Committee of Council Agenda

Tuesday, April 5, 2022
2:00 p.m.
Council Chambers
3rd Floor City Hall, 2580 Shaughnessy Street, Port Coquitlam, BC

Pages

1. CALL TO ORDER

2. ADOPTION OF THE AGENDA

2.1. Adoption of the Agenda

Recommendation:
That the Tuesday, April 5, 2022, Committee of Council Meeting Agenda be adopted as circulated.

3. CONFIRMATION OF MINUTES

3.1. Minutes of Committee of Council 4

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

- *March 1, 2022*
- *March 8, 2022*
- *March 15, 2022.*

4. REPORTS

4.1. Flood Protection and Resiliency 14

Recommendation:
That Committee of Council amend the Financial Plan to include:

1. *Design funding in 2022 ($150,000) from the General Capital Reserve for the Cedar Drainage Pump Station.*
2. *Design and construction funding in 2022 ($85,000) from the General Capital Reserve for replacement of a failed drainage main on Fremont Street.*

3. *Design and construction funding in 2022 ($1,145,000) from the Sanitary Sewer Reserve for sanitary system upgrades on Patricia Avenue and the lane east of Wellington Street.*

4. *Design funding in 2022 ($100,000) from the General Capital Reserve to upgrade three culverts and assess erosion on Cedar Drive.*

4.2. Zoning Bylaw Amendments for Single Residential and Duplex Development in the Floodplain 42

Recommendation:
That Committee of Council recommend to Council that the Zoning Bylaw be amended to further regulate new single residential and duplex development below the flood construction level.

5. COUNCILLORS' UPDATE

6. MAYOR'S UPDATE

7. CAO UPDATE

8. RESOLUTION TO CLOSE

8.1. Resolution to Close

Recommendation:
That the Committee of Council Meeting of Tuesday, April 5, 2022, 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;

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].

9. ADJOURNMENT

9.1. Adjournment of the Meeting

Recommendation:
That the Tuesday, April 5, 2022, Committee of Council Meeting be adjourned.

10. MEETING NOTES

Committee of Council Minutes

Tuesday, March 1, 2022
Virtual Meeting

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

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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, March 1, 2022, Committee of Council Meeting Agenda be adopted with the following changes:

- *Addition to 9.1, item 5.1, section c & l and item 5.3, section a.*

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:

- *February 8, 2022*
- *February 15, 2022.*

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

Absent (1): Councillor Penner

Carried

4. REPORTS

4.1 Emergency Operations Centre Grant Funding

Moved-Seconded:

That Committee of Council confirm support for the Union of British Columbia Municipalities (UBCM) Emergency Operation Centre (EOC) & Training Grant application, including overall grant management.

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

Absent (2): Councillor Darling, and Councillor Penner

Carried

4.2 Climate Action Plan (CAP) - Phase I Engagement Summary

Staff provided an on-screen presentation and answered questions from the Committee of Council relative to the "Climate Action Plan - Phase I Engagement Summary".

4.3 Civic Centre Revitalization – Veterans Park Scope

Moved-Seconded:

That Committee of Council:

1. *Endorse the design as outlined in the March 1, 2022, report titled "Civic Centre Revitalization - Veterans Park Scope" specifically the figure 1 layout and the figure 3 elevated design, and the lit cenotaph; and*
2. *Direct staff to proceed with construction of the Veterans Park area of the Civic Centre Revitalization Project.*

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

Opposed (1): Councillor Dupont

Absent (1): Councillor Penner

Carried

5. COUNCILLORS' UPDATE

No update.

6. MAYOR'S UPDATE

No update.

7. CAO UPDATE

No update.

8. CLOSED ITEMS RELEASED TO PUBLIC

9. RESOLUTION TO CLOSE

9.1 Resolution to Close

Moved-Seconded:

That the Committee of Council Meeting of Tuesday, March 1, 2022, 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;

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].

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

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;

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;

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

Opposed (1): Councillor Dupont

Absent (1): Councillor Penner

Carried

10. ADJOURNMENT

10.1 Adjournment of the Meeting

Moved-Seconded:

That the Tuesday, March 1, 2022, Committee of Council Meeting be adjourned at 3:43 p.m.

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

Absent (1): Councillor Penner

Carried

11. MEETING NOTES

Councillor Darling experienced technical difficulties during item 4.1 and was absent for the vote. Councillor Darling returned for Item 4.2.

Mayor

Corporate Officer

Committee of Council Minutes

Tuesday, March 8, 2022
Virtual Meeting

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

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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, March 8, 2022, Committee of Council Meeting Agenda be adopted with the following changes to Item 8.1:

- *Late item added as new item 5.1, and re-numbering of remaining sections*
- *item 5.3 - section g added.*

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

Absent (2): Mayor West, and Councillor Dupont

Carried

3. CONFIRMATION OF MINUTES

None.

4. REPORTS

4.1 RCMP 2021 Year in Review

Supt. Keith Bramhill, OIC, provided an on-screen presentation entitled “RCMP 2021 Year in Review” and answered questions from the Committee relative to the Review.

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, March 8, 2022, be closed to the public pursuant to the following subsections(s) of Section 90(1) of the Community Charter:

Item 5.1

e. the acquisition, disposition or expropriation of land or improvements, if the council considers that disclosure could reasonably be expected to harm the interests of the municipality.

Item 5.2

b. personal information about an identifiable individual who is being considered for a municipal award or honour, or who has offered to provide a gift to the municipality on condition of anonymity.

Item 5.3

g. litigation or potential litigation

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;

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 (5): Councillor Darling, Councillor McCurrach, Councillor Penner, Councillor Pollock, and Councillor Washington

Absent (2): Mayor West, and Councillor Dupont

Carried

9. ADJOURNMENT

9.1 Adjournment of the Meeting

Moved-Seconded:

That the Tuesday, March 8, 2022, Committee of Council Meeting be adjourned at 3:37 p.m.

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

Absent (2): Mayor West, and Councillor Dupont

Carried

10. MEETING NOTES

Vice Chair, Councillor Washington chaired the meeting.

Mayor

Corporate Officer

Committee of Council Minutes

Tuesday, March 15, 2022
Virtual Meeting

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

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1. CALL TO ORDER

The meeting was called to order at 2:23 p.m.

2. ADOPTION OF THE AGENDA

2.1 Adoption of the Agenda

Moved-Seconded:

That the Tuesday, March 15, 2022, 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 Temporary Use Permit for 1615 Kebet Way

Staff provided an overview of Inno Food's request for a renewal of their Temporary Use Permit and answered questions from the Committee.

Moved-Seconded:

That Committee of Council approve renewal of a temporary use permit at 1615 Kebet Way for an additional three years.

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

Carried

4.2 Consumption of Alcohol in Parks Initiative Update

The Acting Director of Development Services provided an overview of the report and addressed questions from the Committee. She clarified that staff are not planning on adding any additional parks, beyond those identified in the report, at this time. The Mayor spoke to the community's positive reception of the initiative.

Moved-Seconded:

That Committee of Council:

1. *Support the continuation of Peace Park, McLean Park and Dominion Park as permitted locations in the Consumption of Liquor in Public Places Bylaw.*
2. *Recommend Council amend the Consumption of Liquor in Public Places Bylaw to restrict consumption of alcohol within 10 meters of playgrounds.*

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, March 15, 2022, be closed to the public pursuant to the following subsections(s) of Section 90(1) of the Community Charter:

Item 5.1

b. personal information about an identifiable individual who is being considered for a municipal award or honour, or who has offered to provide a gift to the municipality on condition of anonymity.

Item 5.2

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

Item 5.3

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;

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, March 15, 2022, Committee of Council Meeting be adjourned at 5:46 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

Flood Protection and Resiliency

RECOMMENDATION:

That Committee of Council amend the Financial Plan to include:

1. Design funding in 2022 ($150,000) from the General Capital Reserve for the Cedar Drainage Pump Station.
2. Design and construction funding in 2022 ($85,000) from the General Capital Reserve for replacement of a failed drainage main on Fremont Street.
3. Design and construction funding in 2022 ($1,145,000) from the Sanitary Sewer Reserve for sanitary system upgrades on Patricia Avenue and the lane east of Wellington Street.
4. Design funding in 2022 ($100,000) from the General Capital Reserve to upgrade three culverts and assess erosion on Cedar Drive.

PREVIOUS COUNCIL/COMMITTEE ACTION

On November 19, 2019, Committee of Council received a report for information titled "Port Coquitlam Flood Mapping Update".

On December 14, 2021, Committee of Council received a presentation for information titled "Atmospheric River Storm Response".

REPORT SUMMARY

This report provides information on the community's flood resiliency, as well as proactive plans and initiatives the City has to mitigate risk and potential impacts from future winter storm and flood events. In order to enhance preparedness for future events, staff recommend advancing several capital works projects to address flooding risks highlighted by the recent atmospheric storm events.

BACKGROUND

In November 2021, the Pacific Northwest area was subject to a series of severe storms causing catastrophic flood damage to properties, homes, businesses and infrastructure. These floods were caused by extreme weather events, including atmospheric river storms.

In December, staff provided an update to Council on actions taken by the City to address flooding and storms (Attachment 1). The presentation provided information on the characteristics of atmospheric river events, planned projects, proactive maintenance, pre-storm preparation, regional collaboration, storm event response activities, communication efforts, and post-event activities.

DISCUSSION

This report provides information on the City's multi-pronged approach to flood risk management, including plans, programs and projects to protect infrastructure, people and property, and to mitigate associated risk and potential impacts from winter storm and flood events. It also brings forward recommendations on further actions to assist in preparing for future events and mitigating potential impacts.

Flood Risk: A significant portion the City is located within either the Fraser/Pitt River flood plain or Coquitlam River flood plain. The boundary reflects a 1 in 200-year level flood in keeping with current direction from the Province.

Flood risk in the Lower Mainland has been historically driven by the annual spring melt (freshet), however, impacts of sea level rise due to climate change and extreme weather events are anticipated to exacerbate flood risk in the future. Flood events can result in a wide variety of impacts, including damage to private and public property, loss of infrastructure, disruption to community services, business, trade and services, and impacts to water quality and environment.

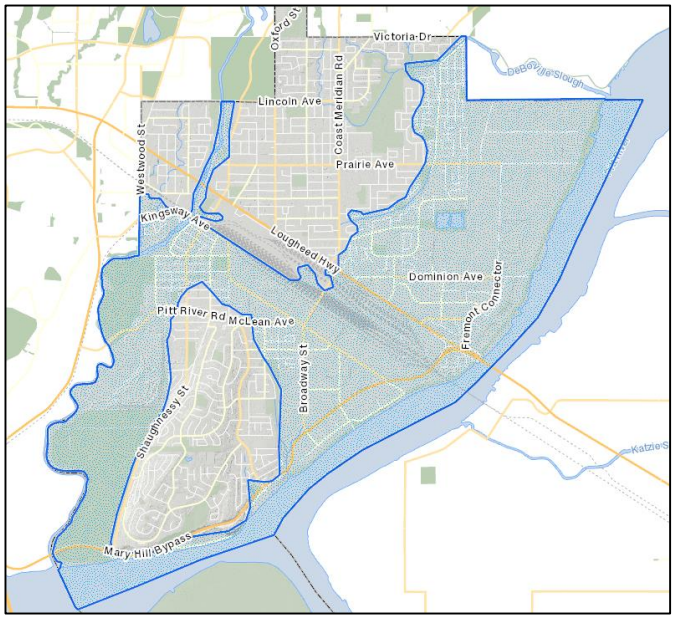


Figure 1: Map of floodplain boundaries

Dike System: The City has dikes on the Coquitlam River, Fraser River and Pitt River. Since the early 1970s the province has generally accepted a 1:200 flood event to be the minimum provincial dike design standard for new dikes. The 1:200 flow rate is equivalent to the 1948 flood, which is understood to be the second largest Fraser River flood on record. The City of Port Coquitlam has designed and constructed our dikes to these elevations, with significant upgrades in 2007 to ensure we meet this protection level. In recent years, the City has also completed a number of diking system upgrades to prepare for Fraser River freshet events. Public Works staff complete regular inspection and maintenance activities to ensure the diking system is maintained per provincial guidelines for dike inspection and reporting. Additional information on the dike system is available in the Port Coquitlam Flood Mapping Update Report (Attachment 2).

Pump Stations: The City has nine drainage pump stations which are used to pump drainage from low lying areas and protect floodplain areas located behind the dikes when river levels rise. During low river conditions, water discharged from creeks or outlets in the City drain freely to the Coquitlam, Fraser or Pitt Rivers. During high river conditions, flood boxes close to protect floodplain areas and the creek water needs to be pumped over the dikes to the river.

Flood Buffer: As part of the Water Use Planning Process carried out with BC Hydro between 2000 and 2010, an engineering study determined that the flood protection provided by dikes on the Coquitlam River no longer met the provincial standard for a 1:200-year flood event. While the dikes were originally designed for a flow of 573 m^3/s plus 0.6m freeboard, hydraulic analysis indicated a capacity of less than 400 m^3/s, with little or no freeboard, due to the accumulation of sediments in the channel over time.

In 2009, Port Coquitlam and Coquitlam signed an agreement with BC Hydro to operate a seasonal buffer on the Coquitlam Lake Reservoir to assist the cities in managing their flood protection responsibilities on the Coquitlam River without raising the dikes. The agreement involves keeping higher volumes of water in the reservoir, and diverting flows from the Coquitlam Lake Reservoir to the Buntzen Lake Reservoir, during winter periods to minimize discharges to the Coquitlam River when most major storm events occur.

BC Hydro completes annual reporting on the Coquitlam Lake elevation and dam flow releases. More recently, the City of Coquitlam completed a study to review the 1:200-year event which predicted potential overtopping and flooding requiring the evacuation of Coquitlam and Port Coquitlam residents. Given that Coquitlam River flows are anticipated to increase over time as a result of climate change, staff from both cities have reached out to BC Hydro with a request to meet and discuss next steps, which could include an updated study to identify vulnerable areas and the potential for additional buffering.

Lower Mainland Flood Management Strategy: Since 2014, the City has been working with the Fraser Basin Council on a Lower Mainland Flood Management Strategy (LMFMS), which is aimed at reducing flood risk and improving the flood resilience of communities along BC's Lower Fraser River and south coast. Participants in the strategy have responsibilities or interests related to flood management and include the Government of Canada, the Province of British Columbia, Lower Mainland local governments, First Nations and non-governmental and private sector entities in the region.

The Strategy is being developed in three phases; Phase 1 focused on an analysis of BC Lower Mainland flood scenarios, a regional assessment of flood vulnerabilities and a review of flood protection works and practices in the region. Phase 2 is underway and focuses on development of a long-term strategy that includes: identifying regional infrastructure priorities for flood mitigation, further exploration of flood mitigation methods, and creation of a regional framework for decision making for funding requests to higher levels of government. Phase 3 will be focused on implementation of the Strategy.

A ‘Port Coquitlam Flood Mapping Update Report’ taken to Council on November 19, 2019 regarding the regional work included flood maps and information about the risks from rising sea levels and climate change impacts (Attachment 2). The report also included information about the interactive

Lower Fraser Floodplain Model developed in Phase 2 that can be used by local governments to model the impacts of flooding in communities and plan improvement projects. Flood modeling and mapping is based upon the largest flood on record of 1894, commonly referred to as the 1:500-year flood event.

The model can be used to analyze the effects of dike breaches; to create flood hazard maps that show the extent, depth and velocity of floodwaters; and to evaluate the effectiveness of proposed flood mitigation options. The results of the modelling work show that the City of Port Coquitlam is protected against the 1:200-year flood event, but that dike overtopping is predicted for the 1:500 event (year 2100 Freshet, 1:500-year storm + 1m sea level rise). Staff plan to use the model results to review and inform changes to flood construction levels and identify flood mitigation projects.

POLICY, REGULATIONS AND COMMITTEES

The City has a number of policies and regulations intended to set direction on flood protection, reflect Provincial framework and mandates for development within the floodplain, and identify opportunities to strengthen flood risk mitigation approaches in decision-making processes.

Official Community Plan: The OCP includes a floodplain boundary map reflecting a 200-year flood level. Policies acknowledge the significance of flood risk for the community and note the importance of floodplain management, which includes: i) working with senior levels of government to develop a comprehensive approach to flood protection through the dike system, ii) regulating development in the floodplain through technical considerations of floodproofing in building and development design, iii) requiring new developments be constructed to meet minimum flood construction levels, and iv) recognizing the importance of stormwater management practices and plans.

Upcoming updates to the OCP will need to reflect updates to the floodplain boundaries and include policies and direction that address sea level rise and increased incidents of storm events in crafting community direction and policies.

Zoning Bylaw and Building Bylaws: The Zoning Bylaw contains regulations to prevent habitable space being constructed below the flood construction level to help mitigate property damage during a 1:200-year flood. The flood construction levels are set by the Province and reflected in our Zoning Bylaw flood plain maps. The Zoning Bylaw also has provisions to assist in stormwater management, such as minimum impervious surface requirements.

The City also uses Section 56 of the Community Charter to require in areas that are subject to flooding that the land owner to provide a report certified by a qualified professional that the land may be used safely for the intended use. A covenant can specify flood mitigation measures that must be adhered to such as requiring building elements (e.g. furnaces, boilers and hot water tanks) to be above the flood construction level.

Staff have identified refinements to current zoning bylaw provisions and have drafted a companion report, which recommends amendments to prevent conversion of non-habitable space to self-contained suites. In addition, staff are working on a comprehensive floodplain bylaw to ensure a consistent, clear and comprehensive regulatory approach to all properties and associated land uses constructed under the flood construction level. This bylaw will be based on the provincial framework and will supplement current policies and zoning regulations.

Subdivision Servicing Bylaw: The City's drainage design criteria were reviewed and updated in 2021 to account for changes in rainfall patterns associated with climate change. The updated criteria ensure that infrastructure is sized adequately for climate change by designing for a 10% increase in flows for the piped system and a 20% increase in flows for major facilities such as culverts and pump stations. The design criteria will be implemented in the update to the Servicing Bylaw Update (underway), and is being used to inform the design of capital projects in the interim.

Climate Action Plan*:* The City is currently developing a Climate Action Plan in recognition that extreme heat, drought, storms and flooding are all signs of climate change that are affecting our community's safety and well-being more every year. Building on the City's 2010 Corporate and Community Climate Action Plan, the Climate Action Plan which will look to reduce our contribution to the emissions causing these changes and to mitigate the impact of climate change on civic services and the community.

Regional Committee: A Metro Vancouver Flood Resiliency Task Force has been established in response to the extreme flooding that impacted the region and many parts of the province in November 2021. The task force will provide advice and recommendations to the Metro Vancouver Board and to the Board members appointed to the Lower Mainland Flood Management Strategy on issues related to flood resiliency. The task force will also consider options for Metro Vancouver to coordinate and collaborate with member jurisdictions, First Nations, Fraser Valley Regional District, provincial government, and federal government on plans, priorities, and funding to enhance flood resiliency.

RISK MITIGATION

The City undertakes a number of actions to proactively reduce the risk of flooding which are described below.

Stormwater Management: Municipalities manage stormwater within watershed boundaries to preserve watershed health and ensure that properties are protected from flooding. Integrated Watershed Management Plans (IWMPs) are developed to achieve those objectives by identifying flood management and protection projects such as culvert upgrades and pump station upgrades, and making recommendations for climate change mitigation and adaptation. To date, the City has completed IWMPs for the Hyde Creek and Maple Creek watersheds. The South Port Coquitlam

IWMP is currently underway and includes the Baker, Fraser and Harbour sub-watersheds. The North IWMP (Dominion, Laurier) and West IWMP (Reeve, Colony Farm, Coquitlam River) are planned to start in 2023 and 2025 respectively.

Rainwater management criteria for low impact design (green infrastructure, source controls) is specific to each watershed and included in IWMPs. A city-wide rainwater management policy and design criteria for source controls will be considered after completion of outstanding IWMPs. In the interim, the City is incorporating street trees, rain gardens, and green/rainwater infrastructure into capital projects to provide shade, reduce heat island effect, mitigate drought conditions, treat and manage stormwater runoff quality and quantity.

Inflow and Infiltration (I&I) Planning: Inflow and infiltration (I&I) of excess water into a sanitary system during storm events can take up capacity in the system and lead to sanitary sewer overflows, backups, excessive pumping costs and premature upgrades. Assessments of I&I rates across City catchments noted that some had rates higher than the reduction target set by Metro Vancouver and may be considered priorities for future investigation and rehabilitation programs.

The City currently reduces I&I through two of the recommended actions – CCTV (video) inspection and replacement of sanitary mains in poor condition. Replacement of old or deteriorating service laterals is also being considered with the Servicing Bylaw update as they are a considerable contributor to I&I. Metro Vancouver is currently updating the regional I&I Strategy to set new targets, actions and thresholds. Staff will use the results of the update work to determine if additional programs are warranted.

Drainage System assessments: The City has system studies and hydraulic models for each of the storm, sanitary and water systems. The recommended upgrades inform offsite requirements required by developments, as well as capital projects. Capacity upgrades for the linear system are typically planned with replacement of ageing infrastructure and/or paving projects, unless a critical capacity issue has been identified to warrant replacement at a sooner date. The City also carries out site specific drainage assessments where needed to investigate issues and identify solutions.

Other Inspection, Maintenance and Repairs: The City's storm and sanitary pipes are regularly inspected with an annual CCTV program to assess their condition. The information is used to identify pipes and manholes that require rehabilitation or replacement, and the work is coordinated with the capital Neighbourhood Rehabilitation program. The inspections also identify mains that need maintenance such as joint sealing, grouting, root cutting or flushing.

Culverts in the City are routinely inspected to assess condition and identify defects and remedial work. Culverts in poor condition are scheduled for replacement with the City's Neighbourhood Rehabilitation program.

Service levels and benchmarking standards are used by Public Works staff to ensure that regular and adequate inspection, maintenance and repair activities are undertaken for the City's infrastructure and assets. Public Works staff also work collaboratively with Engineering staff to identify issues in the field that may require an engineering assessment or capital works beyond repairs and/or the operating budget. This includes information from the winter storm and flood events to flag areas of concern for future investigation, and the need for capital works required ahead of schedule.

Infrastructure Upgrades: Much of the City's infrastructure built in the 1960s and 1980s is beginning to show signs of age. The City developed an Asset Management (AM) Strategy in 2019 to ensure it is investing in the renewal of its assets at a sustainable level. The City is currently developing asset management plans and an asset management program that will consider natural assets and climate adaptation in subsequent phases.

The City invests significant funding each year through its Neighborhood Rehabilitation Program for the replacement or upgrading of civil infrastructure, including roads, water, sanitary, storm, pump stations and culverts. Capacity upgrades for major facilities such as culverts and pump stations are identified with the City's hydraulic drainage model and IWMPs. Condition upgrades are identified through the above noted inspection and maintenance activities.

Several infrastructure improvements are planned to provide flood protection, some of which are recommended for advancement based on recent storm events:

- **Wellington/Patricia Sanitary Main**: The City's sanitary system hydraulic model identified capacity upgrades for 216m of 200mm sanitary main located in the lane east of Wellington Street between Lincoln Avenue and Patricia Avenue, and 356m of 200mm sanitary main on Patricia Avenue from the lane to Coast Meridian Road. The upgrades were planned to take place with Neighbourhood Rehabilitation work scheduled for that area in 2024. The sanitary mains are currently operating near capacity with sanitary flow, with limited capacity for additional stormwater inflow and infiltration expected during heavy rain events. Due to the surcharge events experienced in the mains during the recent atmospheric river events, staff recommend that this project be advanced to complete design and construction in 2022.

- **Fremont Street Drainage Main**: Replacement of a 37m long, 1050mm failed drainage main on Fremont Street, south of Handley Crescent is required. The storm main was planned for replacement with the 2025 Neighbourhood Rehabilitation program. However, unprecedented rainfall experienced during the recent atmospheric events exacerbated the existing condition of the main, which suffered a partial collapse. Public works staff provided a temporary repair, but a further collapse has occurred due to the compromised condition. A steel plate is presently in place above the collapsed section of road to facilitate travel in the interim. Staff recommend that this project be advanced to complete design and construction in 2022.

- **Cedar Drive Culvert Upgrades & Erosion Assessment:** The Hyde Creek IWMP identified the need for culvert upgrades on Cedar Drive at Lombardy Drive (2), Prairie Avenue, and DeBoville Slough. The culvert at DeBoville Slough is included for replacement with the scope of work for the Fremont Connector. The culvert replacement at Prairie Avenue was considered with the capital road project; however, staff are requesting funding in 2022 to support the design of a larger culvert for additional flood protection against climate change and future storm events. The two culverts at Lombardy Drive experienced localized flooding with the recent atmospheric rain events; staff are requesting funding to complete the upgrade design and environmental permitting in 2022 with construction to follow in 2023. The Cedar Drive watercourse is experiencing erosion at several locations along its length due to higher flows and a lack of bank protection. An assessment to determine the erosion extents and make recommendations on bank protection works and associated costs is recommended for inclusion with the design.

- **Greenmount Avenue Drainage Main**: A new drainage storm main is planned on Greenmount Avenue between Wellington Street and Coast Meridian Road with the 2024 Neighbourhood Rehabilitation program to address drainage issues in that block. Replacement of a drainage main on Greenmount Avenue west of Wellington Street will also be considered for replacement as it was identified as a potential source of inflow/infiltration during the atmospheric river events, which may be limiting capacity in downstream pipes. CCTV video and further inspection in 2022 will be used to confirm staff observations and identify other potential sources in the area.

- **Wilson Avenue/Gates Park**: a drainage assessment is planned in 2022 for the cul-de-sac at the west end of Wilson Avenue and parking lot at Gates Park. Both areas are prone to flooding during high rain and tide events when water is released from the Coquitlam River Dam. The drainage system discharges to the Coquitlam River and backs up when the river levels are high. The assessment will identify and evaluate options to address flooding and mitigate damage to infrastructure and property while improving site safety. Rerouting the flow via a gravity connection or pumping to the drainage system on Reeve Street will be explored as an alternative, along with other potential solutions.

- **Maple Creek Pump Station:** The Maple Creek drainage pump station was constructed in 1990 and has capacity, condition, safety, and fish passage issues. The existing pumps are inadequate to convey the creek flow and large event storm flows from Maple Creek to the Coquitlam River, and do not provide protection against climate change impacts such as increased rain fall and sea level rise. Additionally, the current configuration does not permit fish passage when the pumps are operating. A new, fish friendly pump station was approved in the capital budget and designed in 2021. The pump station was designed for a 20% increase in design flows to account for climate change impacts Environmental permitting is underway with construction is scheduled for 2023.

- **Cedar Pump Station***:* The Cedar drainage storm pump station was constructed in 1980 and received electrical upgrades in 2012, The station requires pump upgrades to provide additional capacity; it is operating under capacity to manage increased flows which have occurred during significant rain events. The current pump style is also not fish passable. The Cedar Drainage Pump Station upgrade project was approved with the last capital budget and included design in 2023, environmental permitting in 2024, and construction in 2025. However, with the flooding experienced in this drainage catchment during the recent atmospheric river events, staff recommend that this project be advanced by one year to start the design in 2022, with permitting to following in 2023 and construction in 2024.

EMERGENCY MANAGEMENT

The City has four emergency management plans that support flood-related emergencies/disasters, such as freshet, atmospheric rivers and winter storms and addresses the four phases of emergency management (preparedness, mitigation, response and recovery).

These plans include:

- An *Emergency Response Plan,* which outlines how staff and resources will respond to an emergency/disaster, inclusive of the City's authority and responsibilities to act; and operational guidelines for coordinating response to incidents arising from the hazards and risks faced by the residents of the City.

- A *Crisis Communications Plan,* which provides step-by-step guidance and practical tools for effectively managing internal and external communications when an issue or crisis occurs.

- The *North East Sector Disaster Debris Management Plan,* which supports the communities of Anmore, Belcarra, Coquitlam, Port Coquitlam and Port Moody to effectively and efficiently respond to debris generating incidents (wind storms, earthquake and floods), that exceed each municipality’s capacity for normal garbage and recycling operations.

- The *Flood and Evacuation Planning Guide,* which is designed to facilitate the safe and orderly evacuation of residents, businesses, and others in response to a flood-related events. The document primarily focuses on freshet; however, it does contain information to support other flood-related events and considers the processes and procedures identified within the BC Hydro Emergency Planning Guide: Coquitlam Dam.

In addition to these plans, maintaining inter-agency relationships with partner agencies is vital during all emergency management phases. As such and for flood-related events, the City continues to foster relationships with partner agencies such as BC Hydro, RCMP and neighbouring municipalities.

Through its partnership with Emergency Management, the City is connected to an array of subject matter experts in provincial ministries and federal agencies which provides an opportunity to:

- increase situational awareness in advance of and during a flood-related event, e.g. by attending EMBC Seasonal Readiness sessions and Coordination Calls, City and Emergency Operation Centre staff can draw upon knowledge from agencies such as Environment Canada, the River Forecast Centre and the Ministry of Forests, Lands, Natural Resource Operations and Rural Development's Flood Assessment Unit;
- coordinate response activities for events that are multi-jurisdictional in nature; and
- seek cost recovery from EMBC for expenses incurred.

NEXT STEPS

In a separate report, staff will bring forward recommended amendments to the zoning regulations for residential development in the floodplain. A comprehensive Floodplain Bylaw to regulate land uses under the flood construction level will be brought forward for consideration later this year. Future work will identify changes necessary to respond to new information, address changing weather patterns, and mitigate the impacts of rising sea levels.

FINANCIAL IMPLICATIONS

Staff request funding to advance the following infrastructure upgrades ahead of schedule to mitigate potential impacts from future atmospheric river and winter storm events:

- Funding of $150,000 in 2022 from the General Capital Reserve for design of the Cedar Drainage Pump Station. Funding for environmental permitting ($10,000) in 2023 and construction costs in 2024 ($1.5M) will be brought forward as future capital requests if grant funding is unavailable.
- Funding of $85,500 in 2022 from the General Capital Reserve for design and construction of a failed drainage main on Fremont Street, south of Handley Crescent.
- Funding of $1,145,000 in 2022 from the Sanitary Sewer Reserve for design and construction sanitary main upgrades on Patricia Avenue and the lane east of Wellington Street.
- Funding of $100,000 in 2022 from the General Capital Reserve to upgrade three culverts and assess erosion on the Cedar Drive watercourse. Funding for environmental permitting and construction costs in 2023 ($700,000) will be brought forward as a future capital request if grant funding is unavailable.

OPTIONS (✓= **Staff Recommendation)**

	#	Description
✓	1	Amend the 2022 Financial Plan to include: 1. Design funding in 2022 ($150,000) from the General Capital Reserve for the Cedar Drainage Pump Station. 2. Design and construction funding in 2022 ($85,000) from the General Capital Reserve for replacement of a failed drainage main on Fremont Street. 3. Design and construction funding in 2022 ($1,145,000) from the Sanitary Sewer Reserve for sanitary system upgrades on Patricia Avenue and the lane east of Wellington Street. 4. Design funding in 2022 ($100,000) from the General Capital Reserve to upgrade three culverts and assess erosion on Cedar Drive.
	2	Request additional information.

ATTACHMENTS

Attachment 1 – Atmospheric River Storm Response

Attachment 2 – Port Coquitlam Flood Mapping Update

Lead authors: Melony Burton, Trisha Maciejko, Jennifer Little

CITY OF PORT COQUITLAM

Atmospheric River Storm Response

December 14, 2021

What is an Atmospheric River?

- Long, narrow streams of high water that deliver intense amounts of rainfall over short period
- Unprecedented events
- Surpassed total months rainfall (Nov avg. 166mm)
  - 16 days of storms totaled 565.2mm

Capital Planning

Getting the Basics Right

Proactive Maintenance

Back to the Basics Service Levels

- Ditch and Culvert Maintenance

- Catch Basin Cleaning

- Storm Main Cleaning

Pre-Storm Preparation

Reactive Service Level Work Plans

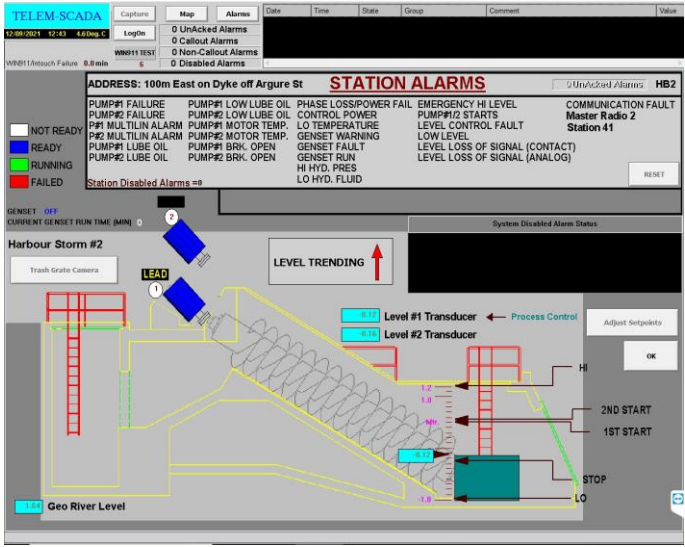
- Beaver Dam Removal
- Trash Grate Cleaning
- Storm Pump Stations

Regional Collaboration

- Coordinate with EMBC
- Coordinate with internal emergency preparedness
- Receive updates from BC Hydro pertaining to dam spill and river levels
- Coordinate with other municipalities

During Storm Event

- Generators for Pumps

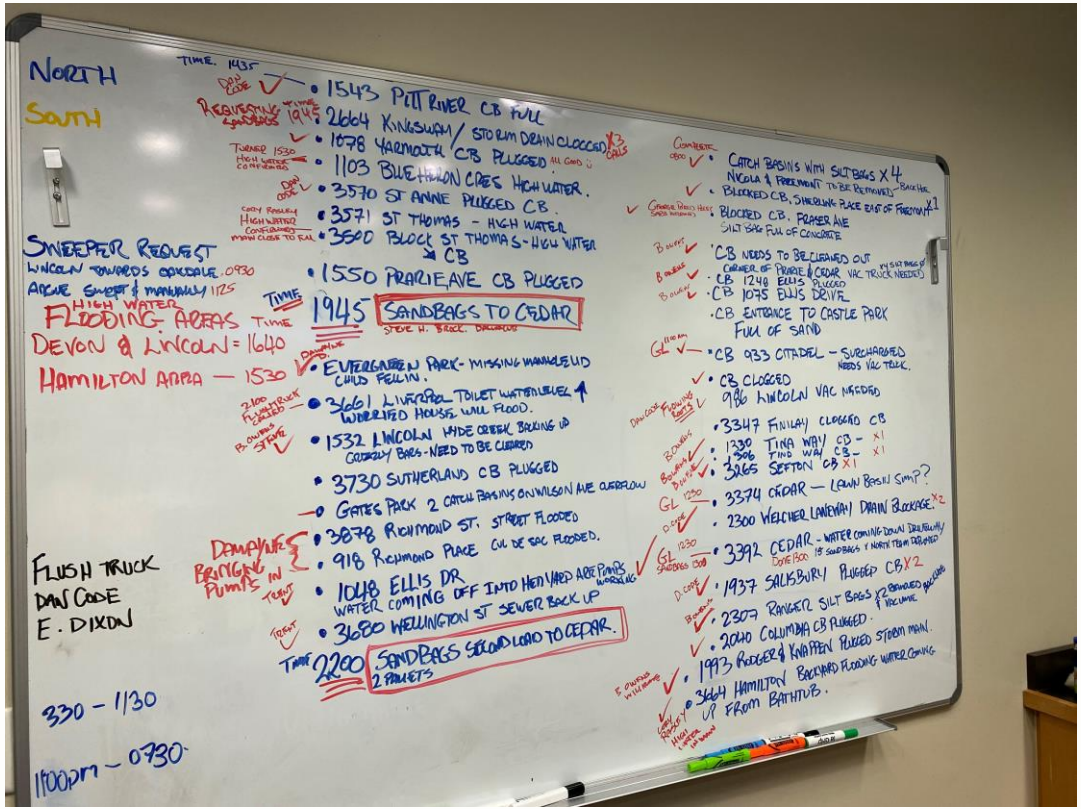


- Monitor intake and discharge levels

- Road and Trail Closure Signage

During Storm Event

Providing Customer Service During the Storm



Communication Outreach

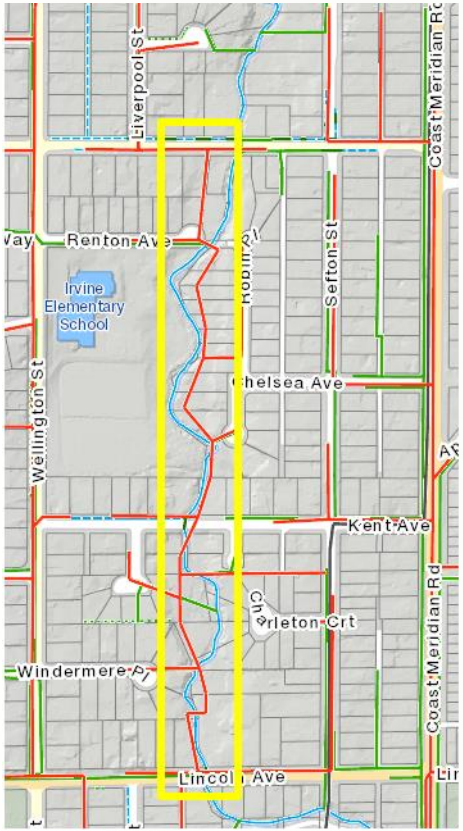
- **Social Media Postings**

Post Event Activities

Challenges Highlighted

- Cedar Pump Station
- Maple Pump Station
- Liverpool Area

- Climate Action Plan



Next Steps

Flood Protection Report

- Interim measures
- Proactive and planned actions
- Capital Project Financial Planning Options

Appreciation

Glad the rain has stopped for the moment. Made my heart full and sink at the same time when I saw the hard workers cleaning out the catch basins across the street from me at 2:30a.m., yes it woke me up but I sure felt for these guys and am very grateful to all the city workers.

Thank you so much City of Port Coquitlam for looking after us so well!
I ♡ PoCo!

Thank you to all of the City workers who are working around the clock.

Port Coquitlam Flood Mapping Update

RECOMMENDATION:

None.

PREVIOUS COUNCIL/COMMITTEE ACTION

On September 17, 2019 Council carried the following motion:

> *That staff prepare flood maps showing current flood risk to Port Coquitlam from the Fraser Basin and provide a report in the fall 2019 with information about the risks facing the community from rising sea levels that align with projections in the most recent Intergovernmental Panel on Climate Change report.*

REPORT SUMMARY

Port Coquitlam has participated in the Fraser Basin Council's Lower Mainland Flood Management Strategy ("the Strategy") since its development in 2014. Participants in the strategy have responsibilities or interests related to flood management and include the Government of Canada, the Province of British Columbia, Lower Mainland local governments, First Nations and non-governmental and private sector entities in the region. This report summarizes the flood projections for Port Coquitlam, the regional work completed to date and presents the Strategy's next phase.

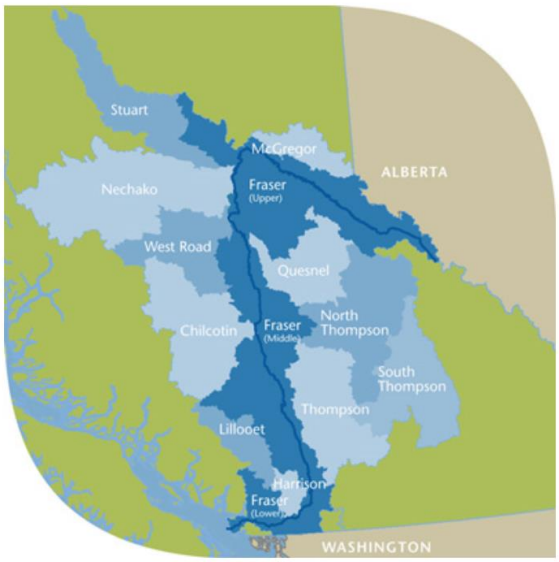
BACKGROUND

The Lower Fraser Watershed is fed by 12 major watersheds.

1. The Upper / Middle Fraser
2. Stuart
3. McGregor
4. Nechako
5. Quesnel
6. West Road-Blackwater
7. Chilcotin
8. North Thompson
9. South Thompson
10. Thompson
11. Lillooet
12. Harrison

These watersheds are illustrated on Figure 1.

Figure 1 – Fraser Basin Watersheds



https://www.fraserbasin.bc.ca/basin_watersheds.html

In addition, the Lower Fraser watershed incorporates a number of smaller watersheds: Stave Lake and River drain into the Fraser between Maple Ridge and Mission; Alouette Lake and River flow into the Pitt River; the Pitt River drains south from Garibaldi Provincial Park through Pitt Lake, emptying into the Fraser River between Pitt Meadows and Port Coquitlam.

Coquitlam Lake drains via the Coquitlam River to empty into the Fraser River just east of the Port Mann Bridge. The Brunette River drains Burnaby Lake and Still Creek to join the Fraser River at Coquitlam.

The Fraser Basin Council's Strategy considers this complex network in its entirety. The complexity of this network is why it is critical that a regional approach be taken.

Flood risk in the Lower Mainland has been historically driven by the annual spring melt (freshet), however, impacts of sea level rise due to climate change is anticipated to contribute to flood risk in the future.

DISCUSSION

Phase 1 of the Fraser Basin Council's Strategy was initiated in 2014 and included four distinct projects:

- Analysis of future flood scenarios
- Regional assessment of flood vulnerabilities
- Lower Mainland dike assessment
- Review of flood management policies and practices

These projects have been incorporated into a summary report included as Attachment 1. Phase 1 also included flood mapping based upon 4 flooding scenarios:

A. Present day Coastal Flood (1:500 yr storm, current sea level)
B. Year 2100 Coastal Flood (1:500 yr storm, 1m sea level rise*)
C. Present Day Freshet (1:500 yr, high tide, current sea level, 17,000 m3 at hope)
D. Year 2100 Freshet (1:500 yr, high tide, 1m sea level rise* & moderate climate change, 20,000 m3 at hope)

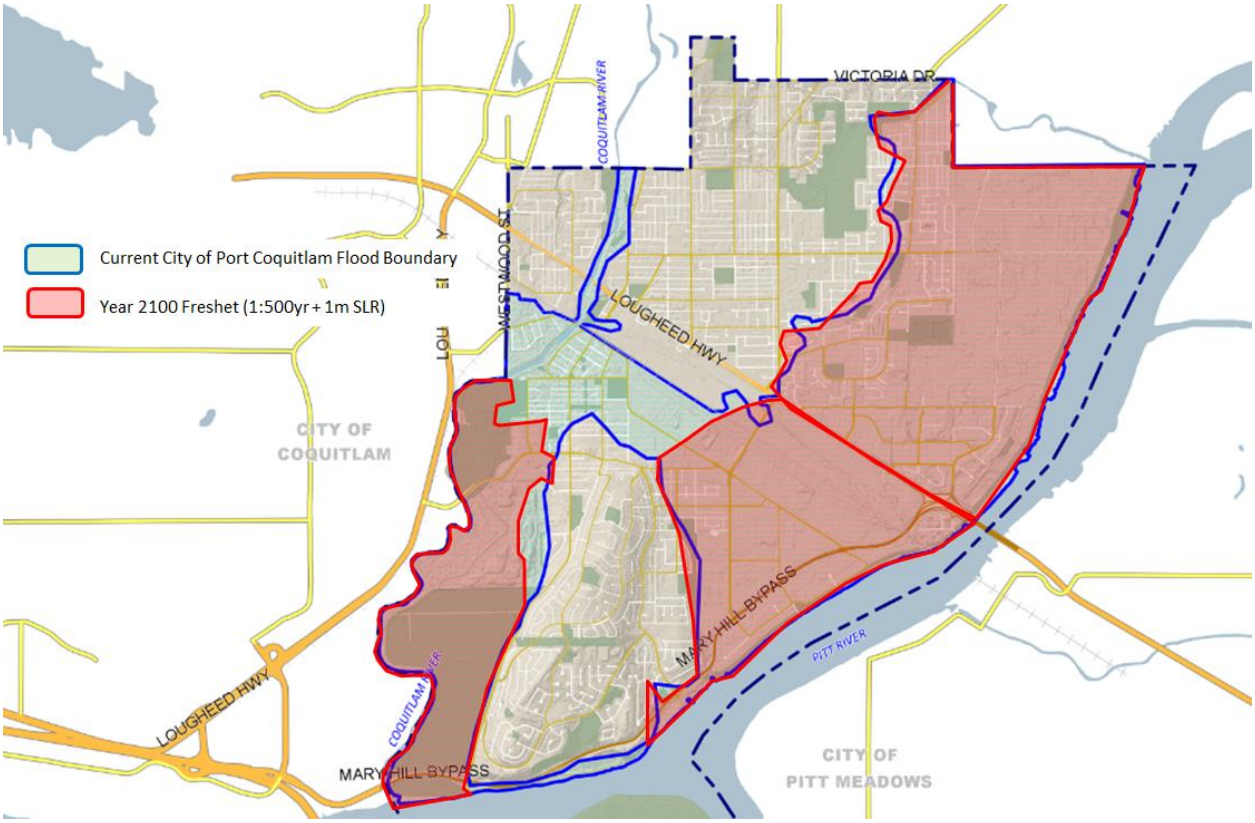
** The Fraser Basin Council's assumption of 1.0m sea level rise by 2100 is consistent with the recent Intergovernmental Panel on Climate Change's findings in their September 2019 Special Report on the Ocean and Cryosphere in a Changing Climate. In this report, the IPCC forecasts global mean sea level changes in the magnitude of 0.29 to 1.1m by 2100 depending on the climate model metrics considered.*

Since the early 1970s the province has generally accepted a 1:200 Annual Exceedance Probability (AEP) event to be the minimum provincial dike design standard for new dikes. Consistent to our neighbouring municipalities, the City of Port Coquitlam has designed and constructed our dikes to these elevations. The 1:200 flow rate is equivalent to the 1948 flood, which is understood to be the second largest Fraser River flood on record, whereas, the Strategy's flood modeling and mapping is based upon the largest flood on record of 1894, commonly referred to as the 1:500 year event.

It should also be recognized that the majority of the existing dikes across the lower mainland do not meet the current minimum provincial standard (1:200 event), as provincial standards have been revised since the majority of dikes were constructed. However, in 2007, the City proactively raised the dikes in the community to ensure we are protected against a 1:200 year flood event. In recent years, the City has completed a number of diking system upgrades to prepare for Fraser River freshets. In addition to large capital projects, the City also completes numerous inspection and maintenance activities to ensure the diking system is maintained to an adequate level.

Flood maps, for the four scenarios above are included as Attachment 2 and the current flood map utilized by the City of Port Coquitlam is included as Attachment 3. The maps are as expected. The City of Port Coquitlam is protected against the 1:200 year flood event; however dike overtopping is predicted for the 1:500 AEP. In Figure 2, the flooding extents of Scenario D (Year 2100 Freshet) have been overlaid on the City's current flood map to demonstrate the comparable footprints.

Figure 2 – Flood Map Overlay



Phase two of the Fraser Basin Council's strategy is underway, and is focused on identifying regional infrastructure priorities for flood mitigation, further exploration of flood mitigation methods and creation of a regional framework for decision making and funding requests to higher levels of government. This work is detailed in a July Briefing included as Attachment 4, and is expected to be completed in 2020. Staff will report back in 2020 with the results of phase two, and any direct implications for Port Coquitlam.

Additionally, the Fraser Basin Council is developing an interactive Lower Fraser Floodplain Model which will be accessible by municipalities and will be used to model the impacts of flood mitigation projects and anticipate this tool to be live in early 2020. This model will be utilized by municipalities for planning improvement projects with the greatest benefit to cost ratios and will help identify unintended consequences prior to construction.

Once phase two is complete, phase three will focus on implementation.

FINANCIAL IMPLICATIONS

None. This report is for information only.

ATTACHMENTS

Att#1: Lower Mainland Flood Management Strategy – Phase 1 Summary Report

Att#2: Fraser Basin Council – Flood Mapping – Port Coquitlam

Att#3: Current Port Coquitlam Flood Plain

Att#4: Lower Mainland Flood Management Strategy – Flood Strategy Briefing – July 2019

Lead author(s): Forrest Smith

Zoning Bylaw Amendments for Single Residential and Duplex Development in the Floodplain

RECOMMENDATION:

That Committee of Council recommend to Council that the Zoning Bylaw be amended to further regulate new single residential and duplex development below the flood construction level.

PREVIOUS COUNCIL/COMMITTEE ACTION

May 28th, 2019 - Committee of Council recommended to Council that the Zoning Bylaw be amended to limit exempt floor area in a basement; restrict development below the flood construction level; and further regulate cooking, laundry and bathroom facilities in dwelling units.

June 11th, 2019 - Council gave Zoning Amendment Bylaw No. 4132 first two readings.

June 25th, 2019 - Council referred Zoning Amendment Bylaw No. 4132 back to staff to provide a report to Committee of Council to address concerns raised at the Public Hearing.

REPORT SUMMARY

This report brings forward recommendations related to recent flooding events in the region and the potential impact of future events in Port Coquitlam. Amendments to the Zoning Bylaw are proposed to better regulate the use of floor area within new single-residential and duplex dwellings located in the flood plain; the intent is to address the potential for areas below the flood construction level being converted to habitable uses despite the area being identified as vulnerable to potential flooding.

BACKGROUND

History: In June 2019, the City considered implementing a suite of Zoning Bylaw amendments intended to address concerns pertaining to the height, size and massing of single and duplex residential buildings, the prevalence of multiple secondary suites being constructed in these buildings and habitable floor area being constructed below the flood construction level. During the public hearing, concerns were raised by local builders as to the impact of these changes on single residential construction, particularly the ability to maximize the size of dwelling units on lots and to provide secondary suites and finished living spaces in basements outside of the flood plain. Council directed the proposed amendments back to staff to review the concerns and propose options to address the public input. Further work on the proposed bylaw amendments was ultimately deferred due to amended priorities and changes in staff.

In November 2021, the coast of British Columbia was subject to a series of severe storms causing catastrophic flood damage to properties, homes, businesses and infrastructure. These floods were caused by extreme weather events and while the impact to Port Coquitlam was limited compared to

many neighbouring municipalities, the events serve as a reminder of the community's vulnerability to flood risk.

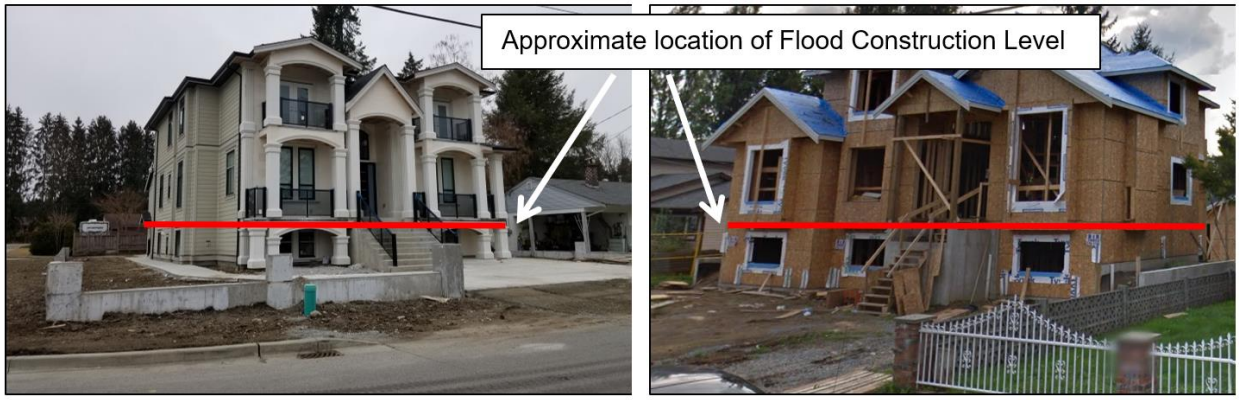
Context: The City currently has approximately 12,200 properties zoned to permit single-residential or duplex development; of these properties, over 18% (2,200) are located in the flood plain. The primary issue associated with buildings in the flood plain occurs when owners convert non-habitable space below the flood construction level in new houses to a secondary suite or other habitable space. This increases the potential for property damage which could occur should the City experience a flood. It also increases the level of vulnerability for persons who are occupying space below the flood construction level as they are living in unauthorized suites that have not been inspected for compliance with building and fire codes and could experience significant impact in a flood event.

Policy and Regulations: The OCP includes policies which stress the need to regulate development in the floodplain through technical considerations of floodproofing in building and development design and by requiring new developments be constructed to meet minimum flood construction levels.

In 1978, the City first amended the Zoning Bylaw to define the City's flood plain areas and set regulations for new development that fell below the flood construction level (area below this level could potentially be impacted during a 1 in 200-year flood). The regulations are intended to facilitate protection to private property by restricting what could be constructed below the flood construction level as property redeveloped and new buildings are constructed over time.

Current regulations of the Zoning Bylaw restrict homes in the flood plain to having habitable floor space (including bedrooms, kitchens and living rooms) located above the flood construction level, which can be as much as 7 or 8 feet above a site's natural grade, and only includes habitable space in its calculation of the floor area ratio (ratio of a building's total floor area to the size of the piece of land upon which it is being built); all space below the flood construction level is exempt from being included in the City's floor area ratio calculation.

The space below the flood construction level is currently permitted to include bathrooms, garages, utility rooms, mechanical rooms and entry foyers with no floor area restrictions. All other spaces below the flood construction level are to be non-habitable (typically unfinished space); however, there are no restrictions on ceiling height or building elements such as windows and doors to these non-habitable and floor area exempt spaces. Over time, many property owners convert this non-habitable space to include habitable rooms and often unauthorized secondary suites. A review of building permits issued in recent years shows that most new dwellings in the flood plain are designed to easily facilitate conversion of the non-habitable space to one or more additional suites.



Non-habitable lower floors with an abundance of windows and doors

Proposed Amendments: Staff recommend bylaw amendments be brought forward that will further limit the ability for spaces within single-residential and duplex buildings that are below the flood construction level in new construction to be converted to habitable space.

The amendments proposed to address this concern are:

1. to restrict the number and size of non-habitable rooms located below the flood construction level to:
   (i) one entry foyer up to 10m^2 (107 ft^2) in size; and
   (ii) one mechanical and/or utility room with no more than one set of laundry facilities of up to 7m^2 (75 ft^2) in size; and
   (iii) include these spaces in the floor area ratio calculation (remove the current exemption);
2. to allow for one garage up to 46m^2 (495 ft^2) in size, which would continue to be exempt from the floor area ratio calculation;
3. to restrict all other spaces within the building below the flood construction level to that of a crawl space with a floor to ceiling height of no more than 1.5m (5 ft.); and,
4. to not permit windows or external door openings in a crawl space area.

DISCUSSION

The proposed amendments respond to concerns about to the use of space below the flood construction level for habitable purposes, including the provision of unpermitted secondary suites in areas below the flood construction level in new single residential and duplex construction. In staff's experience, these non-habitable spaces are easily converted because they are built with full height ceilings, bathrooms, windows and doors. They are considered "bonus" or "free" space as they are exempt from the City's floor area ratio calculations, however, they are often valued and sold at the

same price as habitable space; this increases the price of the home and the pressure to convert the space into un-permitted uses. Residents and tenants occupying these spaces are then put at risk.

The amendments do not prohibit all construction below the flood construction level and some exemption to the floor area ratio would still be permitted for uses that do not encourage conversion to living space - garages (up to 46m^2 (495 ft^2)), mechanical and utility rooms and entry foyers. The restriction on remaining areas below the flood construction level as crawl space with height limitations and prohibition of windows and doors will combine to limit potential for other spaces to be converted. The provisions are intended to regulate the form of new construction and will not impact existing homes lawfully constructed prior to adoption of the proposed amendments.

Staff are working on a comprehensive floodplain bylaw to ensure a consistent, clear and comprehensive regulatory approach to all properties and associated land uses constructed under the flood construction level. This bylaw will be based on provincial recommendations and will supplement zoning regulations and formalize current practices.

FINANCIAL IMPLICATIONS

The proposed bylaw changes would not impact the City's current practice of billing for secondary suites. The City currently bills water, sewer and solid waste fees for any secondary suites that exist including dwelling units that are not permitted under, or do not comply with the Building Code or a City bylaw (such as the Zoning Bylaw or Building and Plumbing Bylaw). The charge imposed on a property reflects the actual use of the property from a utility consumption standpoint only. The City's inclusion of unlawful dwelling units in the calculation of such charges does not constitute City approval of such a dwelling unit, nor does it affect or limit the City's powers to enforce its bylaws with respect to such a dwelling unit.

OPTIONS (✓= Staff Recommendation)

	#	Description
✓	1	Restrict areas below the flood construction level in new single residential and duplex development to a crawl space with no windows or doors plus garage, utility room and entry foyer and include utility rooms and the entry foyer in the floor area ratio.
	2	Request staff bring forward a different proposal to address concerns related to habitable areas being located below the flood construction level.
	3	Determine that no change is required to the current regulations.

Lead author(s): Jennifer Little

Contributing author(s): Bryan Sherrell