
To: Mayor and Council
From: Paul Gipps, CAO
Meeting Date: March 18, 2025
Meeting Type: Regular Council Meeting

Prepared by: Matthew Salmon, Infrastructure & Development Engineering Director
Department: Engineering and Environmental Services

Title: Flood Management Strategy
Description: Recommendations on how to manage development within District Flood plains.

RECOMMENDATION

THAT staff be directed to create a Flood Management Strategy Bylaw.

EXECUTIVE SUMMARY

This task was initiated by a [Notice of Motion](#) made by Councillor Brett on July 16, 2024 that directed staff to:

bring back a report regarding the further impact to increased density and impermeable surfaces in the Woodsdale neighborhood. The impacts should consider the Water Quality and Water Quantity in Wood Lake, Winfield Creek, and Middle Vernon Creek. Considering update to the drainage plan from 2002 with new density projects and include water quality impacts.

Following staff discussion and input from CAO it was suggested that the creation of specific regulation pertaining to identifying and mitigating flood hazards would best achieve the desired outcome.

Staff have reviewed the current suite of regulations and guidelines to understand the existing regulatory framework, both provincial and municipal, and to identify the guidance resources available. The conclusion from the research conducted is that staff recommend the creation of a District of Lake Country Flood Management Bylaw similar to this example from the [Comox Valley Regional District](#), and this version from the [Cowichan Valley Regional District](#). Such a Bylaw would collate the existing regulation and guidance and fill in the gaps specific to Lake Country. The aim of the Flood Management Bylaw is to create a concise and useable document to regulate and guide development within flood plains that can be utilised by all.

A Flood Management Bylaw is designed to help protect communities from flood hazards. Here are some key functions it typically serves:

- **Regulates Development:** It sets rules for how and where buildings and structures can be constructed in flood-prone areas. This includes establishing minimum elevations, know as Flood Construction Levels (FCL's) and setbacks from water bodies to reduce flood risk.
- **Designates Flood Plains:** The Local Government Act allows Local Government to designate land as a 'flood plain' and to establish Flood Construction Levels (FCL's), the District has not currently identified specific flood plains, although it is referenced in the OCP. The Zoning Bylaw has FCL's for Okanagan and Wood Lakes respectively.
- **Ensures Safety:** By requiring buildings to be elevated and properly set back from floodplains, it helps minimize damage during flood events, protecting both property and people.
- **Compliance with Guidelines:** It ensures that development within a flood plain complies with all flood hazard guidelines, such as those provided by the Province, Local Government and professional regulators such Engineers and Geoscientists of BC (EGBC) or other authorities having jurisdiction.

- **Community Resilience:** It contributes to the overall resilience of the community by promoting safe and sustainable land use practices that take into account the potential impacts of climate change.
- **Risk Assessment:** The bylaw includes provisions for regular risk assessments and updates to floodplain maps, helping to identify and mitigate potential risks to critical infrastructure

Flood management and stormwater management are both crucial for mitigating water-related risks and are somewhat interrelated, however they focus on different aspects as summarised below:

Flood Management:

- **Scope:** Primarily deals with managing and mitigating the impacts of large-scale flooding events, such as river floods, coastal floods, and flash floods.
- **Strategies:** Includes building dyke, dams, floodwalls, and implementing floodplain zoning and regulations. It also involves emergency response planning and flood forecasting.
- **Objective:** Aims to protect people, property, environment, and infrastructure from the destructive effects of floods.

Stormwater Management:

- **Scope:** Focuses on managing runoff from rainfall and snowmelt in urban and suburban areas to prevent localized flooding, erosion, and water pollution.
- **Strategies:** Involves the design and maintenance of stormwater systems like drains, retention basins, green infrastructure (e.g., rain gardens, storm ponds), and stormwater treatment facilities.
- **Objective:** Aims to control the quantity and quality of stormwater runoff to reduce flooding, improve water quality, and enhance urban environments.

In summary, while flood management addresses large-scale flood events, stormwater management deals with everyday runoff and its impacts on urban areas. Both are essential for creating resilient and sustainable communities.

**"When we take care of the land and water,
the land and water take care of us."**
-siwłk^w (water) Declaration

DISCUSSION/ANALYSIS

The District has initiated various studies over the years to understand the impacts and risk mitigation strategies for managing floods from potential sources such as failure of our upper lake dams, Middle Vernon Creek, Wood and Kalamalka Lakes. In addition to these studies, the current suite of interrelated regulation and guidelines includes but is not limited to:

- District of Lake Country [Zoning Bylaw](#)
- [BC Building Code](#)
- District of Lake Country Integrated Stormwater Management Plan – due completion spring 2025
- District of Lake Country [Subdivision and Development Servicing Bylaw](#)
- District of Lake Country [Building Regulation Bylaw](#)
- District of Lake Country [Stormwater Management Bylaw](#)
- Provincial Flood Hazard Area Land Use Management Guidelines
- EGBC Professional Practice Guidelines & Practice Advisories:
 - LEGISLATED FLOOD ASSESSMENTS IN A CHANGING CLIMATE IN BC [PP Guidelines - Legislated Flood Assessments in a Changing Climate in BC V.2.1](#)

- FLOOD MAPPING IN BC - [APEGBC-Guidelines-for-Flood-Mapping-in-BC.pdf](#)
- PRACTICE ADVISORY – ELECTRICAL ENGINEERING CONSIDERATIONS IN FLOOD-RESILIENT DESIGN OF BUILDINGS <https://www.egbc.ca/getmedia/9528eaec-8b60-4426-8b79-684be54a78f4/Practice-Advisory-Electr-Consid-Flood-Resilient-Design.pdf.aspx>
- Okanagan Basin Water Board (OBWB) [Okanagan Mainstem Floodplain Mapping Project](#)
- [B.C. Flood Strategy](#) – released publicly March 2024. The Ministry of Water, Land and Resource Stewardship (WLRS) is currently [soliciting feedback](#) to inform the production of Provincial flood policy guidance.

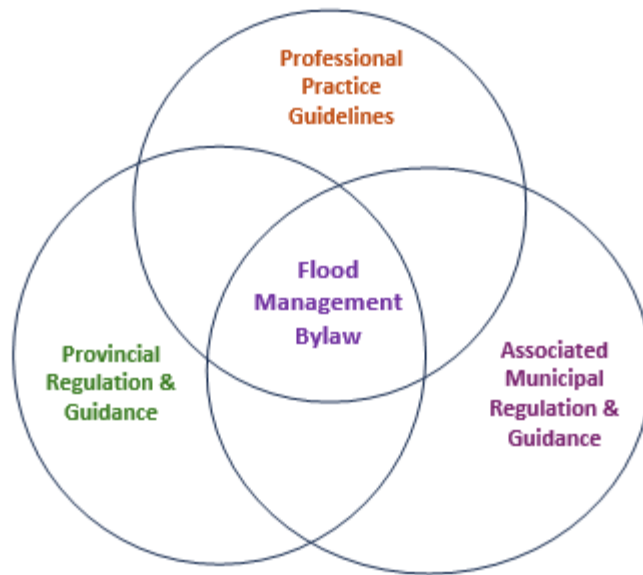


Figure 1. The relationship between the existing levels of regulation and guidance and a Flood Management Bylaw.

FINANCIAL IMPLICATIONS

None Budget Previously Approved Other (see below)

Council has directed staff to apply for funding ([link to Council Report](#)) under the Ministry of Municipal Affairs Local Government Infrastructure Planning Grant Program. The scope of the project to create the Flood Management Bylaw has been finalised with our preferred consultant and the project is ready to proceed once suitable funding is in place.

COMMUNICATION

The organisations representing the building and development industry will be consulted during the drafting of the Flood Management Bylaw. The Districts' Communications Team will also keep the public informed. A guidance brochure like this [example](#) from the Cowichan Valley Regional District, will also be produced to compliment the Flood Management Bylaw.

Respectfully Submitted.

Matthew Salmon, Infrastructure & Development Engineering Director

Report Approval Details

Document Title:	Flood Management Strategy.docx
Attachments:	
Final Approval Date:	Mar 10, 2025

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

Reyna Seabrook, Director of Corporate Services - Mar 10, 2025 - 8:56 AM

Paul Gipps, Chief Administrative Officer - Mar 10, 2025 - 9:44 AM

Makayla Ablitt, Legislative & FOI Coordinator - Mar 10, 2025 - 10:13 AM