



STAFF REPORT

DATE: January 5, 2021

FILE: 0540-04

TO: Chair and Directors,
Regional Board

FROM: David Leitch
Chief Administrative Officer

RE: QUADRA ISLAND & CORTES ISLAND: SEA LEVEL RISE MODELLING GRANT

PURPOSE

To consider an application for a planning grant from the Union of BC Municipalities to help mitigate risk and develop in-depth sea level rise modelling for Cortes Island and Quadra Island.

POLICY ANALYSIS

Having detailed information regarding the extent and potential vulnerabilities of sea level rise will enable the Regional District and other public bodies to better prepare, strategize and plan responses to such events and thereby meet their obligations under the *Emergency Program Act*.

EXECUTIVE SUMMARY

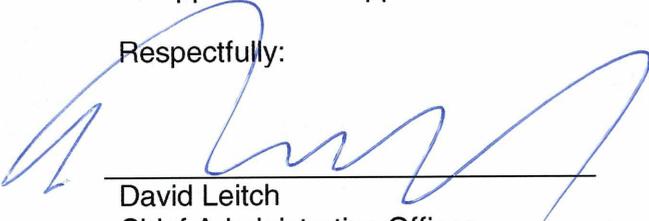
The Community Emergency Preparedness Fund (CEPF) is a suite of funding programs intended to enhance the resiliency of local governments and their residents in responding to emergencies. The Flood Risk Assessment, Flood Mapping and Flood Mitigation Planning Grant program is part of the CEPF and is designed to support local governments to ensure that they have accurate knowledge of the flood hazards they face and to develop effective strategies to mitigate and prepare for those risks. The grant program can contribute up to 100% of the cost of eligible activities to a maximum of \$150,000, provided the application has a Council or Board resolution confirming support for the proposed activities and for providing overall grant management. Local governments can submit one application per intake. The submission deadline for this grant is February 26, 2021.

RECOMMENDATIONS

1. THAT the report from the Chief Administrative Officer be received.
2. THAT an application for \$150,000 in funding be authorized for submission to the CEPF 2021 Flood Risk Assessment, Flood Mapping and Flood Mitigation Planning Grant program to develop in-depth sea level rise modelling for Quadra Island and Cortes Island, and

THAT the Regional District commit to providing overall project management should the application be approved.

Respectfully:



David Leitch
Chief Administrative Officer

BACKGROUND/HISTORY

Sea level rise is an environmental shift witnessed globally over the past century. The atmosphere’s warming temperatures cause our ocean’s waters to warm and expand and cause glaciers and ice sheets on land to melt, resulting in sea level rise. Rising sea levels and more extreme storms create increasing hazards like flooding and erosion for seaside communities. As seas continue to rise, the Quadra Island and Cortes Island are two of many coastal communities in British Columbia preparing to deal with increased flooding now, and in the future, as we adapt to our changing environment

The immediate goal of this project would be to develop a model on how sea level rise will affect Cortes Island and Quadra Island in the year 2100 and year 2200 by:

- Analyzing and acquiring the necessary data specific to the geography of the region and;
- Conducting flood modelling for most likely and worst-case sea level rise scenarios to determine potential inundation levels; and
- Conducting a hazard, risk and vulnerability analysis that:
 - indicates the level of hazard in the assessment area and the potential risks to affected communities;
 - identifies populations and key infrastructure likely to be affected by sea level rise.

Sea level rise modelling is the first step in the development of effective response and evacuation plans for communities at risk as well as providing valuable data for future land-use planning decisions. The next step for the Regional District could be study the impact of Sea Level Rise to the coastline of Electoral Area D and develop a Sea Level Rise Action Plan to guide community adaptation of the next 30 years. The Action Plan would line the risks to the built, natural and social environments, identify actions to address these risks and outline strategies for implementation by:

- Ensuring seal level rise is considered in all future decision making and infrastructure project;
- Facilitating a strategic approach to sea level rise adaptation;
- Encouraging foreshore protection that preserves and/or enhances foreshore ecology; and
- Increasing community resilience to climate change impacts.

FINANCIAL IMPLICATIONS

Following is a breakdown of the activities proposed to be conducted under the auspices of the study project, if approved:

Proposed Activities	Estimated Cost
Analyze data specific to geography of the region to determine the potential levels of sea level rise in the assessment area.	\$77,000
Indicate the level of hazard in the assessment area and the potential risks to affected communities.	\$30,000
Identify key infrastructure which is likely to be affected.	\$5,000
Identify and inform emergency response program development.	\$5,000
Creation of a sea level rise inundation map, vulnerability map and hazard map for the assessment area.	\$15,000
Completion of Risk Assessment Information Templates for each island.	\$10,000
Staff / Governance Presentations	\$3,000
Community Presentations	\$5,000
Total	\$150,000

LEGAL IMPLICATIONS

Providing support for a CEPF grant indicates that the Strathcona Regional District is prepared to accept responsibility for this project and to provide overall grant management.

INTERGOVERNMENTAL/REGIONAL IMPLICATIONS

Once completed, the proposed project will support local governments' and First Nations' ability to better understand and sea level rise risk and:

- to provide a comprehensive plan to the Regional District and First Nations within the region for their use.
- to support subsequent regional and local scale flood hazard land use planning and policy development, emergency planning, capital investment planning, capacity building and public outreach efforts;
- to help to protect homes, businesses, and livelihoods from being damaged by sea level rise; and
- to aid in public education and preparedness efforts.

CITIZEN/PUBLIC RELATIONS IMPLICATIONS

The geographic scope this project would model the impact of future sea level rise on Cortes Island and Quadra Island community assets such as:

Regional District Infrastructure: Quathiaski Cove Sewer System, Hoskyn Channel Wharf, and Granite Bay Wharf.

Regional District Parks: Esplanade Park, Granite Bay Park, Hoskyn Channel Landing, Blind Creek Boat Launch, Hank's Beach Forest Conservation Park, Gnat Park, Moon Park

Homes: private residences.

Critical Assets: powerlines, marine transportation infrastructure (docks, marinas, fueling stations), septic systems.

Commercial / Recreational Assets: Provincial parks, fishing, retail and resort infrastructure.

Cultural or Historical Assets: culturally modified trees and places of local importance to First Nations.

Provincial Parks: Smelt Bay, Mansons Landing, Hathayim Marine Park, Rebecca Spit, Small Inlet Marine Park.

INTERDEPARTMENTAL INVOLVEMENT/IMPLICATIONS

Financial Services would manage the financial resources for the project. Community Services and Protective Services would provide overall supervision of project deliverables.

Prepared by: A. Nelson – Community Services Manager
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