

DATE OF MEETING December 11, 2024

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SUBJECT SEA LEVEL RISE MANAGEMENT PLAN GRANT APPLICATIONS

OVERVIEW

Purpose of Report:

To inform the Finance and Audit Committee of two separate funding applications submitted by City Staff to support the development of a Sea Level Rise Management Plan and seek Council resolutions in support of both applications.

Recommendation

That the Finance and Audit Committee recommend that Council direct Staff to apply for a funding opportunity from the Ministry of Emergency Management and Climate Readiness for a Disaster Relief and Innovation Fund grant to support a Sea Level Rise Management Plan.

AND

That the Finance and Audit Committee recommend that Council direct Staff to apply for a funding opportunity from the Federation of Canadian Municipalities' Local Leadership for Climate Adaptation initiative- Climate Ready Plans and Processes for a Sea Level Rise Management Plan.

BACKGROUND

Developing a Sea Level Rise Management Plan is included in the City of Nanaimo's *Integrated Action Plan* as a priority action (C1.2.12).

In 2019, the City completed a Sea Level Rise Study to assess the potential impacts of rising sea levels on the local environment, infrastructure, and communities. This study was a critical first step in understanding the vulnerability of our coastline and planning for future climate risks. The Study includes sea level rise projections for 2050 and 2100, an assessment of potential coastal erosion impacts, and defines a Flood Construction Level (FCL) along the City's shoreline for 2050 and 2100.

The project team that completed the 2019 study recommended that further analysis be carried out in specific low-lying populated areas (Departure Bay, Protection Island, and downtown areas) that will more accurately define inundation limits and potential flooding. A Sea Level Rise Management Plan (SLRMP) was recommended for Nanaimo's entire coastline. The SLRMP will include refined inundation modeling in vulnerable areas, an economic risk assessment and an identification and evaluation of preferred sea level rise management options.

To fund the project, the City has applied for the following two grants:

Grant Name	Funder	Amount Requested
Disaster Resilience and Innovation Fund (DRIF)	Ministry of Emergency Management and Climate Readiness (EMCR) British Columbia	\$400,000
Climate-Ready Plans and Processes (CRPP)	Federation of Canadian Municipalities (FCM)	\$105,000

DISCUSSION

Project Summary

The Sea Level Rise Management Plan (SLRMP) will build on the work completed during the 2019 Sea Level Rise Study. Not only will the SLRMP expand the City's understanding of sea level rise and storm surge impacts within the vulnerable areas identified in the 2019 study, but it will also help the City identify and evaluate plausible solutions. The SLMRMP can be broken down into the following elements:

1. **Probabilistic Calculation of Sea Level Rise:** The 2019 study included multiple factors such as storm surge, wind speed, king tides, and others, but didn't account for the joint probability of the extreme of each component occurring simultaneously. The probabilistic calculation would take a more detailed analysis to address this issue. This could be used to redefine the flood control elevation.
2. **Refined Inundation Modeling:** 2D modeling in vulnerable areas that includes wave run-up and the impact of multiple tide cycles.
3. **Economic Risk Assessment:** Estimate the financial implication of rising sea levels to coastal infrastructure and properties.
4. **Sea Level Rise Management Options Planning:** Include stakeholder engagement, identification of sea level rise management options, and an evaluation of those options.
5. **Coastal Erosion Monitoring:** Conduct a detailed survey of the areas prone to coastal erosion (i.e., North Slope), which requires subsequent surveying, combined with orthophoto imagery analysis where appropriate.
6. **Post Study Communication Strategy:** Develop a strategy to communicate findings from the sea level rise management plan to property owners, other stakeholders, and the general public.

With the exception of the post-study communication, all of the above elements are included as recommended next steps within the 2019 Sea Level Rise Study.

To fund the Sea Level Rise Management Plan, Staff have applied for the following grants:

Disaster Resilience and Innovation Fund (DRIF)

The Disaster Resilience and Innovation Fund (DRIF) is a program offered by Emergency Management and Climate Readiness (EMCR) BC. The funding offer is aimed at supporting initiatives that enhance the province's ability to prepare for, and respond to, natural disasters and climate-related emergencies. The fund provides financial support to projects that focus on building

resilience, advancing innovative approaches, and fostering collaboration among communities, governments, and organizations. DRIF encourages the development of new tools, technologies, and strategies to reduce disaster risks, improve emergency management, and strengthen the overall preparedness and adaptive capacity of local governments in the face of increasingly frequent and severe climate events. Up to \$400,000 in funding is available, and while it is encouraged, no matching funding is required.

The City submitted an expression of interest, the first step in applying, in mid-September. Staff expect to hear back from EMCR regarding the next steps of the City's application before the end of the year. The City's submission included core elements two through four from the project list above due to the maximum available funding from this grant.

Climate-Ready Plans and Processes (CRPP)

The Federation of Canadian Municipalities (FCM) Climate-Ready Plans and Processes Grant supports municipalities in developing and implementing climate adaptation plans. This grant aims to help local governments prepare for climate change impacts and build resilience by funding projects that enhance climate resilience planning and processes. Up to \$105,000 in funding is available from CRPP. The grant covers 60% of eligible costs with additional coverage funding, or a higher percentage if applicants meet the following conditions:

- +20% for applicants that are Indigenous communities, Northern communities, remote communities, or municipalities with populations below a defined small population threshold (<10,000);
- +10% for municipalities with populations between 10,001 and 50,000;
- **+5% for municipalities with populations between 50,001 and 100,000;**
- **+15% for meaningfully addressing Reconciliation, anti-racism, equity, and inclusion; or,**
- +5% for applications that include collaboration between two or more municipal governments, or local governments applying in partnership with an Indigenous community.

Given that the City of Nanaimo was just below 100,000 in population at the 2021 census (5%), and that Staff plan to meaningfully address reconciliation, anti-racism, equity, and inclusion within the project (15%); the City could be eligible for funding of up to 80% of the total project cost to a maximum of \$105,000. FCM staff have confirmed that the unconfirmed funding from the DRIF application can be used as the required contribution to the CRPP grant.

Funding Scenarios

Staff have identified four possible outcomes depending on the results of the grant applications.

1. **Both applications are successful:** The project will include all project elements.
2. **Only the DRIF application is successful, the CRPP is not successful:** The project will only include the three core elements (inundation modeling, economic risk assessment, and management options planning) identified in the DRIF application.
3. **Only the CRPP application is successful, DRIF application not successful.** The project scope will be modified and include an economic risk assessment, and a high-level management options analysis based on the flood construction levels identified in the 2019 study. Staff anticipate the project will require a budget of \$140,000 at a

minimum to include these most essential elements of a SLMP. Assuming Staff are able to meaningfully address reconciliation, anti-racism, equity, and inclusion within the project, and receive up to 80% of project funding to a maximum of \$105,000, a City contribution of the remaining project budget from Staff time, cash, or a combination of both will be required.

4. **Neither application is successful:** Staff will explore other funding sources and request necessary project funding through the 2026-2030 Financial Plan.

Both grant applications require a Council resolution in order for the City to advance to the next stage of the application process.

OPTIONS

1. That the Finance and Audit Committee recommend that Council direct Staff to apply for a funding opportunity from the Ministry of Emergency Management and Climate Readiness for a Disaster Relief and Innovation Fund grant to support a Sea Level Rise Management Plan.

AND

That the Finance and Audit Committee recommend that Council direct Staff to apply for a funding opportunity from the Federation of Canadian Municipalities' Local Leadership for Climate Adaptation initiative – Climate Ready Plans and Processes for a Sea Level Rise Management Plan.

- The advantages of this option: If the City is successful with either grant application, staff will be able to proceed with this Priority Action in 2025 with little impact on the City's budget.
 - The disadvantages of this option: Completing two grant applications could take considerable staff time with no guarantee of success.
 - Financial Implications: None at this time. If the DRIF grant is not successful and a financial contribution may be required to proceed with CRPP application, Staff will follow up with another report on project scope and funding options.
2. That the Finance and Audit Committee recommend that Council not provide resolutions to either application and direct Staff not to pursue the DRIF and CRPP grant applications any further.
 - The advantages of this option: This option will allow Staff to focus on other priorities.
 - The disadvantages of this option: Without Council resolutions, the City will not be eligible to receive funding from either of the grants. This priority action will not move forward until Staff are able to find funding sources.
 - Financial Implications: None.
 3. That Council provide alternate direction. |

SUMMARY POINTS

- Developing a Sea Level Rise Management Plan was identified as a recommended next step within the City's Sea Level Rise Study and is included in the City's *Integrated Action Plan* as a priority action.
- Completing a Sea Level Rise Management Plan will expand the City's understanding of the impacts from sea level rise and help identify and evaluate plausible solutions.
- Staff have applied for funding through both the Disaster Resilience and Innovation Fund (DRIF) and the Climate-Ready Plans and Processes (CRPP) to fund the Sea Level Rise Management Plan.

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