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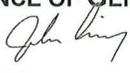
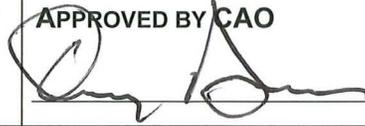
**To:** Public Works & Transportation Committee      **Date:** January 5, 2021  
**From:** Milton Chan, P.Eng.  
Director, Engineering      **File:** 10-6060-01/2020-Vol  
01  
**Re:** **Flood Protection Grant Funding Applications**

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**Staff Recommendation**

1. That the Steveston Island Preliminary Dike Design submission to the National Disaster Mitigation Program (NDMP) for Mitigation Planning as outlined in the staff report titled “Flood Protection Grant Funding Applications” dated January 5, 2021 from the Director, Engineering be endorsed;
2. That the Drainage Pump Station Backup Power Upgrade submission to the Investing in Canada Infrastructure Program (ICIP) for Adaptation, Resilience & Disaster Mitigation as outlined in the staff report titled “Flood Protection Grant Funding Applications” dated January 5, 2021 from the Director, Engineering be endorsed, and that any associated project costs beyond the eligible grant funding be funded from the City’s Drainage Reserve;
3. That the Dike Operation & Maintenance Manual Update submission to the Union of BC Municipalities (UBCM) Community Emergency Preparedness Fund for Flood Planning as outlined in the staff report titled “Flood Protection Grant Funding Applications” dated January 5, 2021 from the Director, Engineering be endorsed; and
4. That the Chief Administrative Officer and General Manager, Engineering and Public Works be authorized to negotiate and execute the funding agreements with the Government of Canada, the Province of BC, or UBCM for the above mentioned projects should they be approved for funding and that the Consolidated 5 Year Financial Plan (2021-2025) be amended accordingly.

Milton Chan, P.Eng.  
Director, Engineering  
(604-276-4377)

REPORT CONCURRENCE		
<b>ROUTED TO:</b> Intergovernmental Relations Finance Sewerage & Drainage Roads & Construction	<b>CONCURRENCE</b> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<b>CONCURRENCE OF GENERAL MANAGER</b>  _____
<b>SENIOR STAFF REPORT REVIEW</b>	<b>INITIALS:</b>  MO	<b>APPROVED BY CAO</b>  _____

## Staff Report

### Origin

In December 2020, a number of new and renewed provincial and federal grant opportunities were announced. This report responds to those announcements.

This report supports the following strategies within Council's Strategic Plan 2018-2022:

Strategy #1 A Safe and Resilient City:

*Enhance and protect the safety and well-being of Richmond.*

*1.2 Future-proof and maintain city infrastructure to keep the community safe.*

Strategy #5 Sound Financial Management:

*Accountable, transparent, and responsible financial management that supports the needs of the community into the future.*

*5.1 Maintain a strong and robust financial position.*

*5.4 Work cooperatively and respectfully with all levels of government and stakeholders while advocating for the best interests of Richmond.*

### Analysis

As detailed in the City's Flood Protection Management Strategy, Richmond is situated approximately 1.0 m above sea level and flood protection is integral to protecting the health, safety, and economic viability of the City. Richmond is protected from flooding by infrastructure that includes 49 km of dikes, 585 km of drainage pipes, 61 km of culverts, 165 km of watercourses and 39 drainage pump stations.

The City's Flood Protection Management Strategy and Dike Master Plans are the guiding framework for continual upgrades and improvements to address climate change induced sea level rise.

#### National Disaster Mitigation Program (NDMP)

On December 9, 2020, Emergency Management BC (EMBC) announced a call for proposals from local governments for the National Disaster Mitigation Program (NDMP) sixth and final intake. This is an anticipatory intake and funding is not yet confirmed; however, Public Safety Canada has encouraged provinces to begin accepting applications.

Funding under the NDMP is intended to reduce or negate the effects of flood events. Funding is available for risk assessments, flood mapping, mitigation planning and investments in non-structural mitigation projects. EMBC will review and prioritize all submissions and forward their recommendations to the Government of Canada for funding consideration. Each project is eligible to receive up to 100% of eligible project costs.

The deadline for proposals was January 7, 2021. Given the short deadline, staff prepared and submitted a proposal for the Steveston Island Preliminary Dike Design. The Steveston Island Preliminary Dike Design includes, but is not limited to, the preliminary design of the Steveston Island dike and any related investigations to assist with securing the land and obtaining regulatory approvals. Related investigations potentially include further geotechnical investigation, environmental investigation and a hydraulic study to assess the impact of sedimentation patterns and water quality.

The Steveston Island Preliminary Dike Design project is the next step in the Council-endorsed work plan from Dike Master Plan Phase 1. The Steveston Island dike and sea gate project is a long-term initiative and has a multi-decade timeline for implementation. Advance planning and proactive engagement of stakeholders allows the City to strategically implement this upgrade through grants and partnerships, and accelerate the construction schedule should funding opportunities or changes in climate change science arise.

The application guidelines state that projects must be endorsed by Council to be considered for funding. Staff are requesting Council's endorsement on the submission to EMBC for the NDMP grant funding for up to 100% of the estimated project cost of approximately \$500,000. Should Council choose not to endorse this submission, staff will contact EMBC and withdraw the proposal.

#### Investing in Canada Infrastructure Program (ICIP)

On December 1, 2020, Infrastructure Canada and the Province of British Columbia announced the Investing in Canada Infrastructure Program (ICIP) – COVID-19 Resilience Infrastructure Stream, which includes support for disaster mitigation and adaptation infrastructure. EMBC is administering this funding through a program titled the Adaptation, Resilience & Disaster Mitigation (ARDM).

Under this program, cost sharing for infrastructure projects will be up to 80% federal funds and 20% provincial funds. Eligible projects must begin construction before September 30, 2021 and be completed by December 31, 2021.

The deadline for proposals was January 11, 2021. Given the short deadline, staff prepared and submitted a proposal for the Drainage Pump Station Backup Power Upgrade that includes the installation of five generators at various locations. These projects were chosen as they are shovel ready and can be completed within the timeline required by the program.

This project corresponds with the City's Flood Protection Management Strategy, which identifies that some or all stations should be able to provide post-disaster service, including standby power as a top priority.

This submission will include the Miller Road Drainage Pump Station generator upgrade, which was previously approved by Council as part of the 2020 Drainage Pump Station Rehabilitation and Generator Upgrade capital account (\$250,000). Any associated project costs beyond eligible grant funding is proposed to be funded from the City's Drainage Reserve. Staff are reviewing other potential pump stations and will include up to four more locations in the \$1,250,000 grant submission. Should the City be successful for the ICIP grant, any unused funds allocated for the generator upgrade through the 2020 Drainage Pump Station Rehabilitation and Generator Upgrade capital account will be returned to the original funding source and the 5 Year Financial Plan will be amended accordingly.

The application guidelines state that projects must be endorsed by Council to be considered for funding. Staff are requesting Council's endorsement on the submission to EMBC for the ICIP grant funding for up to 100% of the estimated project cost of approximately \$1,250,000. Any associated projects costs beyond the eligible grant funding is proposed to be funded from the City's Drainage Reserve. Should Council choose not to endorse this submission, staff will contact EMBC and withdraw the proposal.

#### Union of BC Municipalities (UBCM)

On May 29, 2019, the Province announced \$31 million in grant allocation for the Community Emergency Preparedness Fund (CEPF). UBCM administers the CEPF to provide grant funding for partners to plan and implement flood protection projects in British Columbia.

There are a number of different funding streams in this program. Under the 2021 Flood Risk Assessment, Mapping & Mitigation Planning category, staff are preparing an application for the Dike Operation & Maintenance Manual Update. Strategies to mitigate and prepare for flood risk are eligible for funding.

The deadline for proposals is February 26, 2021. The submission to UBCM for the Dike Operation & Maintenance Manual Update includes a consolidated manual organized by dike master plan locations to provide a thorough record of dike design drawings, inspection reports, maintenance work and miscellaneous activity along the dike.

This project corresponds with the City's Flood Protection Management Strategy, which identifies that a consolidated Dike Operation & Maintenance Manual be created as a top priority.

The UBCM CEPF can contribute up to 100% of the project costs, to a maximum of \$150,000. The estimate cost to complete the Dike Operation & Maintenance Manual Update is approximately \$200,000. Should the City be successful for the UBCM grant, remaining project costs will be funded through the Council-approved 2020 Drainage Minor Capital account.

The application guidelines state that projects must be endorsed by Council to be considered for funding. Staff are requesting Council's endorsement for this project submission to the UBCM CEPF.

**Financial Impact**

None. Should the City be successful with the grant application, the remaining project cost will be accommodated within existing approved capital projects and the Consolidated 5 Year Financial Plan (2021-2025) will be amended accordingly.

**Conclusion**

National Disaster Mitigation Program (NDMP), Investing in Canada Infrastructure Program (ICIP) and the Union of BC Municipalities (UBCM) have requested funding applications from local governments for flood mitigation activities to reduce flood risk. Staff recommend that Council endorse the Steveston Island Preliminary Dike Design, Drainage Pump Station Backup Power Upgrade and the Dike Operation & Maintenance Manual Update for grant funding in accordance with grant program guidelines. Staff are also seeking Council authority for the negotiation and execution of funding agreements should the City's application be successful.



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