



Regional Board Report

TO: Regional Board

FROM: Todd Cashin
Director of Community Services

DATE: May 25, 2020

SUBJECT: Regional Floodplain Management Plan – Phase 2
Mission Creek Flood Mapping and Dike Breach Analysis (6430-18)

Voting Entitlement: *All Directors - Unweighted Corporate Vote - Simple Majority - LGA 208.1*

Purpose: To present information regarding the Mission Creek Flood Mapping and Dike Breach Analysis project.

Executive Summary:

The Regional Floodplain Management Plan was identified as Project No. 1 in the Priority Projects Plan endorsed by the Regional Board in July 2017. One of the recommended tasks is to confirm the floodplains and alluvial fans and to develop floodplain inundation maps within urban areas, including both Mission and Mill Creeks. As such, the Regional District of Central Okanagan and the City of Kelowna partnered to complete the Mission Creek Basin Flood Mapping project. These maps will show flood extents and elevations, which will support identifying potential hazard areas in the community. The results of this study will also assist with mitigation planning, future land use decisions and flood risk assessments, and other flood-related works.

Marcel LeBlanc, Associated Engineering Ltd.'s Water Resources Market Sector Leader and Project Manager, will provide a presentation regarding the Mission Creek Basin Flood Mapping project.

RECOMMENDATION:

THAT the Regional Board receive for information the Regional Floodplain Management Plan – Phase 2 report dated May 25, 2020, from the Director of Community Services.

Respectfully Submitted:

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

Todd Cashin
Director of Community Services

Approved for Board's Consideration

A handwritten signature in black ink, appearing to read "Brian Reardon".

Brian Reardon, CAO

Implications of Recommendation:

Strategic Plan:	Receiving the Mission Creek Basin Flood Mapping study achieves the Regional Board Strategic Priorities 2019-2022 as follows: <ul style="list-style-type: none"> • Values: Resiliency • Strategic Priorities: Sustainable Communities and Environment
Policy:	Receiving the Mission Creek Basin Flood Mapping study complies with the Regional Growth Strategy: Our Water Resources, Our Health, Our Climate.

Background:

Regional Growth Strategy

The RDCO adopted Regional Growth Strategy Bylaw No. 1336 on June 23, 2014. The RGS is a long-range planning tool governed by Part 13 of the *Local Government Act* that assists local governments to plan a coordinated future for their communities while dealing with regional issues and decisions that cross local political boundaries. The RGS is a collective vision from the regional partners for how they see the future in order to create a region that promotes growth that is economically, environmentally, and socially healthy over a twenty (20) year time horizon.

RGS Steering Committee

The RGS Steering Committee, created in 2016, is a forum for senior representatives of regional and municipal planning departments, First Nations and agencies with an interest in regional planning to coordinate the strategic priorities around the region and align the priorities with the goals and policies of the RGS.

RGS Priority Projects Plan

In accordance with Section 4.1.2 of the RGS, through a collaborative process, RDCO staff, RGS Steering Committee and elected officials developed a 5-year action plan to outline the priority initiatives to implement the RGS. The 5-year action plan, endorsed by the Regional Board on July 24, 2017 is the framework for RGS implementation and based on the regional initiatives identified within the RGS and by the Regional Board.

Table 1: Five-Year Action Plan Summary and Timeline. Dark green indicates one-time projects of limited duration; light green indicates projects that, once initiated, will be ongoing.

#	Project	2017	2018	2019	2020	2021
1	Regional Flood Management Plan: Phases 2 and 3	Dark Green	Dark Green	Dark Green		
2	Regional Planning Lab	Light Green	Light Green	Light Green	Light Green	Light Green
3	Regional Housing Needs Assessment		Dark Green			
4	Regional Growth Strategy Monitoring Program		Dark Green	Light Green	Light Green	Light Green
5	Regional Citizen Survey		Dark Green			
6	Regional Housing Strategy			Dark Green	Dark Green	
7	Regional Growth Strategy Five-year Review			Dark Green		
8	Regional Agricultural Strategy				Dark Green	
9	Regional Employment Lands Inventory					Dark Green

Regional Floodplain Management Plan:

Phase 1 of the Regional Floodplain Management Plan was completed in 2016 to better understand the flood risk within the Regional District of Central Okanagan. Phases 2 and 3 were listed as Project No. 1 of the Regional Growth Strategy Priority Projects Plan. Phase 2 is focused on delineation and confirmation of the flood-prone streams and floodplains identified in Phase 1.

Mission Creek Flood Mapping Study:

One of the recommendations to be completed in Phase 2 was to undertake a flood hazard risk assessment of Mission Creek. The intent is to develop hydraulic models based on updated LiDAR data using the Mission Creek model for dike breach analysis at critical areas, and to produce flood hazard maps to identify potential hazards. This information will also assist with future land use decisions, flood planning, future flood risk assessment, or other flood-related works.

The consulting contract to complete the work was awarded in the summer of 2019 to Associated Engineering Ltd., and LiDAR data and aerial imagery was obtained through a partnership with the Okanagan Basin Water Board. The project began in August 2019 with the first draft completed in April 2020.

The following steps were completed to assess the Mission Creek Basin and develop floodplain inundation maps:

1. Field Reconnaissance and Surveying
2. Hydrological Analysis
3. Hydraulic Model Build and Analysis
4. Floodplain Mapping and Reporting

Financial Considerations:

The RDCO was granted \$150,000 in funding from UBCM's Community Emergency Preparedness Fund in 2017; of these funds, \$90,000 was allocated to complete the Mission Creek Flood Mapping and Dike Breach Analysis project.

External Implications:

RDCO staff recently applied for additional funding through UBCM's Community Emergency Preparedness Fund to undertake Phase 3 of the Regional Floodplain Management Plan which focuses on flood mitigation planning and to further develop and expand of the risk mitigation strategies already in place in the region.

Considerations not applicable to this report:

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

Attachment(s):

- December 2019 RDCO and City of Kelowna Memorandum of Understanding
- May 2020 Mission Creek Basin Flood Mapping Study