: Golf course fill remediation;
 - Option 4: Groundwater interception;
- Reach 6 Watercourse (on-site):
 - Option 5: Ochre interceptor trench;
 - Option 6: Fish-friendly floodbox connection;
 - Option 7: Two fish-friendly floodbox connections;
 - Option 8: Setback dike and new pump station;
 - Option 9: Excavate tidal habitat channels; and
- Reach 6 Sub-catchment (off-site):
 - Option 10: Retrofit catchment with green infrastructure.

This section closes with evaluation of options and recommendations for interventions within the Dominion Watercourse, within Reach 6, and for stormwater practices in the City.

3.1 Potential Interventions in Dominion Watercourse

This section describes each intervention in detail. A summary of all options can be found in Appendix A, Table 1. Additional information on interventions can be found in the presentation in Appendix B.

Option 1: In-situ Chemical Treatment

The purpose of in-situ chemical treatment would be to reduce ochre by-products and ochre bacteria from the Dominion Retention Pond. The ochre observed throughout the Dominion Watercourse consists of accumulations of dead bacterial cells and fine particles of iron oxide compounds. The ochre behaves like a colloidal clay and typically does not settle out in natural conditions. Ochre settling may be enhanced through the addition of chemicals that flocculate and/or agglomerate suspended particles to induce settling. Optimal performance of flocculants may require pH manipulation of the water. Under ideal circumstances, chemical treatment would settle all the ochre to the bottom of the pond where it would not



be resuspended by water currents, which is likely given the conditions observed during the site visit. Ochre accumulations could then be removed mechanically from the pond periodically.

Chemical treatment is problematic from an environmental and regulatory perspective as flocculants and pH modification are not biologically benign. Application of these within the natural watercourse may have unintended consequences to either Dominion Watercourse or to the Pitt River. Given potential harm to fish, this intervention would require an environmental review by Fisheries and Oceans Canada under the federal *Fisheries Act* [RSC 1985, c. F-14].

Table 1: Evaluation Criteria for Option 1 – In-situ Chemical Treatment

Feasibility	Estimated Order of Magnitude Cost	Estimated Timeline for Implementation	High-level Cost / Benefit Evaluation		
			Economic	Social	Ecological
Low	\$25K	> 1 year	None	Improvement in aesthetics of the pond with ochre removed and more clear water flows.	Adverse impact on ecological health through introduction of chemicals. Benefit to dissolved oxygen and turbidity through removing ochre.

Option 2: Filtration Plant

The purpose of building a filtration plant would be to intercept ochre and remove it from the surface waters prior to discharge through the retention pond and the Dominion Pump Station. The plant would chemically treat water in basins, rather than in-situ within the Dominion Retention Pond. Flows would be intercepted within the golf course and pumped through the plant. Ochre-containing water would enter the filtration plant and be treated off-line through a series of tanks and filters. The controlled and contained nature of the plant would ensure limited to no escape of chemicals to the natural environment. Mechanical dewatering and filtering of the ochre sludge would improve handling and disposal. Treatment plants of a similar type have been effectively used to process mine and landfill effluents. Once process water had been clarified and met water quality standards, it would be returned to the retention pond for discharge to the Pitt River.

Environmental regulatory barriers to constructing a surface water filtration plant would be moderate. The work would be subject to provincial and federal regulatory reviews under the:

- *Water Sustainability Act* [SBC 2014, c. 15]; and
- *Fisheries Act* [RSC 1985, c. F-14].



Table 2: Evaluation Criteria for Option 2 – Filtration Plant

Feasibility	Estimated Order of Magnitude Cost	Estimated Timeline for Implementation	High-level Cost / Benefit Evaluation		
			Economic	Social	Ecological
High	\$5M	> 1 year	Long-term jobs created to build and operate the plant	The filtration plant would detract from the natural character of the Fremont Natural Area	The plant would improve water quality along a short length of stream along the Dominion Watercourse

Option 3: Golf Course Fill Remediation

The purpose of golf course fill remediation would be to remove the buried organics present under fill which are contributing to downstream ochre formation. It is suspected that historic fill practices associated with construction of the Carnoustie Golf Club may be responsible for a significant proportion of ochre in the Dominion Retention Pond. Infill of former tidal sloughs and wetlands without removal of organic matter or use of barriers to prevent continued groundwater throughflow are the presumed causal factors. Subsurface exploration on the property would be able to verify this and help determine how much ochre originates from this property. If historic fill on the golf course is contributing a large amount of ochre to the system, excavation and removal of the buried organic matter would be an effective remediation technique. Replacement of the removed organic matter with free draining sand would both reduce the creation of anoxic acidic water and provide preferential groundwater flow paths away from any residual organics in the area.

Soil remediation would improve the aesthetic and ecological qualities of Dominion Watercourse. Environmental and other regulatory barriers to constructing this would be low, due to its positive environmental benefits and small footprint. No provincial or federal environmental approvals are anticipated.

Table 3: Evaluation Criteria for Option 3 – Golf Course Fill Remediation

Feasibility	Estimated Order of Magnitude Cost	Estimated Timeline for Implementation	High-level Cost / Benefit Evaluation		
			Economic	Social	Ecological
High	\$1M	> 1 year	Potential redevelopment opportunities to repurpose golf course lands	Improved aesthetics in the retention pond	Improved water quality and potentially increase habitat area. However, could lead to an ecological trap if the pump station is not upgraded



Option 4: Groundwater Interception

The purpose of groundwater interception in the Dominion Watercourse would be to isolate upland groundwater moving through the layers of organic material under surface fills, which will reduce the amount of dissolved iron in the water. Ochre formation could potentially be interrupted if groundwater originating from the uplands to the west of the Fremont Natural Area is intercepted by a modified French drain structure consisting of granular filter, perforated pipe, and impervious membrane. The interceptor pipes would be positioned hydraulically upslope of the buried organics to intercept groundwater flowing through the organics. Intercepted and collected groundwater would be piped to the Dominion Retention Pond, arriving clear and ochre free. It is important to note that the groundwater interceptor would not completely eliminate ochre production, as precipitation and infiltration in and about the organic matter would continue. The proportion of local infiltration to offsite groundwater would govern the success of such an interception system.

Environmental regulatory barriers to constructing groundwater interception drains would be low. Drains would generally be constructed in urban or residential areas away from watercourses, without triggering environmental regulatory reviews.

Table 4: Evaluation Criteria for Option 4 – Groundwater Interception

Feasibility	Estimated Order of Magnitude Cost	Estimated Timeline for Implementation	High-level Cost / Benefit Evaluation		
			Economic	Social	Ecological
Moderate	\$1M	> 1 year	Disruption to normal business during drain construction	Improved aesthetic but disruptions during drain construction	Reduced, but not eliminated, ochre concentrations in surface water

3.2 Potential Interventions in Reach 6

Option 5: Ochre Interceptor Trench

The purpose of the ochre interceptor trench would be to expose groundwater to aerobic conditions to encourage formation of ochre within a trench that is isolated from fish habitat. A series of blind trenches approximately 1 m wide by 1 m deep by 100 m long would be dug between the toe of fill and the Reach 6 channel to allow daylighting and oxygenation of iron-rich groundwater. Ochre would form in the trench, rather than the Reach 6 channel. Some of the ochre would settle out and finer particles would be filtered out as the water flows through the natural riparian soils, with the water entering the existing Reach 6 channel in a clarified form. The trench would be a passive system with no regular maintenance required, although periodic maintenance could be implemented to reduce ochre in the Natural Area, which is aesthetically unpleasant. Careful routing and construction practices would mitigate vegetation impacts.

An interceptor trench would improve the visual aesthetic qualities of the Reach 6 channel but would only fully realize ecological benefits in conjunction with a fish-friendly floodbox. Environmental and other regulatory barriers to constructing this would be low, due to its positive environmental benefits and small footprint. No provincial or federal environmental approvals are anticipated.



Table 5: Evaluation Criteria for Option 5 – Ochre Interceptor Trench

Feasibility	Estimated Order of Magnitude Cost	Estimated Timeline for Implementation	High-level Cost / Benefit Evaluation		
			Economic	Social	Ecological
High	\$50K	< 1 year	Consider periodic removal of ochre deposits	Concentrating ochre in trenches is aesthetically unpleasant	Reduce ochre and associated adverse effects in watercourses

Option 6: Fish-Friendly Floodbox Connection to Pitt River

The purpose of a fish-friendly floodbox would be to restore fish connectivity between the Reach 6 area and the Pitt River, which would primarily benefit juvenile out-migrating salmon. A new fish-friendly floodbox could be installed to connect Reach 6 directly to the Pitt River, immediately south of Dominion Avenue, bypassing the Dominion Retention Pond and Dominion Pump Station. The fish-friendly gate could be regulated so it remains predominantly in the open position, closing only when the internal water levels reach a flood threshold. This connection would serve several ecological purposes: first, it would restore the pre-dike hydrology to Reach 6; and second, it would allow safe fish access from the Pitt River into Reach 6. Reach 6 would be separated from the existing pump station by a berm that would overtop in high water and allow flood relief to the Reach 6 area. However, the berm would protect fish from the non fish-friendly pumps by blocking fish access into the Dominion Retention Pond from Reach 6 during most other water levels.

Environmental regulatory barriers to constructing are expected to be low, due to its positive environmental benefits and small footprint. However, as this would penetrate a flood protection dike and require work below the high-water mark, it would be subject to regulatory reviews and/or approvals under the:

- *Dike Maintenance Act* [RSBC 1995, c. 95];
- *Water Sustainability Act* [SBC 2014, c. 15]; and
- *Fisheries Act* [RSC 1985, c. F-14].

Table 6: Evaluation Criteria for Option 6 – Fish-friendly Floodbox Connection to Pitt River

Feasibility	Estimated Order of Magnitude Cost	Estimated Timeline for Implementation	High-level Cost / Benefit Evaluation		
			Economic	Social	Ecological
High	\$750K	> 1 year	None	Potential for nature interpretation and education	High ecological benefit to outmigrating juvenile salmon



Option 7: Two Fish-Friendly Floodbox Connections to Pitt River

The purpose of two new fish-friendly floodboxes would be to restore fish connectivity to the Reach 6 area and to separate the stormwater flows entering Reach 6 from the tidal inflows from the Pitt River. The first fish-friendly floodbox would be installed immediately south of Dominion Avenue, in the orientation noted above in Option 6. A second floodbox would be installed to the south, closer to where stormwater enters the Reach 6 area. Reach 6 would then be partitioned into a stormwater dominated southern zone, which may carry contaminants from the highway and railyard upstream, and a tidal flow-dominated northern zone, by installing a low berm downstream of the second floodbox. The intent of this configuration is to protect fish in the northern zone from stormwater contamination that may be present in the Reach 6 source flows. The southern stormwater floodbox would be top-mounted, like the Dominion Pump Station flap gate, to deter fish access to that area.

Environmental regulatory barriers to constructing this are expected to be low, due to its positive environmental benefits and small footprint. However, as this would penetrate a flood protection dike and require work below the high-water mark, it would be subject to regulatory reviews and/or approvals under the:

- *Dike Maintenance Act* [RSBC 1995, c. 95];
- *Water Sustainability Act* [SBC 2014, c. 15]; and
- *Fisheries Act* [RSC 1985, c. F-14].

Table 7: Evaluation Criteria for Option 7 – Two Fish-Friendly Floodbox Connections to Pitt River

Feasibility	Estimated Order of Magnitude Cost	Estimated Timeline for Implementation	High-level Cost / Benefit Evaluation		
			Economic	Social	Ecological
High	\$1.5M	> 1 year	Community investment, creating temporary construction jobs	Potential for nature interpretation and education	High ecological benefit to outmigrating juvenile salmon, with additional benefit of contaminant control

Option 8: Setback Dike and New Pump Station

The purpose of a setback dike and new pump station would be to restore connectivity between the pre-development tidal floodplain and the Pitt River by relocating the dike inland adjacent to the existing fill slope. The Reach 6 watercourse would be decoupled from the Dominion Pump Station and be fitted with its own pump at the end of the stormwater collection system. Aquatic features within Reach 6 would receive no direct inflows from the railyard and Highway 7 corridor.

Environmental regulatory barriers to constructing this would be moderate, as there would be loss and gain of regulated fish habitat. Complete reconstruction of a dike would require review by the province under and may trigger requirements to meet new seismic standards. This intervention would be subject to regulatory reviews under the:

- *Dike Maintenance Act* [RSBC 1995, c. 95];
- *Water Sustainability Act* [SBC 2014, c. 15]; and



- *Fisheries Act* [RSC 1985, c. F-14].

Table 8: Evaluation Criteria for Option 8 – Setback Dike and New Pump Station

Feasibility	Estimated Order of Magnitude Cost	Estimated Timeline for Implementation	High-level Cost / Benefit Evaluation		
			Economic	Social	Ecological
Moderate	\$7M	> 5 years	Significant community investment, creating local construction jobs	Opportunity to improve recreational use of the dike and trails in Fremont Natural Area	Restoration of tidal habitat but loss of mature riparian habitat

Option 9: Excavate Tidal Habitat Channels

The purpose of excavating tidal habitat channels would be to increase the amount of aquatic habitat available for fish within the Reach 6 Natural Area, particularly for juvenile salmon. This option would need to be developed in conjunction with a new floodbox (Option 6 or 7 above) to provide these benefits. Additional dendritic microchannels could be excavated in the northern zone of Reach 6. Channels would be approximately 1m wide by 1m deep and would be tidally influenced by freshwater from the Pitt River. Careful routing and construction would minimize impact to riparian vegetation in Reach 6.

Environmental regulatory barriers to constructing this would be low. Channels could be excavated in the dry prior to installation of the floodbox without triggering environmental regulatory reviews.

Table 9: Evaluation Criteria for Option 9 – Excavate Tidal Habitat Channels

Feasibility	Estimated Order of Magnitude Cost	Estimated Timeline for Implementation	High-level Cost / Benefit Evaluation		
			Economic	Social	Ecological
High	\$75K	< 1 year	None	None	Significant habitat improvements for fish and riparian habitat in Reach 6

Option 10: Retrofit Catchment with Green Infrastructure

The purpose of retrofitting the Reach 6 sub-catchment with green infrastructure would be to improve the water quality of stormwater and recharge groundwater by diverting water from the stormwater collection system into the ground. To improve the quality of water flowing from the railyard into Reach 6, existing open drainage ditches and verge areas would be improved to create constructed treatment wetlands consisting of natural vegetation, specially formulated soils, and/or filtration measures to bio-remediate contaminants originating from the railyard. Opportunities may be limited by space available and jurisdiction.

Environmental regulatory barriers to implementing green infrastructure improvements would be low. No environmental regulatory approvals are anticipated.



Table 10: Evaluation Criteria for Option 10 – Retrofit Catchment with Green Infrastructure

Feasibility	Estimated Order of Magnitude Cost	Estimated Timeline for Implementation	High-level Cost / Benefit Evaluation		
			Economic	Social	Ecological
Moderate	\$50K – 1M	variable	None	None	Reduced contaminant runoff into Reach 6

3.3 Recommendations

Recommended Interventions to the Dominion Watercourse Sub-catchment

KWL does not recommend any specific interventions within the Dominion Watercourse sub-catchment at this time. Given the extent of the iron-rich groundwater currently entering the watercourse, the large cost of identified mitigation options, and the significant risk of juvenile salmon mortality associated with the current pumps at the Dominion Pump Station, a long-term strategy for improvements is needed. This strategy may include the following actions:

- Assess future remediation and redevelopment opportunities at the Carnoustie Golf Club;
- Conduct long-term monitoring of stormwater collection system to assess the degree of ochre contribution from stormwater pipes; and
- Targeted green infrastructure development.

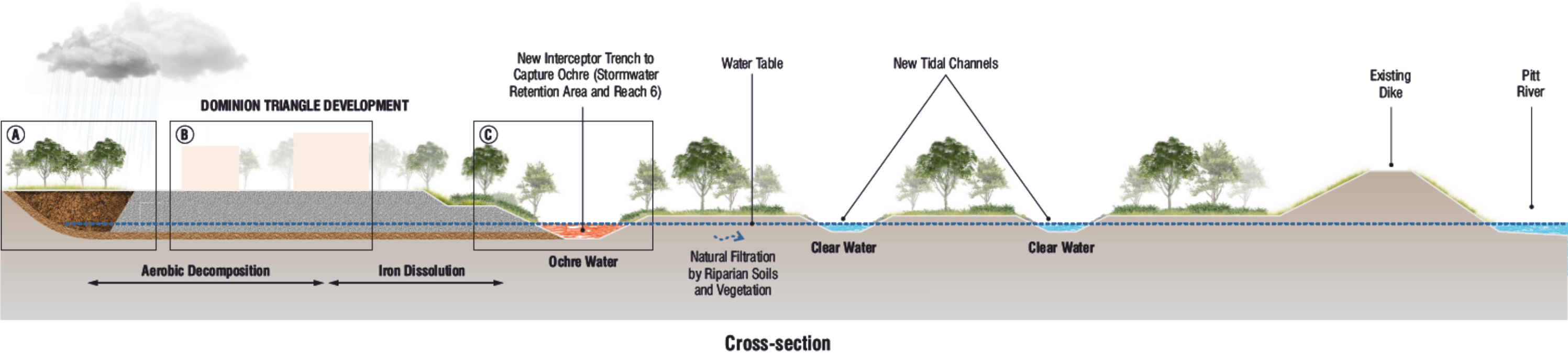
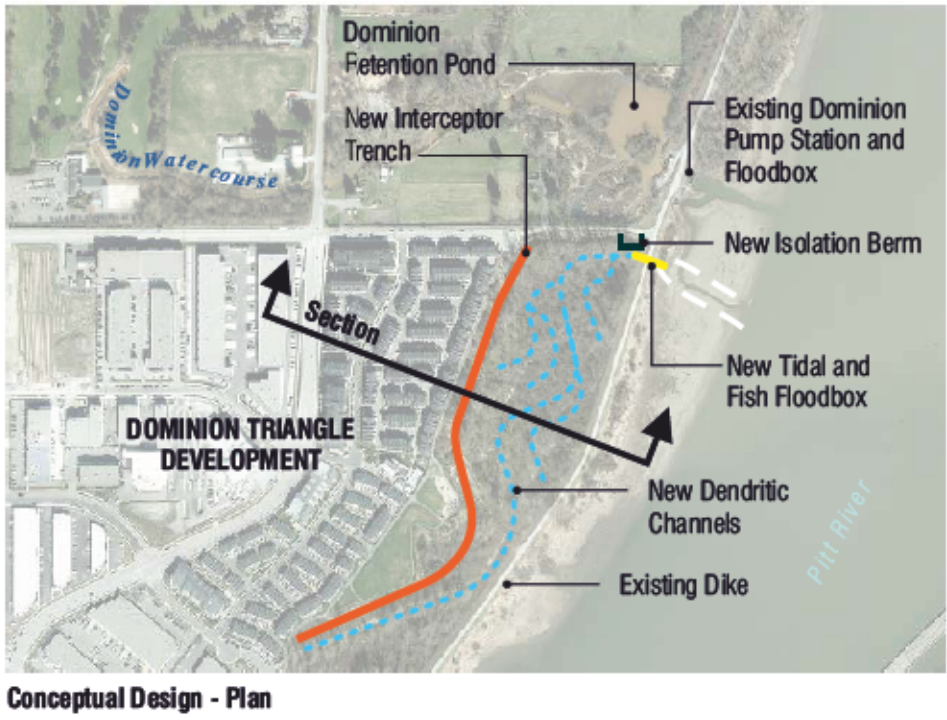
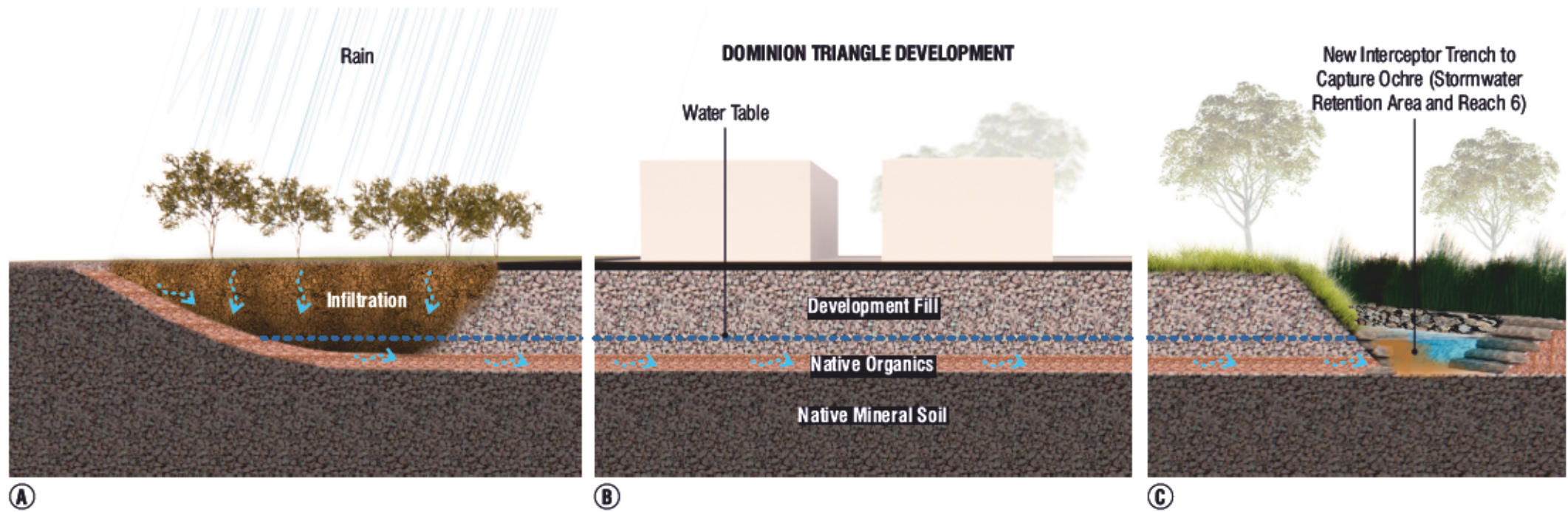
Recommended Interventions in Reach 6 Sub-catchment

KWL recommends that a combination of Options 5, 6, and 9 could be implemented within Reach 6 to maximize ecological health of the Fremont Natural Area. This combined solution would create new fish habitat independent of the Dominion Watercourse and Dominion Pump Station and help to improve water quality in Reach 6. Figures 2 and 3 illustrate the combined suite of recommended interventions with a conceptual drawing and section.

Recommendations for Future Stormwater Practices

While the observed water quality issues in relation to ochre formation do not originate from stormwater runoff, other water quality issues may be present in the runoff from the urban, industrial, and agricultural land uses. Current best practices for treating pollutants in urban runoff is to integrate Low Impact Development (LID) and Green Infrastructure into new development and redevelopment. LID practices that would benefit the overall health of the Dominion catchment include:

- Requiring stormwater management practices with water quality treatment and volume reduction targets;
- Rigorously protecting existing riparian zones and forested areas during development and re-development;
- Promoting the re-establishment of riparian and upland forest cover and natural areas with redevelopment; and
- Limiting development of large impervious surfaces.



Option 6 - Interceptor Trench Concept Plan and Cross-section



Project No. 646.045
Date July 2020
Scale 1:3,000
0 25 50 100 m

Preferred Combination of Options - Reach 6 Natural Area



Stormwater management LID and green Infrastructure practices should target runoff treatment volumes (referred to as a "volume reduction and/or water quality treatment target") to capture and treat runoff. These targets are developed based on the principle that stream degradation and ecological impacts typically begin when a watershed becomes approximately 10% impervious, and these impacts can be mitigated by restoring 90% of rainfall to the natural water balance of the watershed. Common criteria for volume reduction targets are to capture the 90th percentile annual rainfall amount or the rainfall amount associated with a 6-month return period and 24-hour duration. This is typically defined as 72% of the 2-year, 24-hour storm event.

Special consideration should be made for the existing iron ochre pollution when carrying out LID or green infrastructure practices that infiltrate rainwater into existing fill, as additional subsurface flow in areas with buried organic matter could potentially increase the volume of ochre that is generated. For locations where infiltration would exacerbate ochre formation, stormwater treatment devices such as rain gardens, bioswales and permeable pavements may need to be lined and installed with underdrains such that they can provide water quality, flow attenuation and evapotranspiration benefits without infiltrating runoff into the natural groundwater table. Similarly, while downspout disconnection is a common practice for slowing down and treating rooftop drainage, it is not appropriate for the Dominion catchment. The treatment area and ground conveyance path receiving the rooftop runoff may need to be lined, or the rooftop runoff could be harvested in rain barrels or cisterns. Overall, more focus in these problem areas should be on limiting fill, integrating natural areas with redevelopment, and ensuring organic matter is removed prior to filling.

While the above recommendations highlight actions that could be taken to improve stormwater management in the Dominion catchment at a high level, an ISMP would be helpful to propose catchment-specific stormwater management criteria and planning. The ISMP should also provide guidance for land development practices that prevent or minimize the formation of iron ochre. For improving the water quality and stormwater management within the Reach 6 catchment, the existing water quality of the railway runoff and existing treatment practices should be further investigated to determine future actions.

3.4 Resolving Uncertainties

Outstanding uncertainties remain regarding Reach 6 water quality and quantity. Resolving these uncertainties before initiating an engineering design is recommended to completely assess feasibility of the proposed intervention options. At least one year of water quality and quantity monitoring is recommended for each sub-catchment where interventions are being considered.

Water quantity monitoring could be accomplished in Reach 6 with a weir and water level data logger near the culvert outlet near Nicola Place. This will show both seasonal trends and, when correlated to precipitation data, allow better understanding of catchment hydrology. It could also be used by a future ISMP for hydrologic and hydraulic model calibration and verification. Additional seasonal inspections at upstream tributary inputs would be beneficial to determine the behaviour of sub-catchments. Comparisons of flow into and out of the culvert may reveal the amount of groundwater that is infiltrating into the culvert.

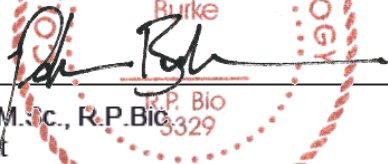
Water quality parameters to be monitored within Reach 6 should include water temperature, dissolved oxygen (DO), specific conductivity, turbidity, heavy metals, hydrocarbons, and nutrients. Sampling for water quality is best done with a multi-faceted approach that includes automated measurement and recording, grab sampling for lab analysis, and monitoring aquatic health using benthic invertebrate communities. The high levels of ochre in the system may interfere with some sampling techniques.



Submission


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Revision History

Revision #	Date	Status	Revision Description	Author
A	July 30, 2020	Final	Issued as client copy.	PRWB / AJ / JTM





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Appendix A

Options Evaluation Summary



Options Evaluation Summary

Option	Feasibility	Estimated Cost ¹	Estimated Timeline ²	High-level Cost / Benefit Evaluation		
				Economic	Social	Ecological
Dominion Watercourse, On-site Potential Interventions						
1. In-situ Chemical Treatment	Low	\$25K	> 1 year	None	Improvement in aesthetics of the pond with ochre removed and more clear water flows.	Adverse impact through introduction of chemicals. Benefit to D.O. & turbidity through removing ochre.
2. Filtration Plant	High	\$5M	> 1 year	Long-term jobs created to build & operate plant	Would detract from natural character of Fremont Area	Improved water quality along a short length of Dominion Watercourse
Dominion Watercourse Sub-catchment, Off-site Potential Interventions						
3. Golf Course Fill Remediation	High	\$1M	> 1 year	Potential golf course redevelopment opportunities	Improved aesthetics in the retention pond	Improved water quality and potentially increase habitat area. Could lead to an ecological trap if pump station is not upgraded
4. Groundwater Interception	Moderate	\$1M	> 1 year	Disruption to normal business during drain construction	Improved aesthetic but disruptions during drain construction	Reduced, but not eliminated, ochre concentrations in surface water
Reach 6, On-site Potential Interventions						
5. Ochre Interceptor Trench	High	\$50K	< 1 year	Consider periodic removal of ochre deposits	Concentrating ochre in trenches is aesthetically unpleasant	Reduce ochre and associated adverse effects in watercourses
6. Fish-friendly Floodbox Connection to Pitt River	High	\$750K	> 1 year	None	Potential for nature interpretation and education	High ecological benefit to outmigrating juvenile salmon
7. Two Fish-Friendly Floodbox Connections to Pitt River	High	\$1.5M	> 1 year	Community investment, creating temporary construction jobs	Potential for nature interpretation and education	High ecological benefit to outmigrating juvenile salmon and contaminant control
8. Setback Dike & New Pump Station	Moderate	\$7M	> 5 years	Significant community investment, creating local construction jobs	Opportunity to improve recreational use of dike & trails	Restoration of tidal habitat but loss of mature riparian habitat
9. Excavate Tidal Habitat Channels	High	\$75K	< 1 year	None	None	Significant Reach 6 fish & riparian habitat improvements
Reach 6 Sub-catchment, Off-site Potential Interventions						
10. Retrofit Catchment with Green Infrastructure	Moderate	\$50K – 1M	variable	None	None	Reduced contaminant runoff into Reach 6
1. Estimated Order of Magnitude Cost 2. Estimated Timeline for Implementation						



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Appendix B

Slides from Options Videoconference

Fremont Natural Area

*ASSESSMENT AND OPTIONS
PRESENTATION*

JULY 10, 2020



Agenda

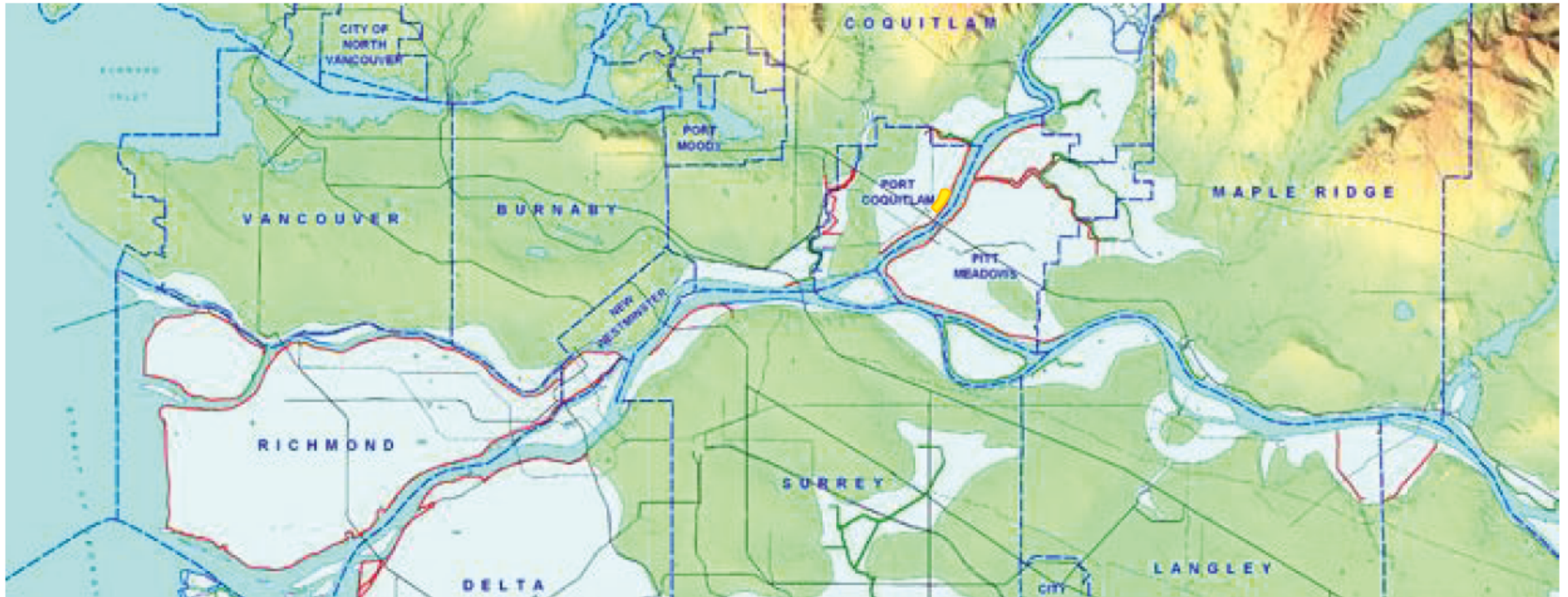
Part I: Site History Background

- History of site
- Hydrology and drainage
- Water quality issues
- Site prioritization

Part II: Options Assessment

- On-site and Off-site interventions:
 - Reach 6 Natural Area
 - Dominion Watercourse

Part I: Site History and Background





Area Watersheds and Sub-watersheds
Highly impacted by diking and development



From: Rural small lot residential / agricultural



To: Commercial / multi-family residential

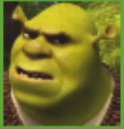
Dominion Triangle Development
100 ha development site
2003-Present



Historic floodplain raised by up to 5.15 m of fill to achieve required flood construction level (from 1.0 m to 5.15 m Geodetic)

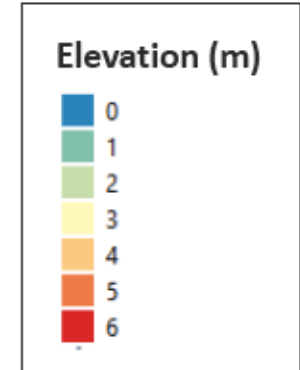
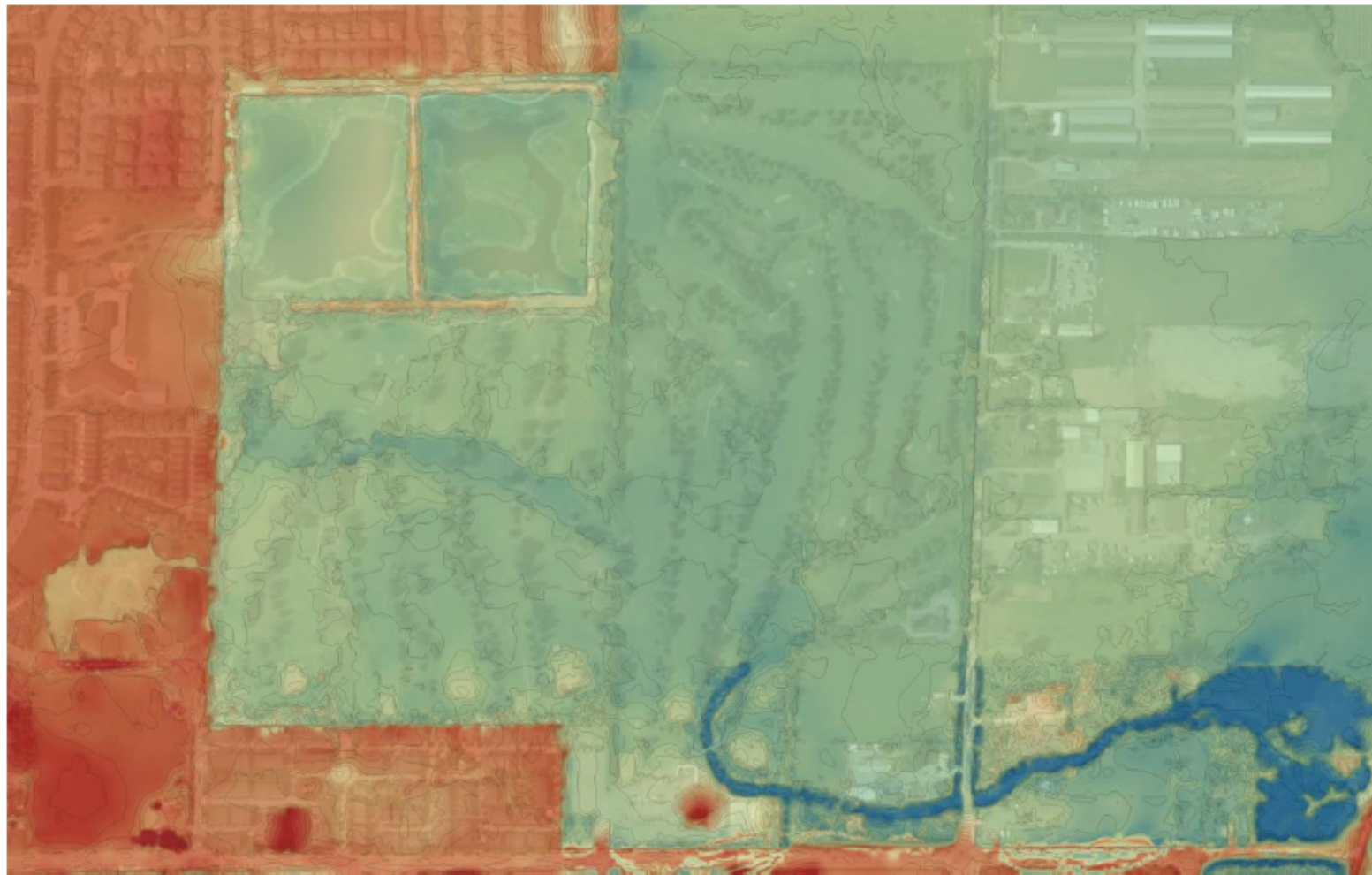
Buried organics + Groundwater Ochre

(not Ogre)

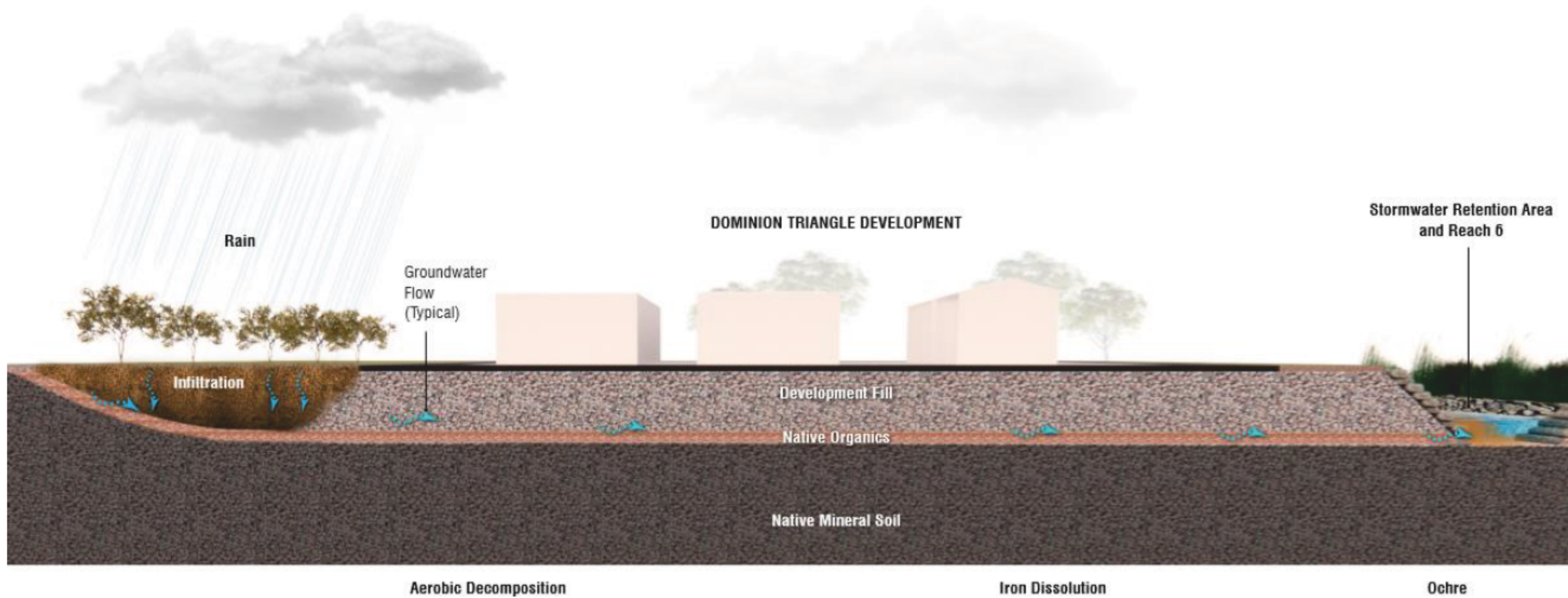




Ochre in Dominion Watercourse (2019 image)



Historical Channel Filling – Dominion Watercourse
Source of ochre loading



Ochre formation

Treatment Options:

1. Excavate the organics
2. Eliminate the groundwater
3. Passively or actively filter out the ochre
4. Dilute / flush the ochre



Reach 6 Natural Area

- Healthy floodplain forest
- Impaired water quality
- Limited fish connectivity to Pitt River
- Pump station likely causes fish mortality



Dominion Watercourse

- Limited riparian area
- Very impaired water quality
- Limited fish connectivity to Pitt River
- Managed as drainage infrastructure and irrigation
- Pump station likely causes fish mortality



Part II: Options Assessment

	On-site	Off-site
Dominion Watercourse	<ul style="list-style-type: none">• Chemical treatment• Filtration plant	<ul style="list-style-type: none">• Removal of golf course fill• Groundwater interception
Reach 6 Natural Area	<ul style="list-style-type: none">• Ochre interceptor trench• New floodbox (tides + fish)• Two new floodboxes (tides + fish + isolate)• New setback dike and pump station• Excavate additional tidal channels	<ul style="list-style-type: none">• Green infrastructure upgrades in Dominion Triangle

Options: Dominion Watercourse



Dominion Watercourse Options

	Feasibility	Legal /regulatory barriers	Capital Costs	Annual Maintenance Required	Ecological Benefits
1. In-situ Chemical Treatment	Low	Very High	Low \$250K	Very high	Low
2. Filtration Plant	High	High	Very high \$5M	Very high	Moderate
3. Golf Course Fill Removal	High	Low	High \$1M+ (unless redeveloped)	Low	High
4. Groundwater Interception	Moderate	Moderate	High \$1M+	Low	High

1. In-situ Chemical Treatment



- Flocculants and coagulants added directly to the watercourse.
- Sediments dredged periodically.

2. Filtration Plant



- Flows are intercepted near the golf course.
- Chemical treatment within tanks.
- Clarified water returned to watercourse.

3. Golf Course Fill Remediation



- Remove all organic material and replace with mineral

4. Groundwater Interception



- Construct perimeter interception system
- Intercepted water directed to channel

Dominion Watercourse Options: **None Recommended**

	Feasibility	Legal /regulatory barriers	Capital Costs	Annual Maintenance Required	Ecological Benefits
In-situ Chemical Treatment	Low	Very High	Low \$250K	Very high	Low
Filtration Plant	High	High	Very high \$5M	Very high	Moderate
Golf Course Fill Removal	High	Low	High \$1M+ (unless redeveloped)	Low	High
Groundwater Interception	Moderate	Moderate	High \$1M+	Low	High

Options:
Reach 6
Natural Area



Reach 6 Options

	Feasibility	Legal/Regulatory Barriers	Capital Costs	Annual Maintenance required	Ecological Benefits
1. Ochre Interceptor Trench	High	Low	Low \$250K	Low	Moderate*
2. New Floodbox	High	Moderate	Mod/High \$500K - 1M	Moderate	High
3. Two New Floodboxes	High	Moderate	High \$1M+	Moderate	High
4. New Setback Dike and Pump	Moderate	Mod/High	Very High \$5M	Mod/High	High
5. Excavate Tidal Channels	High	Low	Low \$250K	Low	High*
6. Upstream Green Infrastructure	Moderate	Low	Mod/High \$500K - 1M	Moderate	Mod/High

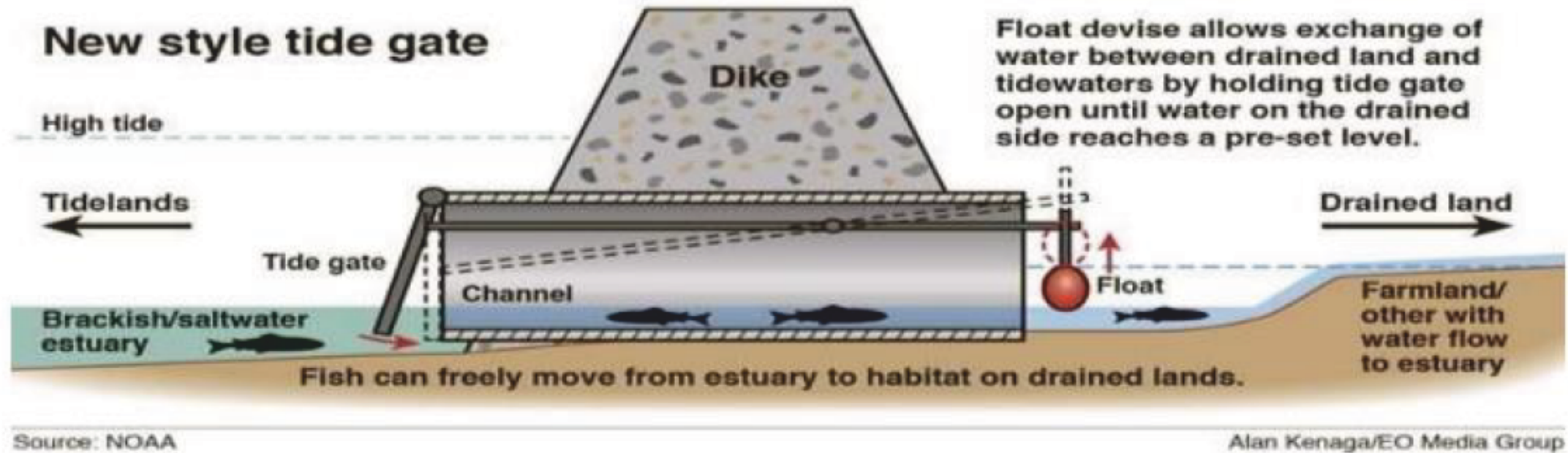
*conditional upon improved fish access and protection from pump station

1. Ochre Interceptor Trench



Improve water quality by intercepting groundwater inflow to Reach 6

2. One New Floodbox



Improve fish access, tidal flushing, and protect fish from current pump with new floodbox. Commonly called a "Fish Friendly" floodbox.

3. Two New Floodboxes



Improve fish access, tidal flushing, protection from pump, and stormwater separation with two new floodboxes

4. New Setback Dike and Pump



Disconnect Reach 6 flows from natural area and rely on tidal flows

5. Excavate Tidal Channels



Maximize fish access into Reach 6 Natural Area

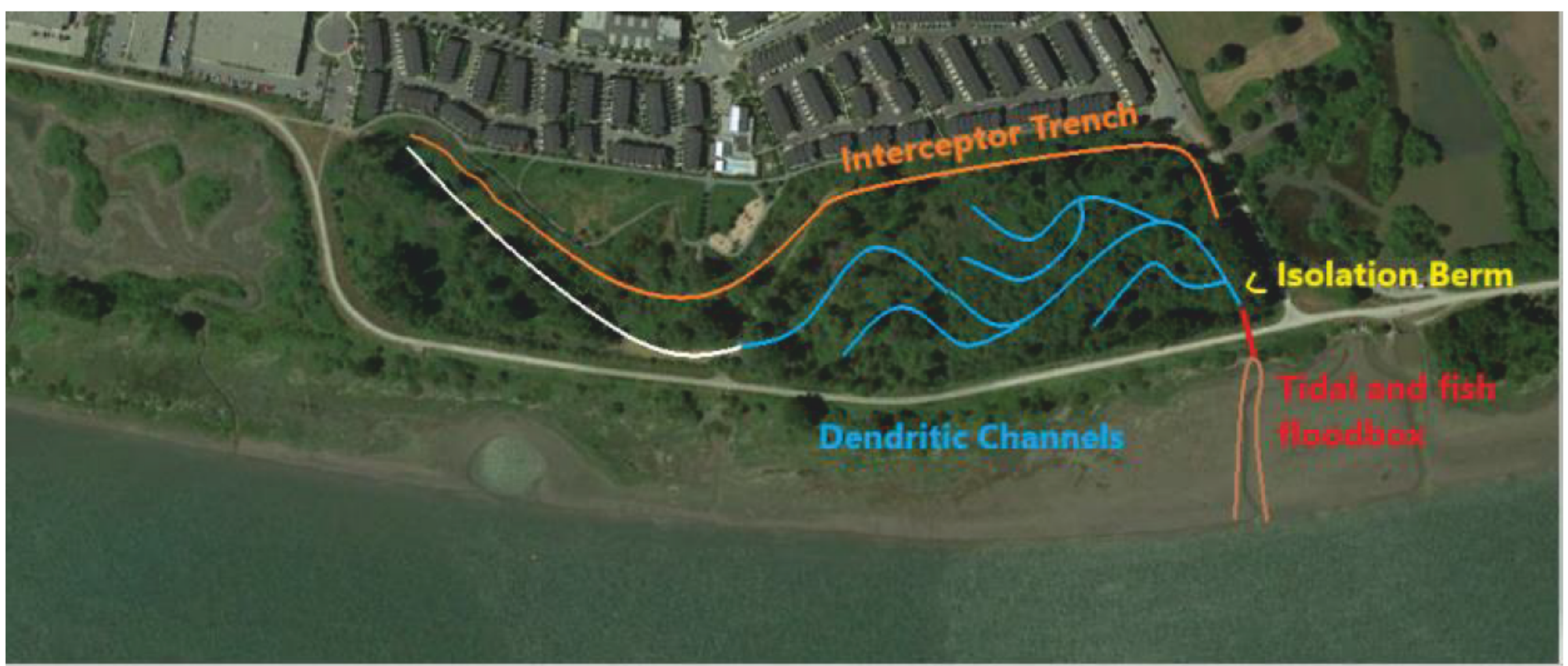
6. Upstream Green Infrastructure



Recommended Reach 6 Options

	Feasibility	Legal/Regulatory Barriers	Capital Costs	Annual Maintenance required	Ecological Benefits
Ochre Interceptor Trench	High	Low	Low \$250K	Low	Moderate*
New Floodbox	High	Moderate	Mod/High \$500K - 1M	Moderate	High
Two New Floodboxes	High	Moderate	High \$1M+	Moderate	High
New Setback Dike and Pump	Moderate	Mod/High	Very High \$5M	Mod/High	High
Excavate Tidal Channels	High	Low	Low \$100K	Low	High*
Upstream Green Infrastructure	Moderate	Low	Mod/High \$500K - 1M	Moderate	Mod/High

*conditional upon improved fish access and protection from pump station



Reach 6 Maximized for Fish Habitat Value*

(Subject to verification of WQ and flood protection elevations)

Uncertainties:

WATER QUALITY, WATER QUANTITY, AND TOLERABLE FLOOD LEVELS IN REACH 6 CATCHMENT





Questions?

RECOMMENDATION:

None.

PREVIOUS COUNCIL/COMMITTEE ACTION

January 22, 2019 – Committee of Council

That Committee of Council direct staff to provide a report outlining a strategy to achieve a tree canopy target of 30% with a variety of options to achieve the target, including recommended changes to the tree bylaw and city budget, before making a decision on amending the Official Community Plan.

February 26, 2019 – Council

Council rescinded Tree Bylaw 2005, No 3475 and adopted Tree Bylaw 2019, No. 4108.

November 24, 2020 – Council

Council adopted amendments to the existing Tree Bylaw that increase protections for existing trees

REPORT SUMMARY

This report provides an update to the canopy coverage analysis completed in 2017 that reflected the change in canopy that occurred between 2004 and 2016. Recent analysis conducted in 2020 (a year after the adoption of Tree Bylaw 2019, No. 4108) updates canopy estimates using more current imagery and provides additional direction as to potential areas of focus for the Urban Forest Management Plan, which is scheduled to commence in 2021.

The updated analysis shows a slight increase in canopy coverage from 2016-2019, suggesting that increased bylaw protection, including the provision of replacement trees along with other contributing factors, has supported the retention of tree canopy in the City. Based on the updated data, this report revisits the feasibility of a 30% tree canopy target and provides some direction as to how this target might be achieved at a high level. These concepts will be further refined as part of the Urban Forest Management Plan in which a tree canopy target will be established with a corresponding action plan on how to achieve the target.

BACKGROUND

The City of Port Coquitlam recognizes the value of trees and healthy urban forests for the many environmental, aesthetic and shading benefits they provide. The City promotes the planting of both on-site and street trees at the time of major developments, works with homeowners and developers to protect trees through its administration of the Tree Bylaw and implementation of Watercourse and Conservation Development Permit Area designations; and, sets policies to guide both tree protection and tree planting in its Official Community Plan.

Update on Tree Canopy in Port Coquitlam

Given the important role played by trees, including improving air quality and reducing stormwater runoff, there is a need to benchmark the City's tree canopy in order to monitor changes to tree canopy coverage over time. The City first estimated tree canopy coverage in 2017 and in 2019, Committee of Council directed staff to provide a report outlining a strategy to achieve a tree canopy target of 30% with a variety of options to achieve the target. The updated canopy estimate and analysis and high level options for increasing canopy provided in this report represents an interim step ahead of the development of the Urban Forest Management Plan which will include more detailed work on the feasibility of different canopy targets and strategies to reach those targets, given current canopy state and anticipated development and climate trends in Port Coquitlam. The Urban Forest Management Plan is a 2021 Park Planning and Environment project.

DISCUSSION

A. Canopy Analysis Methodology

Tree canopy is the area underneath a tree's leaf and branch cover. City tree canopy cover is the relative amount of land which is shaded by the tree canopy and is typically expressed as a percentage of total land. Canopy coverage data provides a snapshot in time of the current tree canopy and is intended to be considered a helpful estimate designed for planning purposes.

In order to calculate tree canopy cover in 2019, similarly with previous estimates of canopy cover, staff followed the methodology of the US Department of Agriculture (USDA) i-Tree Canopy tool which utilizes point data from aerial imagery. Per the i-Tree tool, for a municipality the size of Port Coquitlam, it is recommended that a minimum of 1,000 points be selected, however the accuracy of the estimate will increase with more points selected. Over 1,300 points within the City were randomly selected in 2016 for current and historical (2004) analysis and the same points were selected for the 2019 updated analysis. Calculations were then made to estimate canopy cover based on the results of the point analysis. The primary intention of the 2019 canopy update was to compare to the 2016 results to determine if there had been any recent notable canopy coverage change. This type of cover estimation does not discriminate between coniferous and deciduous trees nor account for tree health or specific size – both of which may impact a trees carbon sequestration capacity.

As shown below in Table 1, datasets were collected and analyzed in 2004, 2016, and 2019 for comparative purposes. This provides a more accurate picture of how the tree canopy is changing over time.

B. City-wide Tree Canopy Cover

Analysis was done in early 2020 to assess the current state of tree canopy in the City:

Year	Tree Canopy Cover in Port Coquitlam
2004	26.4%
2016	25.8%
2019	26.4%

Table 1. Overall Tree Canopy Changes from 2004-2019.

Update on Tree Canopy in Port Coquitlam

Although some new trees do appear in the sample, because the same points were analyzed over a short time period, the slight canopy growth from 2016-2019, as seen in Table 1, may also be attributed in part to tree maturity as individual trees grow and increase in crown size and/or seasonal variability given the timing of the imagery capture. The relative stability in the canopy may also be the result of trees being retained in greater numbers due to the Tree Bylaw. However, protection of existing trees is not sufficient in itself for the longevity and resilience of the canopy, as eventually trees will naturally fail and need to be removed. Proactive tree planting is required or the City will begin to see a decrease in canopy cover.

The most prominent reason for canopy loss is trees being cleared and replaced by impervious cover for new buildings. Other secondary reasons for canopy loss are trees being removed and not replaced immediately and trees being heavily pruned. Despite the replacement tree requirement in the Tree Bylaw being a positive step for long term tree canopy, it is important to note that on average a replacement tree will not provide the same canopy benefits as a mature tree for a number of years after planting, therefore any tree removal, even with replanting, will affect canopy cover in the short term. Additionally, replacement trees are often smaller stature species so canopy can sometimes be reduced even though replacement trees are planted.

For comparison, in 2019, the average tree canopy cover among municipalities falling within the urban containment boundary (UCB) of Metro Vancouver was 32%¹.

C. Tree Canopy Cover by Zone

The canopy coverage on a by-zone basis is decreasing in most zones as seen in Table 2. Increases are only observed in ground oriented residential and parks. These two zones combined account for a significant portion of the City's land area, which explains why their increases result in a small increase in the canopy coverage overall.

Zoning	2004	2016	2019	Change (2004-2019)
Agricultural (excluding ALR)	43.1%	35.3%	40.4%	-2.8%
Apartment	30.8%	25.6%	20.5%	-10.3%
Commercial	16.0%	10.0%	12.0%	-4.0%
Ground Oriented	22.1%	23.0%	23.9%	1.8%
Industrial (excluding CP)	5.1%	4.5%	4.5%	-0.6%
Institutional	25.5%	22.4%	22.4%	-3.1%
Parks	73.6%	77.3%	77.3%	3.6%
Road & ROW	17.2%	17.2%	17.2%	0.0%

Table 2. Canopy Changes by Zone

¹ Metro Vancouver (2019) Regional Tree Canopy Cover and Impervious Surfaces, 44 pages

Update on Tree Canopy in Port Coquitlam

Port Coquitlam's tree canopy covers an estimated 570 hectares, with roughly 55% growing on privately-owned lands and 45% on public lands (parks, natural areas along rivers and streams, trails, schools, streets and other rights-of-way) as seen in Table 3 below. Many of these public trees are located within active parks or along streets and actively managed by the City at an annual cost of \$391,200 (this budget includes watering, pruning, risk assessment, and tree removal when necessary).

On private land, ground-oriented residential is the only zoning area where canopy grew between 2004 and 2019. This demonstrates the need for a comprehensive Urban Forest Management Plan that identifies strategies for both (a) retaining and planting more trees during new development and (b) incentivizing existing property owners to retain and plant trees on established properties. A targeted approach for different zone classes may be beneficial in order to consider a more equitable distribution of tree canopy throughout the municipality.

D. Increasing Tree Canopy

As seen in Table 3, City-managed lands account for approximately one third of the total land base while privately-held (non-city managed) lands make up approximately two thirds of the land base. Despite accounting for two-thirds of all land within the City of Port Coquitlam (held privately or by the City), private lands make up only slightly over half of the treed area. This suggests that strategies for increasing the canopy on both public and private land will be equally important and strengthens the above assessment that continued attention should be focused on increasing the canopy coverage on private land in addition to tree planting on municipally-held property.

Land Type ²	Share of Total Area	Share of Total Treed Area
Public Land	34%	45%
Private Land	66%	55%

Table 3. Tree Management (Public vs. Private)

E. Planting Requirements

In order to make an informed decision on a time-bound tree canopy cover target, it is important to conceptualize how many trees might need to be planted in order to reach a given target. In Table 4, the number of trees required to meet a 28% and a 30% canopy target is identified with corresponding annual tree planting requirements within various timeframes. Tree planting requirements are in addition to replacement trees, which are assumed to be planted after any tree (15cm in diameter or larger) is cut as per the 2019 Tree Bylaw replanting requirements. These figures represent total estimated trees planted on both private and public land and are based on the crown size of an average medium-sized tree.

² Excludes ALR and CP land

Update on Tree Canopy in Port Coquitlam

Target Year ³	Annual Total ⁴ Trees Planted to reach 28% Target	Annual Total Trees Planted To reach 30% Target
2030	778	1497
2040	346	665
2050	222	428

Table 4. Annual Total Planting Estimates

These planting requirements are high level estimates and are subject to considerable variability based on assumptions made during the calculations. The estimated number of required trees planted is lower than reported in 2017, in part due to the varying timeframes, the change in canopy since the last analysis was done, planting conditions and care, and the provisions of the Tree Bylaw requiring replacement trees when trees are cut.

F. Planting Barriers and Additional Considerations

As Port Coquitlam grows and densifies, available land for planting becomes scarcer. Potential planting areas are more limited due to changing development trends – for example, wider sidewalk standards increase walkability but reduce possible planting areas. The size of trees (and associated canopies) are generally smaller when located on streets, boulevards, and near parking and developed areas and such trees are more highly impacted by seasonal drought due to limited and low quality soil volume. Additionally, in areas where the City does not have jurisdiction, such as the ALR or Federal land, the City cannot control how trees are planted or maintained.

Port Coquitlam's natural areas, which are home to many of the City's public trees, are in decline. Trees in these areas are failing at a more rapid rate than previously experienced due to a changing climate and pressure from invasive species. Metro Vancouver's Urban Forest Climate Adaptation Framework describes how both native urban forests and planted urban forests across the region are facing new challenges from climatic moisture deficits, extreme drought and temperatures that exceed species tolerance limits⁵. These factors will significantly impact tree planting requirements and will be more fully explored during the development of an Urban Forest Management Plan.

Additionally, in order to substantially grow the existing tree canopy, there would need to be significant investment from the private sector responding to a shift in policy and regulations. To achieve meaningful canopy growth, developed sites would need to be reconfigured to replace their surface parking lots with adequate soil for tree planting and new developments would be required to provide a significantly higher number of trees than currently achieved in addition to substantial increases in street trees.

³ Assume 2022 implementation

⁴ Total trees include public and private trees

⁵ Urban Forest Climate Adaptation Framework for Metro Vancouver

https://www.retooling.ca/Library/ReTooling_Resource_Library/Urban_Forest_Climate_Adaptation_Framework_Tree_Species_Selection.pdf

NEXT STEPS:

A. Developing an Urban Forest Management Plan

The Urban Forest Management Plan will define strategic objectives for Port Coquitlam's urban forest and guide best management of trees on public and private land. The plan will identify actions to implement best practices and provide a "roadmap" to help guide Port Coquitlam and its residents to protect, maintain and enhance the urban forest for the future. This project is slated for 2021 and will be integral to further developing strategies to reach a range of tree canopy cover targets and timeframes.

B. Establishing a Target

An increasing number of municipalities within Metro Vancouver are establishing tree canopy targets in order to ensure that coverage is either restored or continues to grow over time. Tree canopy cover targets (including tree on public and private land) set in the Metro Vancouver region include:

- City of Surrey – maintain canopy at 30% excluding the ALR (2016)
- City of Vancouver – increase canopy from 18% (2018) to 22% by 2050
- City of New Westminster – increase canopy from 18% (in 2015) to 27% (an additional 8,500 trees planted on public lands and 3,300 trees planted on private lands over 20 years)

A 2030 target for 28% or 30% canopy cover would be challenging with such a short timeline, particularly with respect to the smaller relative canopies of newly planted trees. Alternatively, a 20- or 30-year timeline results in a more achievable planting scenario, and allows sufficient time to monitor the program's implementation over time and to continue to make informed decisions about the tree canopy.

A 2050 (30-year) target provides flexibility to be nimble throughout implementation and make changes to the approach as needed as we learn more about how the proposed strategy works on the ground.

Annual cost estimates in Table 5 are based on an estimate of \$500 per tree for planting and initial maintenance. Costs do not factor in trees planted on private land at this time, as these costs would vary substantially based on the type of programming ultimately implemented in the strategy. The estimated annual city trees planted referenced in Table 5 are the City's share of required trees based on the public (34%) vs private (66%) land area split and excludes ALR and CP land. The estimated increased costs do not account for ongoing maintenance of newly planted trees but estimated the cost for planting alone (2020 dollars).

Year	Annual City Trees Planted	Estimated Increased Public Cost to Plant Trees per Year
2030	736	\$368,000
2040	327	\$163,500
2050	210	\$105,000

Table 5. Annual Public Tree Cost

The current annual budget for tree planting and maintenance (pruning and watering) is \$391,200. Of that total budget, \$33,400 is currently allocated specifically for planting.

C. Potential Strategies for Reaching a 30% Target by 2050

The potential strategies provided in this report are a high-level representation of the types of actions that could be taken in order to increase the canopy coverage in the chosen timeframe. With Council support for a canopy target and timeframe, these options and others will be explored at a more granular level for inclusion in the Urban Forest Management Plan, to be developed with further input from Council and the public in 2021. Potential strategies towards reaching an increased tree canopy within the City of Port Coquitlam may include:

- Maintain our approach in ensuring that annual budget requests include the use of all tree permits, tree-related fines, and cash-in-lieu payments for tree planting programs to increase the amount of proactive planting completed and reduce the amount of other revenue required for tree planting programs.
- Ensuring that all City-owned trees that are removed are replaced in order to ensure a consistent and varied canopy.
- Incorporating additional tree planting in passive parks.
- Updates to the Subdivision Servicing Bylaw No. 2241.
- Targeted plantings on streets with either a sidewalk or a curb and gutter.
- Curb and gutter installations to support street trees in other locations.
- Requiring street trees as a part of off-site improvements for all new developments, including single family residences and duplexes.
- Development of an urban forestry volunteer program to encourage citizen participation and education.
- Amending development regulations to reduce the amount of land which may be paved.
- Tree planting program for private lots.
- Educational programming for youth that aides in tree planting.
- Allow and encourage variances to siting and parking regulations if the variance results in enhanced tree protection or planting.
- Strengthen policies related to tree retention for new developments.
- Annual tree sale.
- A gifting program for trees.
- A tree nursery.
- Resources encouraging tree retention care and appropriate species selection.
- Invasive plant awareness program.
- Incentives or rebates for the protection and recognition of significant and heritage trees.

FINANCIAL IMPLICATIONS

The costs for privately planted trees will vary substantially based on the type of programming offered by the City. For example, educational programming, partnerships, and sapling programs have a relatively low annual cost compared to the planting and maintenance of a street tree. The Urban Forest Management Plan will further cost out options for growing tree canopy in the City.

The current budget for annual tree planting is \$33,400. In order for the City to keep up with the public portion of annual planting requirements and maintenance, while attempting to fill the gap through policy revisions and programs to promote private plantings, an increase somewhere between \$71,600 and \$176,600 per year will be required depending on the measures and targets chosen. It is also possible that these costs or associated implementation costs could be supplemented by applying for external funding such as Tree Canada's Community Tree Grants. These options will be more fully explored during the development of the Urban Forest Management Plan in 2021 and brought forward during the 2022 budget discussions.

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