

**GREATER VANCOUVER WATER DISTRICT (GVWD)  
BOARD OF DIRECTORS**

**REGULAR BOARD MEETING**

**Friday, July 30, 2021**

**9:00 A.M.**

**28<sup>th</sup> Floor Boardroom, 4730 Kingsway, Burnaby, British Columbia**

[Membership and Votes](#)

**A G E N D A<sup>1</sup>**

**A. ADOPTION OF THE AGENDA**

**1. July 30, 2021 Regular Meeting Agenda**

That the GVWD Board adopt the agenda for its regular meeting scheduled for July 30, 2021 as circulated.

**B. ADOPTION OF THE MINUTES**

**1. June 25, 2021 Regular Meeting Minutes**

That the GVWD Board adopt the minutes for its regular meeting held June 25, 2021 as circulated.

*pg. 4*

**C. DELEGATIONS**

**D. INVITED PRESENTATIONS**

**E. CONSENT AGENDA**

*Note: Directors may adopt in one motion all recommendations appearing on the Consent Agenda or, prior to the vote, request an item be removed from the Consent Agenda for debate or discussion, voting in opposition to a recommendation, or declaring a conflict of interest with an item.*

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<sup>1</sup> Note: Recommendation is shown under each item, where applicable. All Directors vote unless otherwise noted.

## **1. WATER COMMITTEE REPORTS**

### **1.1 Award of Contract Resulting from Request for Proposal (RFP) No. 20-054: Construction of Douglas Road Main No. 2 – Still Creek Section – Microtunnel** *pg. 8*

That the GVWD Board:

- a) approve award of a contract in the amount of \$13,495,049.00 (exclusive of taxes) to Ward & Burke Microtunnelling Ltd. resulting from Request for Proposal (RFP) No. 20-054: Construction of Douglas Road Main No.2: Still Creek Section - Microtunnel, subject to final review by the Commissioner; and
- b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.

### **1.2 Coquitlam Lake Water Supply – Project Update** *pg. 13*

That the GVWD Board endorse Option 4 North Intake Smaller Initial Filtration to be carried forward through Permitting and Regulatory Phase into Preliminary Design.

## **2. CLIMATE ACTION COMMITTEE REPORTS**

### **2.1 Proposed Updates to the Sustainability Innovation Fund Policies** *pg. 21*

That the GVWD Board approve the proposed updates to the Water Sustainability Innovation Fund as presented in the report dated June 25, 2021, titled “Proposed Updates to the Sustainability Innovation Fund Policies”.

## **F. ITEMS REMOVED FROM THE CONSENT AGENDA**

## **G. REPORTS NOT INCLUDED IN CONSENT AGENDA**

## **H. MOTIONS FOR WHICH NOTICE HAS BEEN GIVEN**

## **I. OTHER BUSINESS**

### **1. GVWD Board Committee Information Items and Delegation Summaries** *pg. 31*

## **J. BUSINESS ARISING FROM DELEGATIONS**

## **K. RESOLUTION TO CLOSE MEETING**

*Note: The Board must state by resolution the basis under section 90 of the Community Charter on which the meeting is being closed. If a member wishes to add an item, the basis must be included below.*

That the GVWD Board close its regular meeting scheduled for July 30, 2021 pursuant to the *Community Charter* provisions, Section 90 (1) (e) and (m) as follows:

“90 (1) A part of a board meeting may be closed to the public if the subject matter being considered relates to or is one or more of the following:

- (e) the acquisition, disposition or expropriation of land or improvements, if the board or committee considers that disclosure could reasonably be expected to harm the interests of the regional district; and
- (m) a matter that, under another enactment, is such that the public may be excluded from the meeting.”

**L. RISE AND REPORT (Items Released from Closed Meeting)**

**M. ADJOURNMENT/CONCLUSION**

That the GVWD Board adjourn/conclude its regular meeting of July 30, 2021.

**GREATER VANCOUVER WATER DISTRICT  
BOARD OF DIRECTORS**

Minutes of the Regular Meeting of the Greater Vancouver Water District (GVWD) Board of Directors held at 9:19 a.m. on Friday, June 25, 2021 in the 28<sup>th</sup> Floor Boardroom, 4730 Kingsway, Burnaby, British Columbia.

**MEMBERS PRESENT:**

Burnaby, Chair, Director Sav Dhaliwal	Port Moody, Director Rob Vagramov*
North Vancouver City, Vice Chair Director Linda Buchanan*	Richmond, Director Malcolm Brodie*
Anmore, Director John McEwen*	Richmond, Director Harold Steves*
Belcarra, Director Jamie Ross*	Surrey, Director Linda Annis*
Burnaby, Director Pietro Calendino*	Surrey, Director Doug Elford*
Burnaby, Director Mike Hurley*	Surrey, Director Laurie Guerra*
Coquitlam, Director Craig Hodge*	Surrey, Director Doug McCallum*
Coquitlam, Director Richard Stewart*	Surrey, Director Mandeep Nagra*
Delta, Director George Harvie*	Surrey, Director Allison Patton*
Delta, Director Dylan Kruger*	Tsawwassen, Director Ken Baird*
Electoral Area A, Director Jen McCutcheon*	Vancouver, Director Christine Boyle*
Langley City, Director Gayle Martin*	Vancouver, Director Adriane Carr*
Langley Township, Director Jack Froese*	Vancouver, Director Melissa De Genova* (arrived at 9:29 a.m.)
Langley Township, Director Kim Richter*	Vancouver, Director Lisa Dominato*
Maple Ridge, Alternate Director Judy Dueck* for Mike Morden	Vancouver, Director Colleen Hardwick*
New Westminster, Director Jonathan Coté*	Vancouver, Alternate Director Pete Fry* for Kennedy Stewart
North Vancouver District, Director Lisa Muri*	Vancouver, Director Michael Wiebe*
Pitt Meadows, Director Bill Dingwall*	West Vancouver, Director Mary-Ann Booth*
Port Coquitlam, Director Brad West*	Commissioner Jerry W. Dobrovolny (Non-voting member)

**MEMBERS ABSENT:**

None

**STAFF PRESENT:**

Amelia White, Legislative Services Coordinator, Board and Information Services  
Chris Plagnol, Corporate Officer

\*denotes electronic meeting participation as authorized by Section 3.6.2 of the *Procedure Bylaw*

**A. ADOPTION OF THE AGENDA**

**1. June 25, 2021 Regular Meeting Agenda**

**It was MOVED and SECONDED**

That the GVWD Board adopt the agenda for its regular meeting scheduled for June 25, 2021 as circulated.

**CARRIED**

**B. ADOPTION OF THE MINUTES**

**1. May 28, 2021 Regular Meeting Minutes**

**It was MOVED and SECONDED**

That the GVWD Board adopt the minutes for its regular meeting held May 28, 2021 as circulated.

**CARRIED**

**C. DELEGATIONS**

No items presented.

**D. INVITED PRESENTATIONS**

No items presented.

**E. CONSENT AGENDA**

At the request of the Directors, the following item was removed from the Consent Agenda, for consideration under Section F. Items Removed from the Consent Agenda:

**1.2 Update on Adult Coho Release Program in Coquitlam Lake**

**It was MOVED and SECONDED**

That the GVWD Board adopt the recommendation presented in the following item as presented in the June 25, 2021 GVWD Board Consent Agenda:

**1.1 Drinking Water Customer Information Guide**

**CARRIED**

The item and recommendation referred to above is as follows:

**1.1 Drinking Water Customer Information Guide**

Report dated May 17, 2021, from Inder Singh, Director, Interagency Projects and Quality Control, Water Services, providing the GVWD Board information on the development of an updated Drinking Water Customer Service Guide to assist frontline staff in responding to public inquiries about drinking water.

*Recommendation:*

That the GVWD Board receive for information the report dated May 17, 2021 titled, "Drinking Water Customer Information Guide".

*Adopted on Consent*

**F. ITEMS REMOVED FROM THE CONSENT AGENDA**

**1.2 Update on Adult Coho Release Program in Coquitlam Lake**

Report dated May 27, 2021, from Heidi Walsh, Director, Watershed and Environmental Management, Water Services, providing the GVWD Board with an update on the success of the adult coho salmon releases conducted during the fall of 2020.

Members were provided a presentation on the successful release of coho salmon, in the fall of 2020, into Coquitlam Lake.

Presentation material titled "Update on Adult Coho Release Program" is retained with the June 25, 2021 GVWD Board agenda.

9:29 a.m. Director De Genova arrived at the meeting.

**It was MOVED and SECONDED**

That the GVWD Board receive for information the report dated May 27, 2021 titled "Update on Adult Coho Release Program in Coquitlam Lake".

**CARRIED**

**G. REPORTS NOT INCLUDED IN CONSENT AGENDA**

No items presented.

**H. MOTIONS FOR WHICH NOTICE HAS BEEN GIVEN**

No items presented.

**I. OTHER BUSINESS**

**1. GVWD Board Committee Information Items and Delegation Summaries**

**It was MOVED and SECONDED**

That the GVWD Board receive for information the GVWD Board Committee Information Items and Delegation Summaries, dated June 25, 2021.

**CARRIED**

**2. Water Conservation**

Members were notified that heat wave conditions are expected throughout the summer months, which will require water conservation measures to be in place across the region.

**J. BUSINESS ARISING FROM DELEGATIONS**

No items presented.

**K. RESOLUTION TO CLOSE MEETING**

No items presented.

**L. RISE AND REPORT (Items Released from Closed Meeting)**

No items presented.

**M. ADJOURNMENT/CONCLUSION**

**It was MOVED and SECONDED**

That the GVWD Board conclude its regular meeting of June 25, 2021.

**CARRIED**

(Time: 9:33 a.m.)

CERTIFIED CORRECT

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Chris Plagnol, Corporate Officer

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Sav Dhaliwal, Chair

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To: Water Committee

From: Roy Moulder, Director, Purchasing and Risk Management, Financial Services  
Goran Oljaca, Director, Engineering and Construction, Water Services

Date: June 24, 2021 Meeting Date: July 15, 2021

Subject: **Award of Contract Resulting from Request for Proposal (RFP) No. 20-054:  
Construction of Douglas Road Main No. 2 – Still Creek Section - Microtunnel**

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**RECOMMENDATION**

That the GVWD Board:

- a) approve award of a contract in the amount of \$13,495,049.00 (exclusive of taxes) to Ward & Burke Microtunnelling Ltd. resulting from Request for Proposal (RFP) No. 20-054: Construction of Douglas Road Main No.2: Still Creek Section - Microtunnel, subject to final review by the Commissioner; and
- b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.

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**EXECUTIVE SUMMARY**

Metro Vancouver is constructing Douglas Road Main No. 2 – Still Creek Section (DRM2-SC) along Douglas Road, between Lougheed Highway and Canada Way, in the City of Burnaby. This new 1.5 metre-diameter, 2.2 km-long water main will replace the existing Douglas Road Main No. 1, which has reached the end of its service life. The project is being delivered in three phases, including the North Section, Microtunnel Section and the South Section.

As a result of Request for Qualifications (RFQ) No. 20-023, four (4) experienced trenchless construction firms were shortlisted and invited to respond to RFP No. 20-054 for the 660 metre-long microtunnel section of the project. Ward & Burke Microtunnelling Ltd. was identified as offering the technically strongest and lowest cost proposal. Based on the evaluation of proposals, it is recommended to award RFP No. 20-054 to Ward & Burke in the amount of \$13,495,049.00 (exclusive of taxes).

**PURPOSE**

This report is to advise the GVWD Board of the results of RFP No. 20-054: Construction of DRM2-SC - Microtunnel Section and to recommend award of the contract in the amount of \$13,495,049.00 (exclusive of taxes) to Ward & Burke Microtunnelling Ltd. to enable the DRM2-SC project to proceed to completion.



## BACKGROUND

Pursuant to the *GVWD Officers and Delegation Bylaw No. 247, 2014 (Bylaw)* and the *Procurement and Real Property Contracting Authority Policy (Policy)*, procurement contracts which exceed a value of \$5 million require the approval of the GVWD Board of Directors.

This report is being brought forward to the Water Committee to consider a recommendation to the GVWD Board to authorize award of a contract for the construction of DRM2-SC – Microtunnel Section.

## PROJECT DESCRIPTION

As shown in the attachment to this report, Metro Vancouver is planning to construct DRM2-SC primarily along Douglas Road, between the intersection of Lougheed Highway and Douglas Road and the intersection of Kincaid Street at Canada Way, in the City of Burnaby, BC. This section will include installation of a 1.5 metre-diameter water main and construction of two underground valve chambers along the alignment.

The new water main, approximately 2.2 km in length, will pass through variable soil conditions and construction will be phased over three years in three separate sections.

- North Section – approx. 560 metres along Douglas Road, between Lougheed Hwy and Roy Street.
- **Microtunnel Section – approx. 660 metres along Douglas Road, between Roy Street and Manor Street.**
- South Section – approx. 1,060 metres between Douglas Road at Manor Street and Canada Way at Kincaid Street.

This RFP requested proposals for the completion of the 660 m-long microtunnelling section to facilitate several major crossings from North to South under the Burlington Northern Santa Fe Railway (BNSF Railway), Still Creek, and the Trans-Canada Highway (TCH 1).

As a result of Request for Qualifications (RFQ) No. 20-023, four (4) experienced trenchless construction firms were shortlisted and invited to respond to RFP No. 20-054. The RFP closed on April 30, 2021 and the three (3) submissions received are summarized in Table 1.

**Table 1: Proposal Submissions**

Proponent	Proposed Fee (exclusive of taxes)
Ward & Burke Microtunnelling Ltd.	\$13,495,049.00
Innovative Pipeline Crossing Inc.	\$24,324,955.00
Michels Canada Company	\$36,907,281.50

Proposals were evaluated based on 50% technical and 50% financial. The technical component of the proposals was evaluated by staff within the Water Services Department and the financial component was evaluated by staff within the Purchasing and Risk Management Division.

The proposal from Ward & Burke Microtunnelling Ltd. was identified as offering the technically strongest and lowest cost proposal. Ward & Burke Microtunnelling Ltd. demonstrated excellent knowledge of the project through their proposal and proposed construction methodology and have had an excellent record of meeting project schedules and timelines as demonstrated by their latest projects with MV, including the construction of the South Surrey Interceptor, the Douglas Trunk Sewer, and the South Delta Main No. 1, among other project references. Ward & Burke Microtunnelling Ltd.'s references have all given the company excellent feedback and provided confidence in their ability to meet commitments with a high degree of quality in their work and professionalism.

The proposal pricing from Ward & Burke Microtunnelling Ltd. is significantly lower than the other bidders and review shows Ward & Burke Microtunnelling Ltd.'s bid had much lower unit pricing related to mobilization, demobilization and other project startup costs. It is recommended to award RFP No. 20-054 to Ward & Burke Microtunnelling Ltd. in the amount of \$13,495,049.00 (exclusive of taxes).

#### **ALTERNATIVES**

1. That the GVWD Board:
  - a) approve award of a contract in the amount of \$13,495,049.00 (exclusive of taxes) to Ward & Burke Microtunnelling Ltd. resulting from Request for Proposal (RFP) No. 20-054: Construction of Douglas Road Main No.2: Still Creek Section - Microtunnel, subject to final review by the Commissioner; and
  - b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.
2. That the GVWD Board terminate Request for Proposal (RFP) No. 20-054: Construction of Douglas Road Main No.2 Still Creek Section - Microtunnel and direct staff to report back to the GVWD Board with options for an alternate course of action.

#### **FINANCIAL IMPLICATIONS**

If the GVWD Board approves Alternative 1, a contract will be awarded to Ward & Burke Microtunnelling Ltd. in the amount of \$13,495,049.00 (exclusive of taxes) to complete the project work. This amount is within the budget allocated for this project. The proposal from Ward & Burke Microtunnelling Ltd. was identified as offering the technically strongest and lowest cost proposal.

The GVWD Board has the choice not to proceed with Alternative 1, but staff will need further direction in relation to the project. Alternative 2 will result in a delay to the project schedule and is anticipated to add additional costs to the overall project due to the large disparity in proposal pricing.

#### **CONCLUSION**

RFP No. 20-054 was issued for the Construction of the DRM2-SC - Microtunnel Section and Ward & Burke Microtunnelling Ltd. was identified as offering the technically strongest and lowest cost proposal. Based on the evaluation of the three (3) proposals, it is recommended that the Board

authorize the Commissioner and the Corporate Officer to award and execute the contract to Ward & Burke Microtunnelling Ltd. in the amount of \$13,495,049.00 (exclusive of taxes).

**Attachment**

Greater Vancouver Water District – Douglas Road Main No. 2 – Still Creek Microtunnelling Section

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To: Water Committee

From: Bob Cheng, Project Manager, Coquitlam Water Supply, Project Delivery

Date: June 22, 2021 Meeting Date: July 15, 2021

Subject: **Coquitlam Lake Water Supply – Project Update**

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**RECOMMENDATION**

That the GVWD Board endorse Option 4 North Intake Smaller Initial Filtration to be carried forward through Permitting and Regulatory Phase into Preliminary Design.

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**EXECUTIVE SUMMARY**

In October 2018, the GVWD Board endorsed the North Intake – Phased Filtration option to be carried forward into Project Definition for the Coquitlam Lake Water Supply Project. This is an important, complex project that is needed to meet projected future water demands, even with increased water conservation measures. Since the 2018 Board option endorsement, Project Definition and Value Engineering have been completed and this project update is part of the new Project Delivery stage gate process. This recent work has determined that the 2018 Board endorsed option, with some minor modifications, is still the preferred option (Option 4 – North Intake Smaller Initial Filtration). Option 4 provides some life cycle and capital cost savings compared to the 2018 endorsed option.

Engagement with First Nations, stakeholders and the community has commenced and will continue during the Permitting and Regulatory Phase following the completion of the Project Definition Phase in late 2021. Staff will continue to work with the various ministries at the Province and with the City of Coquitlam with respect to the Environmental Assessment, Water Licence and acquisition of the treatment plant site.

**PURPOSE**

To update the GVWD Board on the Coquitlam Lake Water Supply (formerly Coquitlam Intake No. 2) project definition work and seek endorsement of Option 4 North Intake Smaller Initial Filtration to be carried forward through the Permitting and Regulatory Phase into Preliminary Design.

**BACKGROUND**

The Coquitlam Lake Water Supply Project is needed to access additional water in Coquitlam Lake, that is not accessible with current infrastructure, to meet projected water demand due to population growth, even with increased water conservation measures. In October 2018, the GVWD Board endorsed the North Intake – Phased Filtration option to be carried forward into Project Definition. Following the GVWD Board endorsement the project team completed an Indicative Design and Project Definition Report. Additional Value Engineering was also done. As a result of the findings from the Value Engineering and concerns raised by some member jurisdictions with respect to timing and cost, the project team further reviewed opportunities to reduce or defer project costs.

## **PROJECT DEFINITION UPDATE**

The 2018 Board endorsed project option included a north intake located approximately 5 km north of the existing intake; 5 m diameter by 8.4 km long water supply tunnel; and filtration treatment plant built in two phases on a provincially-owned property currently leased out for gravel extraction.

Phase 1 was projected to be completed by the late 2030's and included the new intake, water supply tunnel, and half of the filtration treatment plant required capacity at 1,300 million litres per day (MLD). Phase 2 expansion increased the total filtration treatment capacity to 2,600 MLD and was projected to be built by the late 2050's. This results in an approximate doubling of the current Coquitlam system capacity to meet the projected water demand until the mid-2070's. In 2021, a Value Engineering Optimized Project Options Assessment was undertaken to review the 2018 endorsed project option and explore opportunities to reduce or defer project costs.

## **Value Engineering Optimized Project Options**

Four project options were assessed to determine opportunities to reduce or defer project costs, including:

- Option 1 – North Intake Phased Filtration: 2018 Board endorsed option with value engineering improvements incorporated.
- Option 2 – South Intake Phased Filtration: Similar to Option 1 with new intake proposed at the south end of Coquitlam Lake.
- Option 3 – North Intake Deferred Filtration: Ozone and UV treatment in Phase 1, filtration treatment in Phase 2.
- Option 4 – North Intake Smaller Initial Filtration: Same as Option 1 but with a lower filtration treatment capacity in Phase 1.

The results of the assessment are summarized below in Table 1. The cost for the 2018 preferred option, originally estimated at approximately \$2.7 billion as an indicative high level estimate prior to completion of the Project Definition Report, was updated to \$4.1 billion to align with the Project Delivery Department's new cost estimating framework and to allow for accurate comparison with the 2021 options. The primary drivers for the increase in the estimate was due to the approach to calculate escalation and risk management.

**Table 1 – Value Engineering Optimized Project Options (2021 dollars)**

	2018 North Intake Phased Filtration	Option 1 North Intake Phased Filtration	Option 2 South Intake Phased Filtration	Option 3 North Intake Deferred Filtration	Option 4 North Intake Smaller Initial Filtration (2021 preferred option)
Life Cycle Cost* (Phases 1 & 2)	\$7.6B	\$7.0B	\$7.0B	\$7.4B	\$6.6B
Capital Cost (Phase 1)	\$4.1B	\$3.9B	\$3.8B	\$3.1B	\$3.9B
Filtration Capacity (Phase 1)	1,300 MLD	1,300 MLD	1,300 MLD	0 MLD	900 MLD
Filtration Capacity (Phase 2)	2,600 MLD	2,600 MLD	2,600 MLD	2,600 MLD	2,600 MLD
Turbidity Treatment before Phase 2	YES	YES	YES	NO	YES

\*100 years

Option 1 – North Intake Phased Filtration provides some life cycle and capital cost savings compared to the 2018 Board endorsed option. Option 1 has the added benefit of potentially delaying Phase 2 of the filtration plant further out into the future if the quality of water from the north intake continues to be higher than water from the south intake.

Option 2 – South Intake Phased Filtration provides similar life cycle and capital cost savings as Option 1. While the south intake shortens the water supply tunnel, the costs to build the intake in more geotechnically and seismically challenging conditions offsets savings from a shorter tunnel. The existing treatment system, which is not designed to treat turbidity, will not be available during elevated turbidity events that typically impact the south end of Coquitlam Lake. There may potentially not be enough treatment capacity to meet water demands during the period before Phase 2 expansion.

Option 3 – North Intake Deferred Filtration provides a substantial reduction in capital cost; however, the life cycle cost savings is negligible compared to the 2018 Board endorsed option. This option exposes Metro Vancouver to the risk of not being able to provide water from the Coquitlam source during high turbidity events. As we depend more on the Coquitlam system to supply a larger portion of the regional water demand, greater supply and treatment reliability is required; therefore, this option is not preferred.

Option 4 – North Intake Smaller Initial Filtration provides significant life cycle cost savings and some capital cost savings for Phase 1 relative to the 2018 Board-endorsed option. This option defers some treatment components further out into the future, provides some filtration capacity to address

elevated turbidity events, maximizes the lifespan of the existing treatment plant with the good quality water from the north intake and allows flexibility to expand the system in the future to fully filter water from the Coquitlam source.

The Value Engineering Optimized Project Options Assessment determined that Option 4 – North Intake Smaller Initial Filtration, a modified version of the 2018 Board-endorsed option, as the preferred option, as it provides higher quality source water, allows for some turbidity treatment, defers some Phase 1 costs, and has the lowest life cycle costs. The attachments show the preferred project option.

### **Cost Estimate**

The cost estimate for Option 4 – North Intake Smaller Initial Filtration is presented in the new cost estimating framework as follows:

• Base construction	\$2,173 million
• Owner's cost	\$ 290 million
• Escalation cost	\$1,096 million
• Risk reserve	\$ 357 million
Total	\$3,916 million

### **Schedule**

The Project Definition Phase will conclude at the end of 2021 and immediately transition to the Permitting and Regulatory Phase. Preliminary Design is anticipated to commence in 2025 with some early construction work starting in 2029. Construction and Commissioning of the intake, tunnel, and treatment plant is currently anticipated to be completed by the late 2030's (basis of cost estimate); however, this timeline may be delayed if the results of ongoing water conservation efforts exceed the modeling predictions. Staff will continue to revisit the timing of key construction components at major milestones, taking into consideration the results of water conservation efforts, to ensure that the timing of the project components is appropriate.

### **Investigative Licence and Property Acquisition**

The site of the proposed water treatment plant, near the north end of Pipeline Road, is currently owned by the Province and leased to a private operator for sand and gravel mining. An Investigative Licence Application has been submitted to the Ministry of Forests, Lands, Natural Resource Operations and Rural Development to conduct site investigations on this land. The application is currently under review by the Province. In the interim, at the Ministry's direction, staff continue to work with the current land leasee for site access for investigation work.

Staff continue to work with the Province to determine options for the acquisition of the property. Staff are also working with the City of Coquitlam to look for opportunities to synergize future development of the treatment plant site to meet both of our objectives. The City of Coquitlam will be undertaking an Upper Pipeline Road Corridor Planning Overview, which includes this property. Metro Vancouver has offered to work with the City of Coquitlam on this initiative. As the project requires approximately 1/3 of the identified site, a key opportunity is that the remaining portion of the site can be used as a recreational amenity.



## **ENGAGEMENT PROCESS**

Engagement with First Nations, stakeholders, and the community started in fall 2020. The engagement program is designed to support the Project Definition Phase and the Permitting and Regulatory process, providing interested and affected parties with opportunities for meaningful engagement that generates actionable and effective input and feedback to the project team.

We have been sharing information since 2017 with First Nations, specifically Kwikwetlem First Nation, as the project site is within their core territory. Through our meetings with Kwikwetlem First Nation we identified their initial key interests and we are in the process of negotiating an engagement agreement that outlines the ways in which we will be engaging them.

We also recently met with industrial businesses on Pipeline Road and environmental non-governmental organizations. We have also been meeting regularly with the City of Coquitlam and BC Hydro. We are planning a public information session for later in 2021 and workshops with all groups will be ongoing this year and into next year.

## **LICENCES AND PERMITS**

An Environmental Assessment Certificate or Exemption from the Environmental Assessment Office (EAO) may be required for this project. Furthermore, the Province recently advised staff that the water treatment plant site land disposition will also be contingent on any environmental assessment requirements being satisfied. A project introductory letter has been sent to the EAO and staff are engaging with them to determine the requirements of the environmental assessment process for the project. An EAO exemption is anticipated to take up to two years to resolve and the current schedule factors in this timeline. Engagement with First Nations has been identified as a key aspect of the Permitting and Regulatory process.

Subsequently, a Water Licence will be required to reallocate water from BC Hydro to the GVWD for drinking water and to construct and commission the Coquitlam Lake Water Supply Project.

## **NEXT STEPS**

Staff will be providing a project update to Finance and Intergovernment Committee and the GVWD Board in September 2021. Permitting and regulatory work will commence in late 2021. Concurrently the project will start planning and procurement for further site investigations and treatment pilot testing. The Board will continue to be updated at key milestones including the completion of the Permitting and Regulatory Phase, acquisition of the treatment plant site and prior to the start of Preliminary Design, Detailed Design and Construction.

## **ALTERNATIVES**

1. That the GVWD Board endorse Option 4 North Intake Smaller Initial Filtration to be carried forward through Permitting and Regulatory Phase into Preliminary Design.
2. That the GVWD Board receive for information the report dated June 22, 2021, titled “Coquitlam Lake Water Supply – Project Update” and provide alternate direction.

Staff recommend Alternative 1.

## **FINANCIAL IMPLICATIONS**

This project will be funded through the GVWD capital program.

## **CONCLUSION**

A Value Engineering Optimized Options Assessment was undertaken to look for opportunities to reduce or defer costs identified in the 2018 Board endorsed option. Option 4 – North Intake Smaller Initial Filtration was determined to be the preferred option as it achieves the goal of reducing and deferring some of the project costs. This is a slightly modified version of the 2018 Board endorsed option.

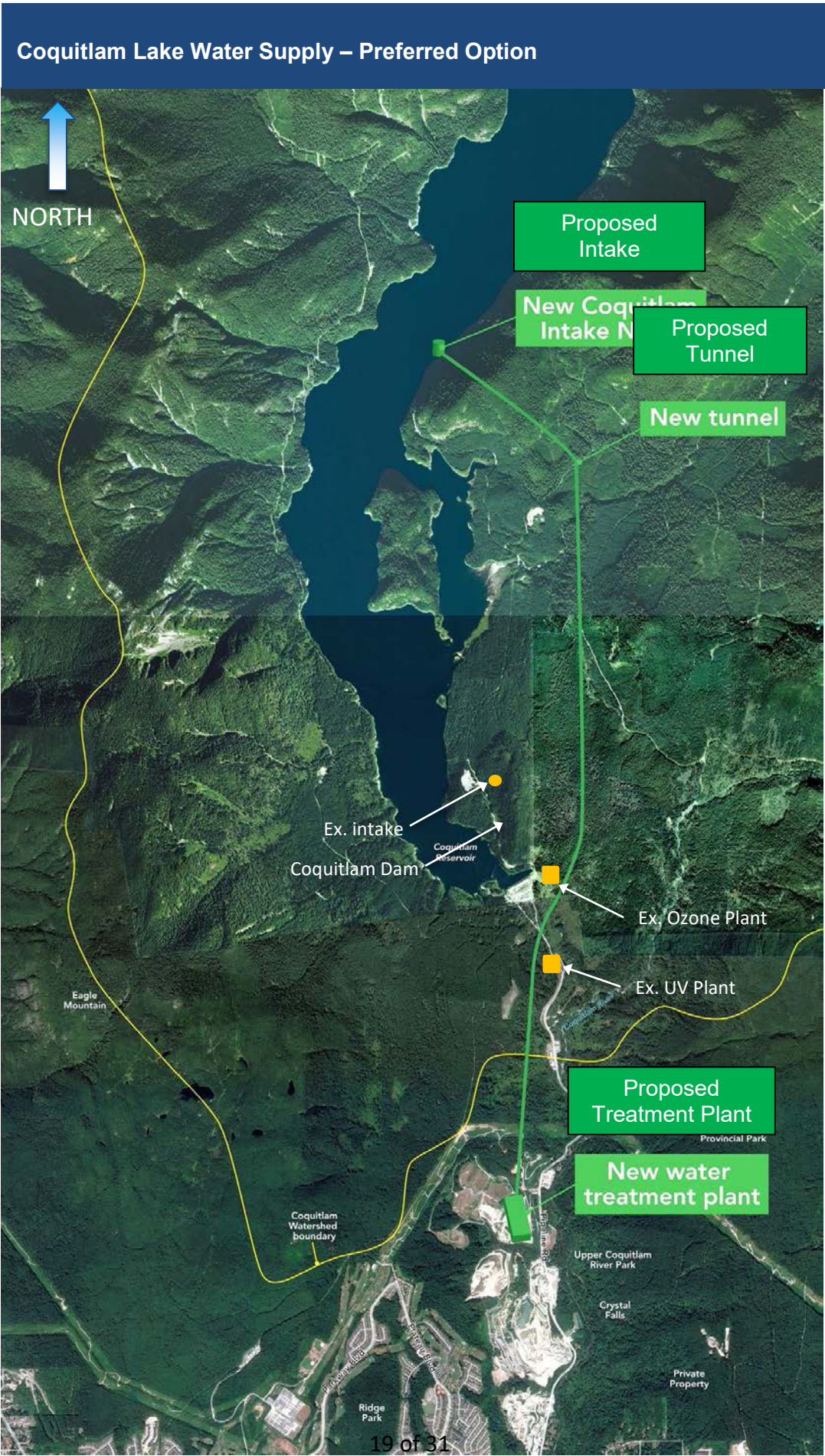
The Project Definition Phase will conclude in late 2021 and the project will transition into the Permitting and Regulatory Phase. Staff will continue to revisit the timing of key construction components at major milestones, taking into consideration the results of water conservation efforts, to ensure that the timing of the project components is appropriate. Staff will continue to work with the various ministries at the Province to determine the permitting and regulatory requirements related to the Environmental Assessment, Water License and acquisition of the treatment plant site.

Engagement with First Nations, stakeholders and the community has commenced and will continue during the Permitting and Regulatory Phase. We will continue to work closely with First Nations, City of Coquitlam, stakeholders and the public to ensure that their interests are considered in the planning of the Coquitlam Lake Water Supply Project.

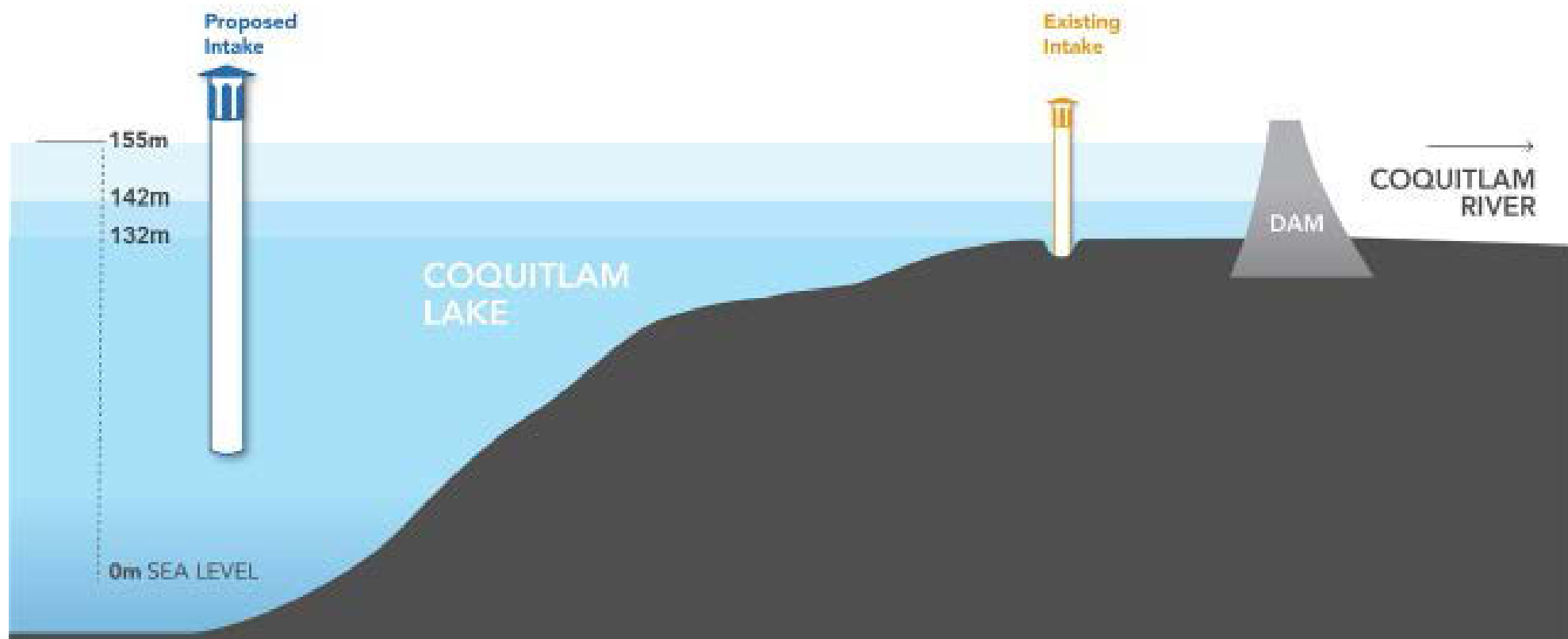
## **Attachments**

1. Coquitlam Lake Water Supply – Preferred Option
2. Coquitlam Lake Water Supply – Cross Section

46222014



## Coquitlam Lake Water Supply – Cross Section



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To: Climate Action Committee

From: Megan Gerrys, Senior Advisor, Regional Economic Prosperity Service  
Roger Quan, Director, Air Quality and Climate Change, Parks and Environment

Date: June 25, 2021 Meeting Date: July 16, 2021

Subject: **Proposed Updates to the Sustainability Innovation Fund Policies**

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**RECOMMENDATION**

That the MVRD Board approve the proposed updates to the Regional District Sustainability Innovation Fund as presented in the report dated June 25, 2021, titled "Proposed Updates to the Sustainability Innovation Fund Policies".

That the GVS&DD Board approve the proposed updates to the Liquid Waste Sustainability Innovation Fund as presented in the report dated June 25, 2021, titled "Proposed Updates to the Sustainability Innovation Fund Policies".

That the GVWD Board approve the proposed updates to the Water Sustainability Innovation Fund as presented in the report dated June 25, 2021, titled "Proposed Updates to the Sustainability Innovation Fund Policies".

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**EXECUTIVE SUMMARY**

The Sustainability Innovation Fund (SIF) program allows the Metro Vancouver organization to address critical climate challenges, meet strategic objectives and pilot innovative ideas. SIF projects touch on areas such as the circular economy, resource recovery, emissions reduction and environmental protection.

Following direction from the Climate Action Committee, staff are bringing forward proposed updates to the Sustainability Innovation Fund policies to strengthen and amplify the positive outcomes of the program. To address the stagnant annual contribution to the fund, Financial Services will develop and annually update a contribution schedule to ensure the fund is able to support future projects.

Starting in 2024, staff are proposing that Financial Services gradually phase in an increase in the contribution amount to each of the Sustainability Innovation Fund reserves. Annual contributions will not exceed 1% of the respective legal entity's operating budget and a maximum amount in the fund will be set at \$25 million, indexed to inflation.

**PURPOSE**

To seek Board approval for the proposed updates to the three Sustainability Innovation Fund (SIF) policies.

## **BACKGROUND**

At its meeting held February 12, 2021, the Climate Action Committee directed to staff to review the Sustainability Innovation Fund policies. Key issues discussed included how current annual contributions to each of the three funds are based on the GST rebate amount from 2005, and the \$100,000 limitation on annual funding for projects under the Regional District SIF. Staff have conducted a review of the Sustainability Innovation Fund program and are recommending policy changes to address the stagnant annual contribution and funding cap for Regional District projects, as well as additional changes focused on enabling projects that can improve sustainability through innovation or continuous improvement, create positive economic benefits for the region, and further sustainability goals in response to the climate emergency. To ensure the fund can support innovative projects going forward, staff are recommending linking the annual funding amount to the annual operating budget and phasing in an increase over time starting in 2024.

## **VALUE OF INNOVATION**

In order to be able to address the climate emergency and meet our corporate objectives, innovation is required. For a large organization such as Metro Vancouver, there is a need to invest in innovation and this will involve: research and development, the adoption of new products, improved processes and production practices, technologies and business strategies.

The SIF program is unique as it allows staff to bring forward their innovative ideas and partner with those outside the organization to put ideas into action. Successful partnerships may lead to significant benefits for the organization, and region, in terms of efficiency gains in utility processes, delaying or reducing the need for costly infrastructure upgrades or providing significant environmental benefits. These will help to keep services affordable for the region and improve the resilience of Metro Vancouver systems.

As an example, the Hydrothermal Processing Biofuel Demonstration project will evaluate the conversion of wastewater biomass to low carbon transportation fuels. If this SIF project is successful, it can lead to full-scale implementation of the technology at the Iona Island Wastewater Treatment Plant for an estimated net present value savings of more than \$60 million compared to the business as usual scenario. Further, a full-scale facility at Iona Island can reduce GHG emissions by 16,000 tonnes CO<sub>2</sub>e/yr, which has attracted the attention of the advanced biofuel industry and petroleum producers seeking to decarbonize liquid transportation fuels. Expressed interest from organizations such as International Energy Agency – Bioenergy, the U.S. Department of Energy, the Commercial Aviation Alternatives Fuels Initiative, and the Water Research Foundation provided incentive for private-sector and provincial investments of \$5 million towards the Hydrothermal Processing Biofuel Demonstration project.

The SIF program is able to bridge the gap between research and commercialization, which is often the hardest type of funding to secure. Being able to invest in technological innovation in the region also yields great economic-development returns, driving entrepreneurship, an export-oriented economy and greater prosperity for the region. Additionally, these funds can often be leveraged as they allow researchers to acquire matching funding from other sources.



With this policy update there is an opportunity to increase partnerships centered on technological innovation that will create these economic benefits and meet corporate objectives. These types of projects may generate returns on SIF project investments through Intellectual Property royalties. A review of comparable governmental organizations that focus on innovation revealed that these organizations typically spend 0.5%-2% of their budget on innovation.

### **PROPOSED POLICY AMENDMENTS**

The three amended SIF Policies attached to this report (Attachments 1-3) show proposed amendments that have been made in response to Committee direction and identified program issues. Attachments 4-6 show the red line versions of the policies. The amendments are designed to enable a wider variety of projects that will reduce emissions, protect the environment or advance regional resilience. The amended policy language explicitly encourages partnerships that will lead to innovative solutions to Metro Vancouver's challenges.

<b>Policy Changes</b>	<b>Existing</b>	<b>Proposed</b>
Funding amounts	Annual contributions: LW: \$1,127,000 RD: \$347,000 WS: \$723,000	Financial Services will develop and annually update a contribution schedule to ensure the fund is able to support future projects. Annually, an amount no greater than 1% of the legal entity's annual operating budget will be transferred to the fund. The fund balance will be set at a maximum amount of \$25 million indexed to inflation.
Project funding limits	Regional District limited to \$100k per year per project.	Remove Regional District funding limit.
Eligible proposals must include sustainability principles	Definition of sustainability from the defunct Sustainability Framework.	Sustainability refers to reducing emissions, protecting the environment and/or advancing regional resilience.
Eligible proposals must forward innovation or provide continuous improvement	Innovation not defined. Beyond 'business as usual' requirement creates challenges with respect to interpretation.	Proposals may cover the spectrum of projects involving true innovation to continuous improvement.
Partnerships	Projects must consider partnerships. Support given to projects that involve members.	Additional emphasis on partnerships, particularly ones that will lead to innovative solutions to Metro Vancouver's challenges, such as through applied and/or translational research within the region's academic institutions. Solutions may be generated through a crowd-sourcing ideation process.
Accountability	Reporting on project outcomes to Committee and in e-Library	Improved project reporting through project close out template (including KPI reporting)

## Accountability

Staff are also intending to improve the accountability of SIF-funded projects by implementing measures to improve reporting on project outcomes, such as Key Performance Indicator (KPI) reporting. KPIs are currently identified by project proponents as part of the SIF application process, and new procedures will be put in place to facilitate consistent reporting during projects and at project completion. Closer attention will also be paid in the evaluation of potential projects with respect to qualitative and quantitative data on each of the projects.

## Annual Contribution

The current policy language sets the annual contribution amount for each of the three funds based on the GST rebate amount set in 2005. This annual funding amount is problematic as it is a stagnant amount that does not take into account the value of money over time. In response to this issue, staff are proposing that the annual contribution to the fund be determined by Financial Services, up to a maximum of 1% of the legal entity's operating budget. This increase in funding will be phased in gradually over time with increases starting in 2024.

The broadening of definitions in the policy, as well as removal of the funding cap, will likely create pressure on the remaining balances. In response to this, staff are proposing an increased contribution. Without an increased contribution, the enhancements to the policy language may drive the fund to depletion. Conversely, in order to protect against any of the three fund balances getting too large, the proposed policy mandates that the maximum amount in the fund cannot exceed \$25 million, indexed to inflation. This amount was determined as being sufficient to support innovative projects going forward.

**Table 1:** Schedule of fund contributions based on current 5-Year Financial Plan (*subject to budgetary processes and review*)

	2022	2023	2024	2025	2026
WS Annual Contribution	\$723,000	\$723,000	\$ 1,861,500	\$ 2,484,600	\$3,500,000
% of operating budget	0.22%	0.21%	0.5%	0.6%	0.7%
LW Annual Contribution	\$1,127,000	\$1,127,000	\$2,351,500	\$3,259,200	\$5,250,000
% of operating budget	0.3%	0.27%	0.5%	0.6%	0.7%
RD Annual Contribution	\$347,000	\$347,000	\$554,500	\$684,000	\$840,000
% of operating budget	0.4%	0.4%	0.5%	0.6%	0.7%

Staff believe that coupling the funding amount to the operating budget is expected to create a stable proxy to base annual contributions on. Allowing Financial Services to set the annual contribution schedule, up to the maximum amount of 1% of the operating budget, phased in over time, gives the organization the flexibility to ensure the fund is able to support innovative projects going forward while safeguarding against the fund getting too large. Fund contributions will be subject to budgetary processes and review.

The proposed maximum of 1% of the operating budget is consistent with similar utility organizations that invest in innovation. In the scan of similar governmental organizations, innovation investments ranged from 0.5%-2% of the overall budget amount. These investments can add corporate value in



the form of economic, environmental and social benefits. Additionally, intangible benefits include valuable partnerships with other organizations, corporate integrity and public trust.

### ALTERNATIVES

1. That the MVRD Board approve the proposed updates to the Regional District Sustainability Innovation Fund as presented in the report dated June 25, 2021, titled "Proposed Updates to the Sustainability Innovation Fund Policies".

That the GVS&DD Board approve the proposed updates to the Liquid Waste Sustainability Innovation Fund as presented in the report dated June 25, 2021, titled "Proposed Updates to the Sustainability Innovation Fund Policies".

That the GVWD Board approve the proposed updates to the Water Sustainability Innovation Fund as presented in the report dated June 25, 2021, titled "Proposed Updates to the Sustainability Innovation Fund Policies".

2. That the Climate Action Committee receive for information the report dated June 25, 2021, titled "Proposed Updates to the Sustainability Innovation Fund Policies" and provide alternate direction to staff.

### FINANCIAL IMPLICATIONS

If the Board approves Alternative 1, Financial Services will gradually phase in an increase in the contribution amount to each of the SIF reserves starting in 2024. Table 1 shows the planned schedule for contribution increases. Annual contributions will not exceed 1% of the legal entity's operating budget and a maximum amount in the fund is set at \$25 million, indexed to inflation.

### CONCLUSION

Following direction from the Climate Action Committee, staff are bringing forward proposed updates to the Sustainability Innovation Fund policies to strengthen and amplify the positive outcomes of the program. To address the stagnant annual contribution to the fund, Financial Services will develop and annually update a contribution schedule to ensure the fund is able to support future projects. Starting in 2024, staff are proposing that Financial Services gradually phase in an increase in the contribution amount to each of the Sustainability Innovation Fund reserves. Annual contributions will not exceed 1% of the respective legal entity's operating budget and a maximum amount in the fund will be set at \$25 million, indexed to inflation.

### Attachments

1. ~~Liquid Waste Sustainability Innovation Fund Policy~~
2. ~~Regional District Sustainability Innovation Fund Policy~~
3. Water Services Sustainability Innovation Fund Policy
4. ~~Liquid Waste Sustainability Innovation Fund Policy Red Line Version~~
5. ~~Regional District Sustainability Innovation Fund Policy Red Line Version~~
6. Water Services Sustainability Innovation Fund Policy Red Line Version

**WATER SUSTAINABILITY INNOVATION FUND**

Effective Date: June 27, 2014 (revised July month day, year)

Approved By: GVWD Board

**Policy No. FN-005**

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**PURPOSE**

The Policy is designed to ensure that the Water Sustainability Innovation Fund (Fund) is used to support projects of the water utility that contribute to the region's sustainability and that the Fund is managed in an effective, transparent, and accountable manner.

**POLICY**

The Water Sustainability Innovation Fund has been in place since October 29, 2004, when the GVWD Board approved the creation of a Fund that would be "dedicated to funding projects based on the principles of sustainability." Projects must contribute to the region's sustainability by reducing emissions, protecting the environment and/or advancing regional resilience.

The fund is designed to support projects that demonstrate an innovative approach that is considered less proven or beyond the level of risk tolerated through the budget process. Projects may also adopt a continuous improvement approach that would not be feasible through the regular budget process due to funding or risk tolerance constraints.

Projects are encouraged to consider partnerships that will lead to innovative solutions to Metro Vancouver's challenges, particularly through applied and/or translational research within the region's academic institutions. These solutions may be generated through a crowd-sourcing ideation process.

Projects supported by the Fund must:

- be overseen by the GVWD;
- be consistent with the authority and responsibility of the GVWD;
- be consistent with the objectives of the *Drinking Water Management Plan* and/or the *Board Strategic Plan*;
- consider partnerships including, but not limited to, member jurisdictions, academic institutions, non-governmental organizations, and community groups;
- result in a positive contribution, in the form of tangible results and/or measurable benefits, to the sustainability of the region;
- demonstrate innovation or a continuous improvement approach.

**Fund Management**

- Financial Services will develop and annually update a contribution schedule to ensure the fund is able to support future projects.

## BOARD POLICY

- Annually, an amount no greater than 1% of GVWD's annual operating budget will be transferred to the fund.
- The fund will be set at a maximum amount of \$25 million indexed to inflation.
- Any revenues generated from projects derived from SIF investments will be taken into consideration with respect to annual contribution amounts.
- The total amount disbursed from the Fund in any year is at the discretion of the GVWD Board and will depend on the merit of the proposals submitted.
- Reporting on the balance of the Water Sustainability Innovation Fund will be carried out through the Status of Reserves report.

### **Annual Evaluation and Decision-Making Process**

- Project proposals will be evaluated by the Sustainability Innovation Fund Inter-Departmental Steering Committee according to the criteria outlined in the Application Package.
- Staff will provide the designated Standing Committee with a report on recommendations on the proposals considered for funding and implications of these recommendations on the Fund's balance.
- The designated Standing Committee will provide its recommendations to the GVWD Board which will make the final decision on projects to be funded.

### **Reporting on the Fund's Contributions to Regional Sustainability**

- On an annual basis, the designated Standing Committee will receive a report on the projects supported by the Fund including the deliverables, outcomes, and the measurable benefits of these projects to the region's sustainability.
- Project reports will be housed in an "e-Library" for easy access by municipalities, regions and others who are interested in learning from the experiences, and who wish to assess the transferability of certain projects to other jurisdictions.

**WATER SUSTAINABILITY INNOVATION FUND**

Effective Date: June 27, 2014 (revised October 28, 2016)

Approved By: GVWD Board

**Policy No. FN-005****PURPOSE**

The Policy is designed to ensure that the Water Sustainability Innovation Fund (Fund) is used to support projects of the water utility that contribute to the region's sustainability and that the Fund is managed in an effective, transparent, and accountable manner.

**DEFINITIONS****Sustainability**

~~Adapting the concept of sustainability as defined by Metro Vancouver's Sustainability Framework for the purposes of this Fund, a sustainability project would need to:~~

- ~~• Have regard for both local and global consequences and long term impacts~~
- ~~• Recognize and reflect the interconnectedness and interdependence of systems~~
- ~~• Be collaborative~~

~~In addition, sustainability projects will make a contribution to:~~

- ~~• Protecting and enhancing the natural environment~~
- ~~• Providing for ongoing prosperity~~
- ~~• Building community capacity and social cohesion~~

**POLICY**

The Water Sustainability Innovation Fund has been in place since October 29, 2004, when the GVWD Board approved the creation of a Fund that would be "dedicated to funding projects based on the principles of sustainability." **Projects must contribute to the region's sustainability by reducing emissions, protecting the environment and/or advancing regional resilience.**

**The fund is designed to support projects that demonstrate an innovative approach that is considered less proven or beyond the level of risk tolerated through the budget process. Projects may also adopt a continuous improvement approach that would not be feasible through the regular budget process due to funding or risk tolerance constraints.**

**Projects are encouraged to consider partnerships that will lead to innovative solutions to Metro Vancouver's challenges, particularly through applied and/or translational research within the region's academic institutions. These solutions may be generated through a crowd-sourcing ideation process.**

## BOARD POLICY

~~Annually, an amount equal to the GST rebate for the water utility in 2005 (\$723,000) is contributed to the Fund.~~

~~The Fund is not designed to support “business as usual” projects that a department would undertake as part of its normal operations, nor is it in place to support projects that would normally be funded through a department’s capital plan. The Fund can be used, however, to pursue “opportunity projects” in the capital planning process, innovative projects that are outside the drinking water core functions that address cross-cutting organizational objectives, and public engagement and education programs designed to change behaviour.~~

Projects supported by the Fund must:

- be overseen by the GVWD;
- be consistent with the authority and responsibility of the GVWD;
- be consistent with the objectives of the *Drinking Water Management Plan* and/or the *Board Strategic Plan*;
- consider partnerships including, but not limited to, member jurisdictions, academic institutions, non-governmental organizations, and community groups;
- result in a positive contribution, in the form of tangible results and/or measurable benefits, to the sustainability of the region;
- demonstrate innovation **or a continuous improvement approach** ~~and facilitate action.~~

### Fund Management

- **Financial Services will develop and annually update a contribution schedule to ensure the fund is able to support future projects.**
- **Annually, an amount no greater than 1% of GVWD’s annual operating budget will be transferred to the fund.**
- **The fund will be set at a maximum amount of \$25 million indexed to inflation.**
- **Any revenues generated from projects derived from SIF investments will be taken into consideration with respect to annual contribution amounts.**
- ~~Annually, an amount equal to the GST rebate for the water utility in 2005 (\$723,000) is contributed to the Fund.~~
- The total amount disbursed from the Fund in any year is at the discretion of the GVWD Board and will depend on the merit of the proposals submitted.
- Reporting on the balance of the Water Sustainability Innovation Fund will be carried out through the Status of Reserves report.

### Annual Evaluation and Decision-Making Process

- ~~In accordance with the Sustainability Innovation Fund Process, departments will identify potential projects relevant to the objectives of the Fund during the internal budget planning process.~~

## BOARD POLICY

- ~~• Projects proposed may come from staff led planning processes or from any Board Committee who can direct staff to evaluate a project or initiative and to prepare a proposal for consideration.~~
- ~~• To be considered, project proponents will need to complete the Sustainability Innovation Fund Application, which includes a description of the alignment with the goals of the *Drinking Water Management Plan* and the *Board Strategic Plan* and a triple bottom line analysis. Proposals should specify the anticipated measurable contributions to the region's sustainability (e.g., reductions in greenhouse gas emissions, conversion to renewable energy sources, cleaner air or water, or improvements in ecosystem health) in addition to other benefits.~~
- **Project p** proposals will be evaluated by the Sustainability Innovation Fund Inter-Departmental Steering Committee according to the criteria outlined in the Application Package.
- Staff will provide the designated Standing Committee with a report on recommendations on the proposals considered for funding and implications of these recommendations on the Fund's balance.
- The designated Standing Committee will provide its recommendations to the GVWD Board which will make the final decision on projects to be funded.

### Reporting on the Fund's Contributions to Regional Sustainability

- On an annual basis, the designated Standing Committee will receive a report on the projects supported by the Fund including the deliverables, outcomes, and the measurable benefits of these projects to the region's sustainability.
- Project reports will be housed in an "e-Library" for easy access by **member jurisdictions**, regions and others who are interested in learning from the experiences, and who wish to assess the transferability of certain projects to other jurisdictions.

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**COMMITTEE INFORMATION ITEMS AND DELEGATION SUMMARIES**

Greater Vancouver Water District

Board Meeting Date – Friday, July 30, 2021

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This information item, listing recent information received by committee, is provided for the GVWD Board's information. Please access a complete PDF package [here](#).

**Water Committee – July 15, 2021***Delegation Summaries:*

No delegations presented

*Information Items:*

- 5.1 Draft Water Services 2022 – 2026 Capital Plan
- 5.2 Water Services Capital Program Expenditure Update to April 30, 2021
- 5.4 Regional Water Conservation Impacts on Capital Planning
- 5.7 Residential Water Metering – Overview of Local Experience

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