



Regional Board Report

TO: Regional Board

FROM: David Komaike
Director of Engineering Services

DATE: March 22, 2021

SUBJECT: UBCM CEPF – Flood Risk Assessment and Mitigation Planning Grant Application 2021

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

Purpose: To request Board support for a UBCM Community Emergency Preparedness Fund Application – Flood Risk Assessment, Mapping and Mitigation Planning stream.

Executive Summary:

The Union of British Columbia Municipalities (UBCM) Community Emergency Preparedness Fund offers grants to enhance the resiliency of local governments and their residents in responding to and recovering from emergencies. Staff has prepared an application to request funding to complete further flood risk assessments and mitigation planning at the Falcon Ridge Water System intake site. Completing mitigation planning and undertaking the resulting works has become increasingly important due to the risk of creek flow shifting away from the intake. Changes in creek flow patterns were first noted during the 2017 and 2018 Freshet Flooding in the Central Okanagan.

A Board resolution supporting the grant application for the flood risk assessment and flood mitigation planning funding is required as part of the application package.

RECOMMENDATION:

THAT the Regional Board approve submitting a UBCM – Community Emergency Preparedness Fund Application to complete further flood risk assessments and mitigation planning at the Falcon Ridge Water System intake site.

Respectfully Submitted:

A handwritten signature in black ink, appearing to read "DK", is written over a light blue horizontal line.

David Komaike
Director of Engineering Services

Approved for Board's Consideration

A handwritten signature in black ink, appearing to read "Brian Reardon", is written over a light blue horizontal line.

Brian Reardon

Prepared by: Mimi Miller, Asset Management Analyst

Implications of Recommendation:

Strategic Plan: Supports the RDCO value of Resilience.

Supports the RDCO commitment to “Provide solutions that consider competing interests and community expectations with the safety and health of residents as a paramount consideration”.

Supports the Strategic Priority: Environment by “Using data from 2020 Climate Projections for the Okanagan Region for asset management and project planning to mitigate climate impact”.

Background:

The Falcon Ridge water system provides potable water to approximately fifty-five homes in the Joe Rich community of the Central Okanagan East Electoral Area. The intake infrastructure is located on crown land adjacent to Mission Creek. The source of the water for this system is Mission Creek. Recent high flow activity in the Creek (2017 to present) has eroded the banks along the creek and caused flow pattern changes, these changes have increased the risk of a loss of flow to the water system intake. Early this year a preliminary assessment of the risk was completed. The assessment indicated the need for immediate works (short-term works), to remove wood debris and gravel to encourage flow past the intake. Furthermore, the assessment recommended undertaking a detailed risk analysis of the intake site (infrastructure and creek) in order to plan long-term works and mitigate the risk of future flow loss.

The Falcon Ridge Intake Site Project has three phases:

Project Phase		Completion Date (Anticipated)	Funding Sources (Anticipated)
1	Preliminary Risk Assessment and Short-Term Works	March/2021 (Completed)	Community Works Funding
2	Detailed Risk Assessment and Mitigation Planning	2021	UBCM CEPF Flood Risk Assessment and Mitigation Planning Grant
3	Undertaking the Mitigation Works	2022	UBCM CEPF Structural Flood Mitigation Grant

The overall purpose of this project is to preserve the supply of potable water to the Falcon Ridge Water System given the flood risk at the site.

Risk Assessment and Mitigation Planning - Project Phase 2

Flooding in recent years has eroded the creek banks upstream from the intake, and deposited silt and debris in a manner causing the flow to move away from the intake. Furthermore, the electrical kiosks and intake site access road are located in the creek floodplain, making them vulnerable to flooding. In order to identify the best possible long-term solutions for the site, staff would like to engage qualified professionals to undertake the following activities:

- Complete a detailed flood risk assessment of the creek at the site;
- Identify of assets (components) at risk; and
- Planning of mitigation activities. The mitigation plan will address flood risks to both the availability of flow to the intake (creek bank stability, sediment deposit, and debris), as well as the flood risk to the water system infrastructure and access road.

UBCM – Community Emergency Preparedness Fund, Emergency Operations Centres and Training

The Community Emergency Preparedness Fund (CEPF), administered by the Union of British Columbia Municipalities (UBCM), supports local governments and their communities with grant opportunities for disaster response and recovery.

The CEPF has seven streams of funding. This application is for the Flood Risk Assessment, Mapping and Mitigation Planning stream. “The intent of this funding stream is to support eligible applicants to ensure they have accurate knowledge of the flood hazards they face and to develop effective strategies to mitigate and prepare for those risks”¹.

Financial Considerations:

This stream of funding covers up to 100% of eligible and approved project costs, to a maximum of \$150,000. Should the application be supported and successful, staff will bring forward a request to amend the 2021-2025 Financial Plan to include the costs of this project.

Projected Project Costs (Phase 2): \$39,730

Organizational Considerations:

Building on Recent Projects

This project benefits from the ongoing work on the Regional Floodplain Management Plan (RFMP). Specifically, the Mission Creek Flood and Hazard Mapping and Dike Breach Analysis. The Regional Floodplain Management Plan is currently in Phase 3². The RFMP is a regional partnership project.

The Environment

The mitigation plan and construction design will take into account the recently published climate projections for the Okanagan region (Okanagan Climate Projections Report, Pinna 2020)³, with the goal that the final design is resilient in the face of projected changes in the local climate.

This project is anticipated to be an example of the works required to create resilient infrastructure, while complying with environmental regulations, and striving for service sustainability.

External Implications:

Stakeholder Engagement and Collaboration

RDCO staff shares project information (planning materials, reports, and outcomes) with member municipalities. Staff and consultants will take a holistic approach to stakeholder engagement, ensuring that stakeholder feedback is incorporated in project refinement.

Alternative Recommendation:

That the Regional Board receive this report for information.

¹ Community Emergency Preparedness Fund Flood Risk Assessment, Mapping & Mitigation Planning 2021 Program, UBCM, Union of BC Municipalities, 2021, <https://www.ubcm.ca/EN/main/funding/lgps/community-emergency-preparedness-fund/flood-risk-assessment-mapping-mitigation-planning.html>, (March 18, 2021).

² 'Regional Floodplain Management Plan', Regional District of Central Okanagan, <https://www.regionaldistrict.com/your-services/planning-section/projects.aspx#FloodPlan>, (March 18, 2021).

³ Pinna Sustainability, RDCO, RDNO, and RDOS, 'Okanagan Climate Projections Report', Regional District of Central Okanagan, <https://www.regionaldistrict.com/your-services/planning-section/environmental/projects-initiatives.aspx> (March 19, 2021)