



City of Port Moody

Report/Recommendation to Council

Date: August 24, 2022
Submitted by: Community Development Department – Policy Planning Division
Subject: Draft Extreme Weather Resilience Plan

Purpose

To present the draft Extreme Weather Resilience Plan for Council adoption.

Recommended Resolution(s)

THAT the Extreme Weather Resilience Plan be adopted as recommended in the report dated August 24, 2022 from the Community Development Department – Policy Planning Division regarding Draft Extreme Weather Resilience Plan.

Executive Summary

Across BC and the globe municipalities are taking a lead role to reduce the impacts of climate change in their communities through energy management, GHG reduction targets, and preparing for future climate change impacts. In June 2019, the City of Port Moody joined many other local governments in declaring a climate emergency, bringing to light the need to take accelerated action on climate change. On July 21, 2020, City Council adopted the Climate Action Plan¹ (CAP), an integrated strategy outlining how the City and the community will reduce greenhouse gas (GHG) emissions and prepare for future climate changes. Through implementation of the CAP, staff have been working to develop an Extreme Weather Resilience Plan that will further the community's progress towards climate change resilience and adaptation goals. Past and ongoing greenhouse gas (GHG) emissions are expected to increase the intensity and frequency of climate impact events in the City. Therefore, the City must be prepared, be able to respond to these impacts, and adapt to these changes in order to ensure public safety, health, and livability.

The purpose of this report is to:

- summarize stakeholder engagement that helped shape the Plan; and
- present the draft Extreme Weather Resilience Plan for Council adoption.

¹ 2020 Climate Action Plan: <https://www.portmoody.ca/en/city-hall/climate-action-plan.aspx>

Background

At the July 21, 2020 Special Council meeting, Council passed the following resolutions:

CW20/065

THAT Council adopt the Climate Action Plan as recommended in the report dated June 22, 2020 from the Planning and Development Department – Policy Planning Division regarding Climate Action Plan;

AND THAT staff be directed to report back with a Two-Year Funding and Implementation Strategy for priority actions.

At the February 2, 2021 Committee of the Whole Meeting, Council passed the following resolutions:

CW21/014

THAT the Phase One Climate Action Implementation Strategy be endorsed as recommended in the report dated December 2, 2020 from the Community Development Department – Policy Planning Division regarding Phase One Climate Action Implementation Strategy;

AND THAT action items and positions identified in the Phase One Climate Action Implementation Strategy without approved funding be referred to a future Finance Committee.

Developing an Extreme Weather Resilience Plan is one of the 23 actions being implemented as a part of the Phase One Climate Action Implementation Strategy². Funding for the Extreme Weather Resilience Plan was approved as part of the 2021 Capital Plan and is funded from the Carbon Offset Reserve (renamed the Local Government Climate Action Program Reserve).

Discussion

On July 21, 2020, City Council adopted the Climate Action Plan (CAP), an integrated strategy outlining how the City and the community will reduce GHG emissions and prepare for future climate changes. Since adoption of the Phase One Climate Action Implementation Strategy in February 2021, staff have been working to initiate implementation of 23 out of 54 actions in the Climate Action Plan before the end of 2022. One of the 23 actions is to develop an Extreme Weather Resilience Plan that outlines short, medium and long-term actions that the City can take to reduce the impact of extreme weather events on the community, with a focus on immediate and long-term support for vulnerable populations. The Climate Action Plan lists two major outcomes that need to be addressed through a recommended suite of actions in an Extreme Weather Resilience Plan, these include:

- ensure all members of the community have equal access to information, support, and resources related to preparing for climate change impacts, such as inclement weather events; and

² Phase One Climate Action Implementation Strategy:

<https://www.portmoody.ca/common/Services/eDocs.ashx?docnumber=562101>

- ensure the City is ready to respond and support vulnerable populations during climate-related hazards, such as flooding, wildfires, and extreme heat or cold.

As committed to in the CAP, staff are continuing to use a low carbon resilience (LCR) framework throughout implementation. Under LCR, the Plan outlines actions that address climate adaptation (adapting to impacts of climate change) while not increasing greenhouse gas (GHG) emissions (climate mitigation).

After a comprehensive development process, staff are pleased to present the draft Extreme Weather Resilience Plan for Council consideration (**Attachment 1**).

Extreme Weather Resilience Engagement

Throughout the Plan's development, staff received input from stakeholders and used this information to inform actions in the Extreme Weather Resilience Plan. Stakeholder engagement and input was collected through three virtual, consultant led, workshops:

1. a Kickoff Meeting, to introduce the planning process and solicit input on adaptive capacity for each extreme weather hazard;
2. the Vulnerability Assessment Review, to discuss the draft vulnerability assessment methodology and results, and initiate the identification of extreme heat adaptation measures; and
3. an Adaptation Measures Workshop, to identify and prioritize measures to reduce or eliminate population and lifeline vulnerability to extreme weather events.

The workshops were attended by industry stakeholders to provide feedback on the Plan's approach, vulnerability assessment and draft actions. A full list of stakeholders can be found on page iv in Attachment 1. Workshops included surveys for participants to provide ideas and input on:

- historical weather events that caused damage or interruption to city service(s);
- the City's adaptive capacity for each extreme weather event;
- the draft vulnerability assessment for population and critical infrastructure; and
- adaptive measures to increase resiliency.

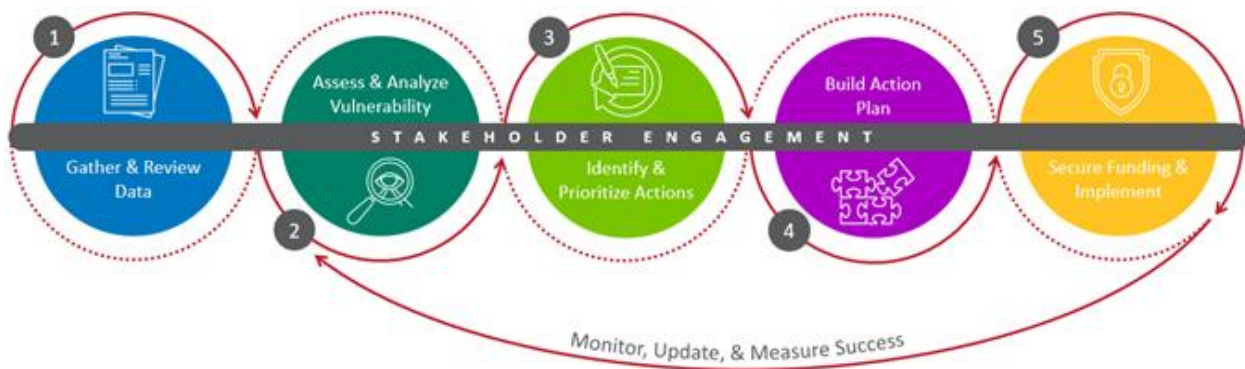
A summary of outcomes from workshop engagement sessions can be found in Appendix B and D of Attachment 1.

Increasing Extreme Weather Resilience

Climate action has been a longstanding priority in Port Moody. The Extreme Weather Resilience Plan considers current and future climate projections, assesses the vulnerability of the community, identifies a subset of the City's community lifelines, and outlines short-, medium- and long-term adaptive solutions to reduce or eliminate future impacts of climate change. The City of Port Moody is committed to achieving its vision of a low carbon and resilient community through sustained implementation of these adaptive solutions.

Developing the Plan

Climate change is becoming more prominent in daily life and the environment around us. Actions taken now and, in the future, will shape how people, infrastructure, and services adapt, and nature responds to increasing climate risks. Therefore, the City must be prepared for, be able to respond to, and adapt to these changes in order to ensure public safety, health, and livability. To develop the Plan, staff worked with consultants to undertake the following five-phase process.



The first phase focused on research, data gathering, selection of extreme weather hazards, vulnerable populations and community lifelines, and the creation of a Neighbourhood Hazards Map.

The second phase presented data and the criteria selected in the first phase to stakeholders for input and feedback. A vulnerability assessment was conducted to determine the exposure and sensitivity of neighbourhoods in Port Moody based on their geographical location and features, and their proportion of vulnerable population groups.

Phase three used all the information from phases one and two to develop a suite of draft adaptive solutions to consider as a part of the plan. These solutions were refined and prioritized through feedback from stakeholders and several iterations of staff review, matched with implementation details. After the list of actions was finalized, information from all phases was compiled into the draft plan.

Action on Equal Access to Information, Resources and Support

Marginalized groups may be disproportionately impacted and have less resources to support preparedness and adaptation to extreme weather events. The Plan used Census data to assist in identifying groups of people that may be more impacted by extreme weather events and focuses adaptive measures to these groups, thus decreasing vulnerability. The demographic variables that were selected for analysis were chosen because of their sensitivity to extreme weather events and their potential ability to adapt; please refer to Table 5 in Attachment 1 (pg. 7) for a full list of demographic variables and indicators chosen for the Plan.

Some of the highest prioritized adaptive solutions selected by stakeholders are actions to increase resources and support for vulnerable populations and require collaboration with community organizations and health authorities. Four actions have been categorized as high

priority, have short implementation timeframes, and have been included in the forthcoming draft Phase Two (2023-2024) Climate Action Implementation Strategy:

- connect and collaborate with neighbourhood groups to establish 'extreme weather ambassadors to lead resilience efforts;
- develop a registry of vulnerable populations;
- enhance extreme weather event awareness, preparedness, and increase education to residents and workers; and
- develop a social network to check on vulnerable populations during extreme weather events.

A more detailed list of all adaptive solutions can be found in Appendix D of Attachment 1.

Action on City Response to Extreme Weather Events

In addition to ensuring that vulnerable populations have the support and resources needed to adapt and respond to extreme weather events, the City must ensure that its facilities and infrastructure are resilient to the changing climate, minimize any interruptions to essential services and provide refuge in case of emergency. There are five adaptive solutions that have been categorized as high priority:

- retrofit City-owned facilities, infrastructure, and public lands for extreme weather events;
- consider changes in land use and policy;
- establish a tree canopy enhancement program;
- work with BC Hydro to prioritize restoration of power to lifelines and vulnerable populations; and
- develop geospatial tools and innovative uses for extreme weather event resources.

A more detailed list of all adaptive solutions can be found in Appendix D of Attachment 1.

Implementation

The City's Policy Planning Division will lead implementation of the Extreme Weather Resilience Plan, in collaboration with the staff climate action working group. The staff working group will continue to meet quarterly and will guide implementation of the Plan. Ongoing monitoring and evaluation of actions being implemented will be integrated into the Climate Action Plan Implementation process, which is designed to track progress in meeting GHG emissions reduction and resilience goals and targets, and to flag when actions may be redundant or require changes. Staff will review the status of the Plan's implementation and present updates through the annual Climate Action Implementation Report.

Implementation of the Extreme Weather Resilience Plan will be iterative and continuously reviewed. The City will review and revise the Plan's goals and actions as part of the planned Climate Action Plan updated in 2025.

Staff are committed to staying up to date on the latest information and initiatives and to continue to be involved in province-wide peer engagement and collaboration, advocacy, and developing best practices.

Like the Climate Action Plan, the Extreme Weather Resilience Plan demonstrates that there is a lot of work to do in upcoming years, and that continued bold efforts will be necessary to increase community climate resilience. Achieving community climate resilience through implementation of climate adaptation goals outlined in the draft plan will require commitment from everyone, including residents, businesses, regional governments, and public organizations. Commitment may come in the form of actions, financial dedication, or other methods.

Other Option(s)

THAT staff be directed to report back with revisions to the Extreme Weather Resilience Plan as specified by Council.

Financial Implications

The level of action outlined in the Extreme Weather Resilience Plan will require dedication of resources including capital and operational costs, existing staff time and consultant assistance. Without dedication of these resources, the implications are that:

- actions outlined and committed to in the Extreme Weather Resilience Plan, Climate Action Plan and Climate Emergency Declaration may be delayed or abandoned; and
- climate change impacts may not be adequately addressed, potentially resulting in greater damage to infrastructure, threat to human health and safety, increased costs of repair and recovery, and other impacts.

Pending adoption of the draft Extreme Weather Resilience Plan, funding for the Plan will be phased in over time. Staff will present a Phase Two Climate Action Implementation Strategy detailing how immediate and short-term actions from this Plan will be integrated into the Climate Action Plan implementation process. The Strategy will identify which actions have been recommended for implementation between 2023 and 2024, as well as related resourcing needs, funding opportunities, lead departments, and action monitoring details.

Communications and Civic Engagement Initiatives

If the draft Extreme Weather Resilience Plan is adopted by Council, staff will post the Plan to the City website and notify stakeholders. The Extreme Weather Resilience Plan includes ongoing monitoring of progress on actions and tracking towards resilience goals. These results will be integrated into the climate action plan implementation updates, presented to Council annually and communicated via the City's communication channels.

Council Strategic Plan Objectives

An Extreme Weather Resilience Plan is Strategic Plan, priority 1 project. This project aligns with the Environmental Leadership priority: reduce the City's impact on the planet, broaden the City's sustainability programs, respond and adapt to climate change through planning and policy development, and address global climate change with local actions.

Attachment(s)

1. Draft Extreme Weather Resilience Plan

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Report Approval Details

Document Title:	Draft Extreme Weather Resilience Plan.docx
Attachments:	- Attachment 1 - Draft Extreme Weather Resilience Plan.pdf
Final Approval Date:	Sep 12, 2022

This report and all of its attachments were approved and signed as outlined below:

Mary De Paoli, Manager of Policy Planning - Sep 7, 2022 - 8:57 AM

Kate Zanon, General Manager of Community Development - Sep 7, 2022 - 11:04 AM

Stephanie Lam, City Clerk and Manager of Legislative Services - Sep 8, 2022 - 4:49 PM

Rosemary Lodge, Manager of Communications and Engagement - Sep 11, 2022 - 8:08 PM

Tim Savoie for Paul Rockwood, General Manager of Finance and Technology -
Sep 12, 2022 - 2:25 PM

Tim Savoie, City Manager - Sep 12, 2022 - 2:44 PM