



Governance & Services Committee

TO: Governance and Services Committee

FROM: Todd Cashin
Director of Community Services

DATE: June 28, 2021

SUBJECT: Regional Floodplain Management Plan – Phase 3 (6430-18)
Central Okanagan Flood Mitigation Planning – Project Update

Purpose: To provide the Governance & Services Committee with an update on the completion of Phase 3 of the Regional Floodplain Management engagement and the next steps to develop a flood mitigation planning framework for the Central Okanagan.

Executive Summary:

Flooding and other natural hazards continue to pose a risk to Canada's economic vitality, infrastructure, environment, and citizens. The Regional District Central Okanagan is no stranger to flood damages having experienced them on riverine and lake hazard zones in recent years. The Regional Board's Strategic Priorities identifies hazard management as a priority and further supports the completion of Phase 3 of the Regional Floodplain Management Plan.

The current project is the culmination of several years of work, including investigations of lake and creek flood hazard, as well as flood risk assessments. Building on this work, Phase 3 seeks to prepare a mitigation planning framework to reduce flood risks with a focus on non-structural mitigation strategies.

Tamsin Lyle, Principal Engineer of Ebbwater Consulting Inc, with support from other project team members will be providing an update on the Central Okanagan Flood Mitigation Planning project, including a summary on engagement.

RECOMMENDATION:

THAT the Governance and Services Committee receive for information the Central Okanagan Flood Mitigation Planning update report dated June 28, 2021.

Respectfully Submitted:

A handwritten signature in black ink, appearing to read "Todd Cashin".

Todd Cashin
Director of Community Services

Approved for Committee's Consideration

A handwritten signature in black ink, appearing to read "Jodie Foster".

Jodie Foster, Director,
Communication & Information Services

Prepared by: Brittany Lange, Environmental Planner

Implications of Recommendation:

Strategic Plan:	Receiving the update on the development of the Central Okanagan Flood Mitigation Plan for information supports the Regional Board Strategic Priorities 2019-2022 with respect to “Environment” and supports the completion of Phase 3 of the Regional Floodplain Management Plan.
Policy:	Receiving the update on the development of the Central Okanagan Flood Mitigation Plan for information supports numerous policies contained within Our Land, Our Water, and Our Governance outlined in the Regional Growth Strategy Bylaw No. 1336.

Background:

Regional Floodplain Management Plan

In June of 2016, the Regional District of Central Okanagan Regional Floodplain Management Plan (RFMP) Phase 1 Report was completed. The RFMP identified high risk areas in a region-wide high-level risk assessment and gap analysis and established the scope and priorities intended to be completed with Phases 2 and 3. Phase 2 included development of flood hazard maps for a number of streams, the shores of Okanagan, Ellison, and Kalamalka/Wood lakes, as well as ongoing risk assessments and dam inundation studies around the region.

Phase 3, seeks to use the information collected through Phases 1 and 2 to develop non-structural flood mitigation strategies; where non-structural describes mitigation activities that do not involve large engineered structures (e.g., dikes, dams, etc.). With risk and hazard assessments completed, the next step in the process is to identify the best and most cost-effective mitigation strategies.

Central Okanagan Flood Mitigation Plan

In January of 2021, the Regional District engaged a team of consultants (Ebbwater Consulting, SHIFT Collaborative, and EcoPlan) to prepare a Flood Mitigation Plan. Effective flood management requires implementing a range of options, rather than relying solely on traditional structures such as dikes or dams. So called non-structural options, like policies, programs and initiatives play an important role in reducing risk and improving flood resiliency and include:

- **Risk Reduction**
 - Land stewardship – maintaining and restoring natural areas (e.g., watersheds, wetlands, riparian areas, natural waterways) to help reduce downstream flooding.
 - Land use management - encouraging or requiring types of land use in flood hazard areas that will prevent or reduce potential damage. For example, a green space would be less affected by flooding than a new sub-division.
 - Building management - regulations and strategies that make structures and belongings less susceptible to flood damage. For example, using flood-resistant materials for the ground floor of a building.

- **Resilience**
 - Education and awareness – homeowner guides, flood and climate change education, neighbourhood preparedness programs, and other learning resources.

- Emergency response - early warning systems, temporary barriers, and other flood response programs.
- Insurance and disaster financial assistance - managing financial risks where no other mitigation strategies are available.

Final deliverables of Phase 3 work will include the following:

- Report on relevant and preferred non-structural flood mitigation options.
- Report on engagement process and input received.
- A flood mitigation planning framework.
- Presentations to member municipalities, First Nations, and RDCO.

Completion of a flood mitigation plan for the region will provide an opportunity and framework for Central Okanagan jurisdictions to consider mitigating and preparing for risks using consistent strategies while continuing to build strong working relationships. Having consistent, region-wide mitigation strategies will create ongoing efficiencies now and in the future, and may affect day-to-day operations in addition to events that require activation of the Emergency Operations Centre.

The project is being guided by a diverse and multi-jurisdictional steering committee, who has provided input at key stages and will continue to do so. This steering committee is enabling and strengthening collaboration in the region.

The overall objective of the project is to develop flood mitigation strategies such that the likelihood of flood damage is reduced. The following are expected to benefit from the outcomes:

- People, property, and the environment. Proactively identifying mitigation opportunities to protect people and property as well as surface and ground water resources from contamination due to flooding in lakes, streams and watercourses.
- Water purveyors, local governments, provincial agencies, and other stakeholders. Flooding has impact on various levels of governments and organizations; through collaboration, this project will ensure the information is beneficial to other agencies and jurisdictions.

Summary of Engagement Activities

Two online stakeholder engagement workshops, attended by approximately 40 people have been conducted. This has been complemented by public engagement, including the development of project flyers, advertising, and posters, a project website hosted by the RDCO, several online 1-hour community conversations, as well as a public survey. Two key questions have been explored in these sessions. In the first instance, stakeholders and the public were asked about their overall values and concerns related to flooding in the region. These values will be used to assess the suitability of flood mitigation actions for the Okanagan Valley. We heard that the following are important:

- Human health and safety.
- Safety and resilience of homes and neighbourhoods.
- Function of infrastructure and transportation networks.
- Protection and recognition of Indigenous and other cultural values.
- Environmental protection and function.
- Health of the local and regional economies.
- Access to recreation and outdoor activities.

In the second round of engagement, we explored the potential toolbox of non-structural mitigation actions to learn from stakeholders and the public which are appealing, and which are less attractive. We heard that there is broad support for most actions, however, that environmentally focused options (watershed protection and restoration) are slightly preferred over building controls. A third and final round of stakeholder engagement will take place in the fall, when we will work to confirm the suite of preferred mitigation options as well as the overall strategy direction.

The final deliverables will be presented to the RDCO Regional Board, Westbank First Nation, Okanagan Indian Band, and Okanagan Nation Alliance later this year.

Policy Considerations:

Regional Board Strategic Priorities 2019-2022

RDCO's strategic priorities, developed by the Regional Board, speak to important goals, services and needs on which the Board wishes to focus the organization's attention and resources. Hazard management has been identified as a priority with a need for a regional coordinated approach to efforts aimed at risk assessment, mitigation, and emergency planning. The strategic plan further supports the completion of Phase 3 of the Regional Floodplain Management Plan.

Regional Growth Strategy (RGS) Bylaw No. 1336

The RGS provides overall direction to work with local governments and provincial agencies to assess and mitigate risks in floodplains. Additionally, this project aligns with various policies of Our Land, Our Water, and Our Governance.

Our Land goal is to manage the land base effectively to protect natural resources and limit urban sprawl. Policies Include:

- Encourage cooperation and information sharing with regional partners on hazard identification and mapping programs to provide better and more information on hazard management (Policy No. 3.2.1.11); and,
- Encourage cooperation and information sharing with regional partners to identify data and information necessary to improve hazard and resiliency planning (Policy No. 3.2.1.12).

Our Water goal is to manage and protect water resources. Policies include:

- Work with local governments, provincial agencies to assess and mitigate the risks in floodplains (Policy No. 3.2.3.3).

Our Governance goal is to respond to the needs of the region with an effective and efficient governance service model. Policies include:

- Support opportunities for regional partners to collaborate, communicate and coordinate on matters of regional significance (Policy No. 3.2.10.4).

Financial Considerations:

The Regional District has received \$150,000.00 from the Province of BC through the Community Emergency and Preparedness Fund, administered through Union of BC Municipalities, to complete Phase 3 of the Regional Floodplain Management Plan.

External Implications:

The project has been conducting an extensive communications and engagement component to gain input from member local governments, Syilx communities in the region, stakeholders and the public to ensure that the proposed mitigation options are acceptable and supported region-wide. Engagement and input are important and necessary components of a flood risk reduction strategy. This includes learning from stakeholders and the public about their values and concerns related to flooding, and then incorporating this into project outcomes will support public acceptance of flood mitigation actions (engagement framework attached).

Organizational Issues:

Along with the fiscal and reporting responsibilities, the Regional District is involved in the strategy development process through overall project management, contract management, and other administrative functions, including, but not limited to budget tracking, request for proposal processes, retaining and liaising with consultants, and preparing progress reports and briefing notes.

Considerations not applicable to this report:

- *General*
- *Legal/Statutory Authority*
- *Alternative Recommendation*

Attachment(s):

- Project Background
- Engagement Framework