

DATE OF MEETING JUNE 19, 2023

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SUBJECT DISASTER MITIGATION AND ADAPTATION FUND

## **OVERVIEW**

### **Purpose of Report:**

To advise Council that the City is preparing a grant application for \$8.6 M in funding from the Disaster Mitigation and Adaptation Fund for the South Forks Dam Seismic Upgrade Project.

## **BACKGROUND**

### **Disaster Mitigation and Adaptation Fund**

Communities across Canada have experienced – and will continue to experience – significant weather-related events or disasters triggered by climate change. The impacts of climate change are evident, including observed changes in air temperature, precipitation, snow and ice cover and others.

The Disaster Mitigation and Adaptation Fund invests in public infrastructure that mitigates the potential economic, environmental and social impacts of climate change, and strengthens community resilience to disasters triggered by natural hazards and extreme weather events. More than \$1 billion in funding is available in the current DMAP application intake.

### **Eligible projects must:**

- have a minimum of \$1 Million in total eligible project costs
- Be aimed at reducing the socio-economic, environmental and cultural impacts triggered by natural hazards and extreme weather events taking into consideration current and potential future impacts of climate change in communities and infrastructure at high risk.
- Be new construction of public infrastructure and/or modification or reinforcement of existing public infrastructure including natural infrastructure that prevent, mitigate or protect against the impacts of climate change, disasters triggered by natural hazards, and extreme weather.

Stacking rules do apply to this funding, with the maximum federal funding amount available limited to up to 40% of total eligible costs. Project spending must occur after funding approval and prior to December 31, 2032.

The grant application deadline is 2023-JUL-19. At this time, it has not been announced when funding approval will be decided. ]

## **DISCUSSION**

The South Fork Dam Seismic Upgrade project is in the 10 year plan with a total current estimated cost of \$21.4 M and work is expected to start in 2030.

The South Fork Dam is located approximately 18km southwest of Nanaimo on the south fork of the Nanaimo River 4km upstream of its confluence with the Nanaimo River.

The South Fork Dam reservoir is maintained at full supply level to maintain pressure in the water mains which supply raw water to the Water Treatment Plant, some 12km downstream of the dam. The raw water supply intake pipe is located through the abutment immediately upstream of South Fork dam.

The dam was built in the early 1930's as an unreinforced concrete arch dam in a steep sided canyon. The dam at its highest point is 30.5m.

From a risk perspective, the lack of seismic stability of the South Fork Dam in the event of a large earthquake has "Very High" downstream consequences, as classified by the BC Dam Safety Regulation. This rating reflects estimates for potential loss of life, economic, social, cultural and environmental losses.

Upgrade options include a new reinforcing band secured to the top half of the dam on the downstream side, or a new Roller Compacted Concrete dam built on the downstream side.

Risk mitigation; improvement to the structural stability of the South Fork Dam would prevent a potential catastrophic failure of the dam, extreme flooding downstream and loss of the City's water supply.

## **CONCLUSION**

The City is actively pursuing grant opportunities as alternative funding sources. The South Fork Dam Seismic Upgrade is a good candidate for this funding stream. The time eligibility of the grant program allows sufficient time to fully develop the scope of the upgrade and prepare for funding.

### **SUMMARY POINTS**

- The City intends to apply for funding of up to \$8.6 M from the Disaster Mitigation and Adaptation Fund for the South Fork Dam Seismic Upgrade project.
- The funding application deadline is 2023-JUL-19.
- If the grant application is successful the City's portion of funding for the project would be reduced.

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