

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

REGULAR BOARD MEETING

Friday, September 24, 2021

9:00 A.M.

28th Floor Boardroom, 4730 Kingsway, Burnaby, British Columbia

[Membership and Votes](#)

A G E N D A¹

A. ADOPTION OF THE AGENDA

1. September 24, 2021 Regular Meeting Agenda

That the GVWD Board adopt the agenda for its regular meeting scheduled for September 24, 2021 as circulated.

B. ADOPTION OF THE MINUTES

1. July 30, 2021 Regular Meeting Minutes

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

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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.

1. WATER COMMITTEE REPORTS

1.1 Coquitlam Sockeye Hatchery – Proposed BC Hydro Facility

That the GVWD Board receive for information the report dated August 18, 2021 titled “Coquitlam Sockeye Hatchery – Proposed BC Hydro Facility”.

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

1.2 Award of Contract Resulting from Request for Proposal (RFP) No. 21-063: Supply and Delivery of Steel Pipe for 2021 Water Services Construction Projects *pg. 12*

That the GVWD Board:

- a) approve the award of a contract in the amount of up to \$16,973,012.00 (exclusive of taxes) to Northwest Pipe Company resulting from Request for Proposal (RFP) No. 21-063: Supply and Delivery of Steel Pipe for 2021 Water Services Construction Projects, 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 the award should proceed.

1.3 Coquitlam Lake Water Supply – Project Update *pg. 16*

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

F. ITEMS REMOVED FROM THE CONSENT AGENDA

G. REPORTS NOT INCLUDED IN CONSENT AGENDA

1. FINANCE AND INTERGOVERNMENT COMMITTEE REPORTS

pg. 25

1.1 GVWD Banking Authority Bylaw 255, 2021

*[Recommendation a): simple weighted majority vote.] and
[Recommendation b): 2/3 weighted majority vote.]*

That the GVWD Board:

- a) give first, second and third reading to *Greater Vancouver Water District Banking Authority Bylaw No. 255, 2021*; and
- b) pass and finally adopt *Greater Vancouver Water District Banking Authority Bylaw No. 255, 2021*.

H. MOTIONS FOR WHICH NOTICE HAS BEEN GIVEN

I. OTHER BUSINESS

1. GVWD Board Committee Information Items and Delegation Summaries

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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 September 24, 2021 pursuant to the *Community Charter* provisions, Section 90 (1) (g) 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:
(g) litigation or potential litigation affecting the regional district.”

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

M. ADJOURNMENT/CONCLUSION

That the GVWD Board adjourn/conclude its regular meeting of September 24, 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 10:28 a.m. on Friday, July 30, 2021 in the 28th Floor Boardroom, 4730 Kingsway, Burnaby, British Columbia.

MEMBERS PRESENT:

Burnaby, Chair, Director Sav Dhaliwal
North Vancouver City, Vice Chair Director
Linda Buchanan*

Anmore, Director John McEwen*
Belcarra, Director Jamie Ross*
Burnaby, Director Pietro Calendino*
Burnaby, Director Mike Hurley*
Coquitlam, Director Craig Hodge*
Coquitlam, Director Richard Stewart*
Delta, Director George Harvie*
Delta, Director Dylan Kruger*
Electoral Area A, Director Jen McCutcheon*
Langley City, Director Gayle Martin*
Langley Township, Director Jack Froese*
Langley Township, Director Kim Richter*
Maple Ridge, Director Mike Morden*
New Westminster, Director Jonathan Côté*
North Vancouver District, Director Lisa Muri*
Pitt Meadows, Director Bill Dingwall*
Port Coquitlam, Director Brad West* (departed at
10:31 a.m.)

Port Moody, Director Rob Vagramov*
Richmond, Director Malcolm Brodie*
Richmond, Director Harold Steves*
Surrey, Director Linda Annis*
Surrey, Director Doug Elford*
Surrey, Director Laurie Guerra*
Surrey, Director Mandeep Nagra*
Surrey, Director Allison Patton*
Tsawwassen, Director Ken Baird*
Vancouver, Director Christine Boyle*
Vancouver, Director Adriane Carr*
Vancouver, Director Melissa De Genova*
Vancouver, Director Lisa Dominato*
Vancouver, Alternate Director Pete Fry* for
Kennedy Stewart
Vancouver, Director Colleen Hardwick*
Vancouver, Director Michael Wiebe*
West Vancouver, Director Mary-Ann Booth*
Commissioner Jerry W. Dobrovolsky
(Non-voting member)

MEMBERS ABSENT:

Surrey, Director Doug McCallum

STAFF PRESENT:

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

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

A. ADOPTION OF THE AGENDA

1. July 30, 2021 Regular Meeting Agenda

It was MOVED and SECONDED

That the GVWD Board:

- a) amend the agenda for its regular meeting scheduled for July 30, 2021 by:
 - i. withdrawing Item E1.2;
 - ii. adding Item 2, Update on Water Conservation, under Section I. Other Business; and
- b) adopt the agenda as amended.

CARRIED

B. ADOPTION OF THE MINUTES

1. June 25, 2021 Regular Meeting Minutes

It was MOVED and SECONDED

That the GVWD Board adopt the minutes for its regular meeting held June 25, 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:

- 2.1 Proposed Updates to the Sustainability Innovation Fund Policies

It was MOVED and SECONDED

That the GVWD Board adopt the recommendation presented in the following item as presented in the July 30, 2021 GVWD Board Consent Agenda:

- 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

CARRIED

The item and recommendation referred to above is as follows:

- 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**
Report dated June 24, 2021, from Roy Moulder, Director, Purchasing and Risk Management, Financial Services and Goran Oljaca, Director, Engineering and

Construction, Water Services, advising the GVWD Board of the results of the Request for Proposal No. 20-054: Construction of DRM2-SC-Microtunnel Section and recommending the award of contract in the amount of \$13,495,049.00 to Ward and Burke Microtunnelling Ltd. to enable the DRM2-SC project to proceed to completion.

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.

Adopted on Consent

F. ITEMS REMOVED FROM THE CONSENT AGENDA

Items removed from the Consent Agenda for consideration under Section F. were considered in numerical order.

2.1 Proposed Updates to the Sustainability Innovation Fund Policies

Report dated June 25, 2021, from Megan Gerryts, Senior Advisor, Regional Economic Prosperity Service and Roger Quan, Director, Air Quality and Climate Change, Parks and Environment, seeking GVWD Board approval for the proposed updates to the Water Sustainability Innovation Fund policy.

It was MOVED and SECONDED

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", subject to the annual budget approval.

CARRIED

G. REPORTS NOT INCLUDED IN CONSENT AGENDA

No items presented.

H. MOTIONS FOR WHICH NOTICE HAS BEEN GIVEN

No items presented.

10:31 a.m. Director West departed the meeting.

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 July 30, 2021.

CARRIED

2. Update on Water Conservation

Members were provided an update on the regional water supply situation and advised that although the snow pack has kept the water supply in the normal range, the demand for drinking water has been very high across the region. Members were advised that water demand information would be sent to all members along with a request to increase conservation messaging and enforcement of current water use regulations where possible.

J. BUSINESS ARISING FROM DELEGATIONS

No items presented.

K. RESOLUTION TO CLOSE MEETING

It was MOVED and SECONDED

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.”

CARRIED

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

No items presented.

M. ADJOURNMENT/CONCLUSION

It was MOVED and SECONDED

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

CARRIED

(Time: 10:34 a.m.)

CERTIFIED CORRECT

Chris Plagnol, Corporate Officer

Sav Dhaliwal, Chair

To: Water Committee

From: Jesse Montgomery, Division Manager, Environmental Management, Water Services

Date: August 18, 2021 Meeting Date: September 9, 2021

Subject: **Coquitlam Sockeye Hatchery – Proposed BC Hydro Facility**

RECOMMENDATION

That the GVWD Board receive for information the report dated August 18, 2021 titled “Coquitlam Sockeye Hatchery – Proposed BC Hydro Facility”.

EXECUTIVE SUMMARY

A sockeye salmon hatchery is planned for construction in the Coquitlam Watershed in 2021. The hatchery is funded by BC Hydro and will be located on their fee simple property on the west abutment of the Coquitlam Dam. Sockeye stocks are severely depleted in the Coquitlam River Watershed, primarily due to the loss of spawning and rearing habitat in Coquitlam Lake some 115 years ago upon completion of the first hydro-electric dam. GVWD has worked with the Kwikwetlem First Nation, to whom sockeye restoration represents a critical cultural restoration goal, and agency partners in support of sockeye recovery since 2004. The new hatchery will require a GVWD water connection; pumped from the raw water intake pipeline at the base of the Coquitlam Dam and an agreement for that supply will be coming to the Board in the future.

PURPOSE

BC Hydro is proposing to commence construction of a sockeye salmon hatchery on the west abutment of their Coquitlam River Dam within the GVWD managed Coquitlam Water Supply Area. This report is being brought to the GVWD Board to provide information on the proposed hatchery and associated implications for GVWD; including the GVWD water supply connection and associated agreement with BC Hydro.

BACKGROUND

BC Hydro is planning to begin construction of the sockeye hatchery as early as August 2021. The facility will be constructed on BC Hydro fee simple property, near the dam and above the GVWD intake pipeline which runs through the property. BC Hydro has requested a permanent water supply connection to the GVWD system to act as the primary water connection for the facility. Support of the GVWD Board for a formal water supply agreement to facilitate this connection is required. It is anticipated this agreement will come to the Board for approval in the future.

COQUITLAM SOCKEYE RESTORATION

GVWD has been working collaboratively with the Kwikwetlem First Nation, BC Hydro, Fisheries and Oceans Canada and other local partners in sockeye restoration since 2004. Prior to initial hydro-electric development on the Coquitlam River in the early 1900s, sockeye salmon runs in Coquitlam Lake were abundant and the centre of the Kwikwetlem First Nations culture and sustenance. Sockeye salmon utilize a lake ecosystem as part of their life cycle which was interrupted

by the loss of upstream and downstream fish passage at Coquitlam Lake. The current challenges of upstream and downstream fish passage and extremely poor marine survival conditions have led to few adult sockeye salmon returning to Coquitlam Dam. Despite overcoming challenges in obtaining stock from the resident kokanee (freshwater sockeye variant) population in the lake and raising 5,000 sockeye salmon that were released into the Coquitlam River in 2017, none returned to the Coquitlam Dam in 2019 for spawning. A sockeye hatchery at Coquitlam Dam is hoped to provide an opportunity to produce enough sockeye salmon juveniles to overcome currently extreme challenges in freshwater and marine habitat conditions. Achieving the ultimate goal of a self-sustaining sockeye salmon population will likely be quite challenging, but optimism for improved marine survival conditions and additional restoration measures over time are also part of the future goals of the multi-agency Kwikwetlem Sockeye Restoration Program.

Hatchery Water Supply

GVWD has a raw water pipeline from the drinking water intake in Coquitlam Lake which runs through the site of the proposed sockeye hatchery. BC Hydro also has a waterline which runs to the site and currently provides water to an adult fish trap and adjacent fisheries enhancement area. The water temperature from the GVWD source is lower during the summer months and is the preferred source for fish health in the hatchery facility. Hatcheries require multiple sources of water for redundancy in the event of loss of supply or quality issues. For this reason, BC Hydro will also provide a permanent water supply connection from their area source.

GVWD has provided seasonal temporary water from its own allocations from Coquitlam Lake to BC Hydro infrastructure for various fisheries initiatives since 2008. One connection is to supplement a fish trap supply line when BC Hydro's line is out of service for annual maintenance, one is for a sockeye smolt rearing tub and another is to provide colder water to the adult fish trap during the summer. The new Coquitlam Sockeye Hatchery is anticipated to require a flow of approximately 14 litres per second and this, combined with the other seasonal water volumes required from GVWD for all fisheries initiatives will total less than 200 litres per second. The pending water supply agreement will consolidate all the water supply requests and form part of a long term arrangement. BC Hydro has agreed to make the appropriate adjustments in their downstream environmental flows to compensate for the agreed volume so there will be no impact to the drinking water supply storage.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

Engineering support and GVWD infrastructure modifications for water supply to the Coquitlam Sockeye Hatchery will be accommodated within approved Water Services program budget allocations.

OTHER IMPLICATIONS

GVWD's fisheries contributions in the Coquitlam River Watershed are important to Pacific salmon restoration initiatives and continue to strengthen relationships with First Nations and agency partners.

CONCLUSION

BC Hydro's proposed construction of a sockeye hatchery on the west abutment of their Coquitlam Dam is slated to commence as soon as August 2021. The proposed new hatchery will require permanent connection to an area GVWD raw water intake pipeline. An associated agreement between GVWD and BC Hydro to consolidate a long term water supply arrangement is anticipated to come to the Board for approval in the future. Water supply contributions to the new sockeye hatchery, in conjunction with various other smaller water connections currently in place, will not impact GVWD available water supply for downstream treatment and transmission to member jurisdictions.

45276883

To: Water Committee

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

Date: July 26, 2021 Meeting Date: September 9, 2021

Subject: **Award of Contract Resulting from Request for Proposal (RFP) No. 21-063: Supply and Delivery of Steel Pipe for 2021 Water Services Construction Projects**

RECOMMENDATION

That the GVWD Board:

- a) approve the award of a contract in the amount of up to \$16,973,012.00 (exclusive of taxes) to Northwest Pipe Company resulting from Request for Proposal (RFP) No. 21-063: Supply and Delivery of Steel Pipe for 2021 Water Services Construction Projects, 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 the award should proceed.
-

EXECUTIVE SUMMARY

Request for Proposal No. 21-063 was issued for the supply and delivery of steel pipe for the 2021 Water Services construction projects, and Northwest Pipe Company was the only pre-qualified supplier that submitted a proposal. Based on the evaluation of the proposal, it is recommended that the GVWD Board authorize the Commissioner and the Corporate Officer to award and execute the contract to Northwest Pipe Company in the amount of up to \$16,973,012.00 (exclusive of taxes). The provisional item related to storage for finished pipe will be applied only in the event that storage is required.

PURPOSE

This report is to advise the GVWD Board of the results of Request for Proposal (RFP) No. 21-063: Supply and Delivery of Steel Pipe for 2021 Water Services Construction Projects, and to recommend award of the contract in the amount of up to \$16,973,012.00 (exclusive of taxes) to Northwest Pipe Company.

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 Board of Directors.

This report is being brought forward to the Water Committee to consider a recommendation to the GVWD Board to authorize the award of a contract for supply and delivery of steel pipe for the 2021 Water Services construction projects. This report is being brought forward at this time in order to maintain the respective project schedules, with construction of each project slated to begin in early 2022.

PROJECT DESCRIPTION

As shown on the Attachment, the two (2) main projects included as contract items in RFP No. 21-063 for supply and delivery of steel pipe include:

- Central Park Main No. 2 - Phase 2
- Kennedy Newton Main - Phase 3

Central Park Main No. 2 - Phase 2 section will be constructed in the City of Burnaby and consists of approximately 3.4 km of 1.2 m diameter steel water main between Maywood Street and Griffiths Avenue. This main is required to replace the aging Central Park Main No. 1, and to increase the capacity of supply to meet growing water demand in the area.

Kennedy Newton Main - Phase 3 section will be constructed in the City of Surrey and consists of approximately 2.5 km of 1.8 m diameter water main between Kennedy Reservoir located at 90th Avenue and 84th Avenue. This main is required to meet growing water demand south of the Fraser River and increase water supply to the area served by the Kennedy and Newton Reservoirs.

As a result of Request for Qualifications (RFQ) No. 18-354: Supply and Delivery of Steel Pipe for Potable Water that was publically advertised on the Metro Vancouver and BC Bid websites, two (2) qualified firms were shortlisted and invited to respond to RFP No. 21-063. The RFP closed on June 11, 2021 and one proposal was received from Northwest Pipe Company. Northwest Pipe Company's proposal met all of the technical requirements and their prices are summarized below (exclusive of taxes).

Proponent	Contract Items	Provisional Items*	Total Cost (exclusive of taxes)
Northwest Pipe Company	\$16,960,142.00	\$12,870.00	\$16,973,012.00

** Represents 90 days of storage per pipe, for all six pipe categories combined.*

The contract value includes pricing for storage of finished pipe. However, this provisional item is only available to the contractor in the event storage becomes a requirement.

The proposal pricing is much higher than it has been in previous years' pipe supply contracts, mainly due to the significant escalation in steel market pricing; the American Metal Market index more than tripled in the past year, increasing from USD \$506 in June 2020 to USD \$1,655 in June 2021.

Staff contacted the lone non-responsive pre-qualified firm to determine the reason for not submitting a proposal. They advised that their Eastern US plants presently have significant backlog in production for their existing jobs well into 2022 and as such would not be able to meet the projected MV production and delivery schedules. Purchasing staff continue to actively pursue other known large diameter pipe suppliers to encourage them to bid on future opportunities, including reaching out to past suppliers as well as to those suppliers who traditionally do not bid on works outside of the United States. Solicitation of offshore bidders remains a possibility in the future if they are able to satisfy our pre-qualification criteria, meet the required technical specifications and remain commercially competitive.

ALTERNATIVES

1. That the GVWD Board:
 - a) approve the award of a contract in the amount of up to \$16,973,012.00 (exclusive of taxes) to Northwest Pipe Company resulting from Request for Proposal (RFP) No. 21-063: Supply and Delivery of Steel Pipe for 2021 Water Services Construction Projects, 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 RFP No. 21-063: Supply and Delivery of Steel Pipe for 2021 Water Services Construction Projects 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 Northwest Pipe Company, in an amount of up to \$16,973,012.00 (exclusive of taxes), for the contract items. This amount is over the budgets allocated for pipe supply for the two (2) projects due to aforementioned escalation in steel prices. However, there is sufficient contingency within the projects' allocated budgets to accommodate the increase in prices.

The GVWD Board has the choice not to proceed with Alternative 1, but staff will need further direction in relation to steel pipe procurement for these projects. Alternative 2 may result in additional costs due to the fluctuation in steel prices and will lead to delays to the respective project schedules with impact to the development of additional capacity for long term growth and replacement of aging existing infrastructure.

CONCLUSION

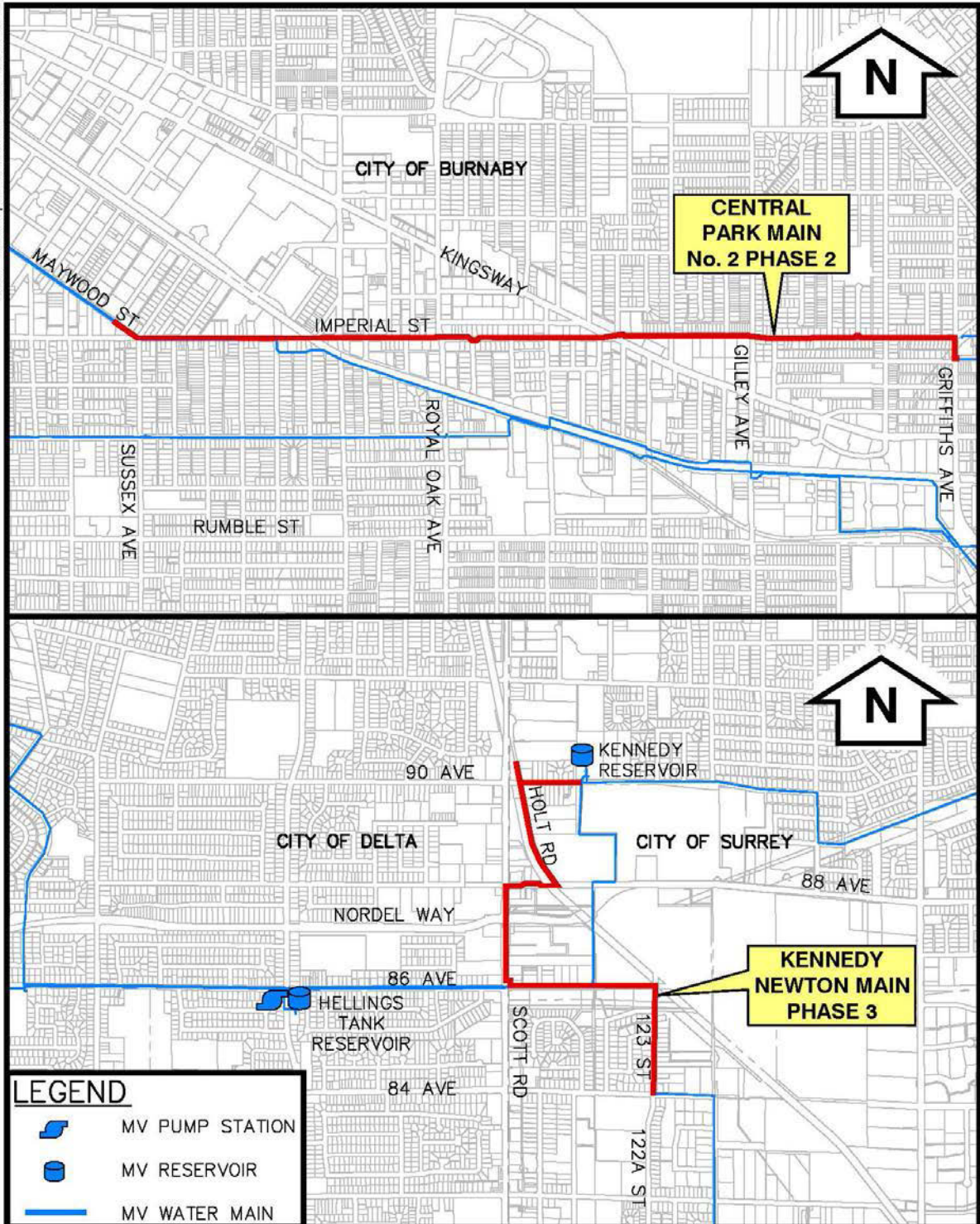
Request for Proposal No. 21-063 was issued for the supply and delivery of steel pipe for 2021 Water Services construction projects, and Northwest Pipe Company was the only pre-qualified supplier that submitted a proposal. Based on the evaluation of the proposal it is recommended that the GVWD Board authorize the Commissioner and the Corporate Officer to award and execute the contract to Northwest Pipe Company in the amount of up to \$16,973,012.00 (exclusive of taxes).

Attachment

2021 Water Services Construction Contracts Locations Map

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AUG08 - Portrait Report.DWG 240mm x 191mm Rev. 03-29-05



GREATER VANCOUVER WATER DISTRICT

SCALE:
0 500 1,000
METRES

**2021 WATER SERVICES CONSTRUCTION CONTRACTS
LOCATIONS MAP**

JM/07/21
X-C-225A/W-3196

To: GVWD Board of Directors

From: Water Committee
Finance and Intergovernment Committee

Date: September 10, 2021

Meeting Date: September 24, 2021

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

WATER COMMITTEE 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.

At its July 15, 2021 meeting, the Water Committee considered the attached report titled “Coquitlam Lake Water Supply – Project Update”, dated June 22, 2021. The Water Committee subsequently passed the motion as presented above.

At its September 8, 2021 meeting, the Finance and Intergovernment Committee received the same report, as presented to the Water Committee at its July 15, 2021 meeting, titled “Coquitlam Lake Water Supply – Project Update”, dated June 22, 2021, for information.

This matter is now before the Board for its consideration.

Attachment

1. “Coquitlam Lake Water Supply – Project Update”, dated June 22, 2021

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**

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.

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.

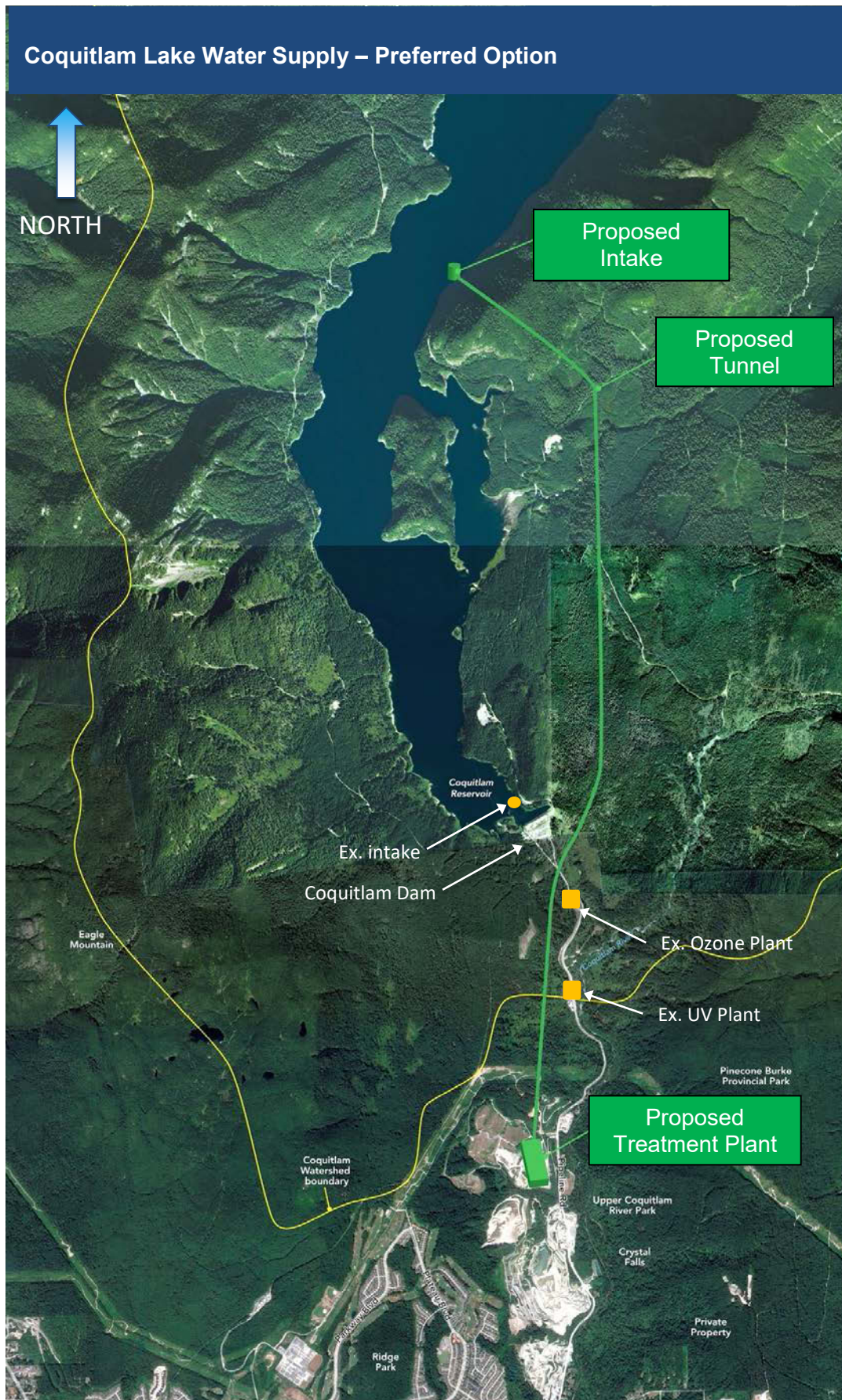
The Project Definition Phase will conclude in late 2021 and the project will transition into the Permitting and Regulatory Phase. Staff will continue to revisit the timing of key construction components at major milestones, taking into consideration the results of water conservation efforts, to ensure 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.

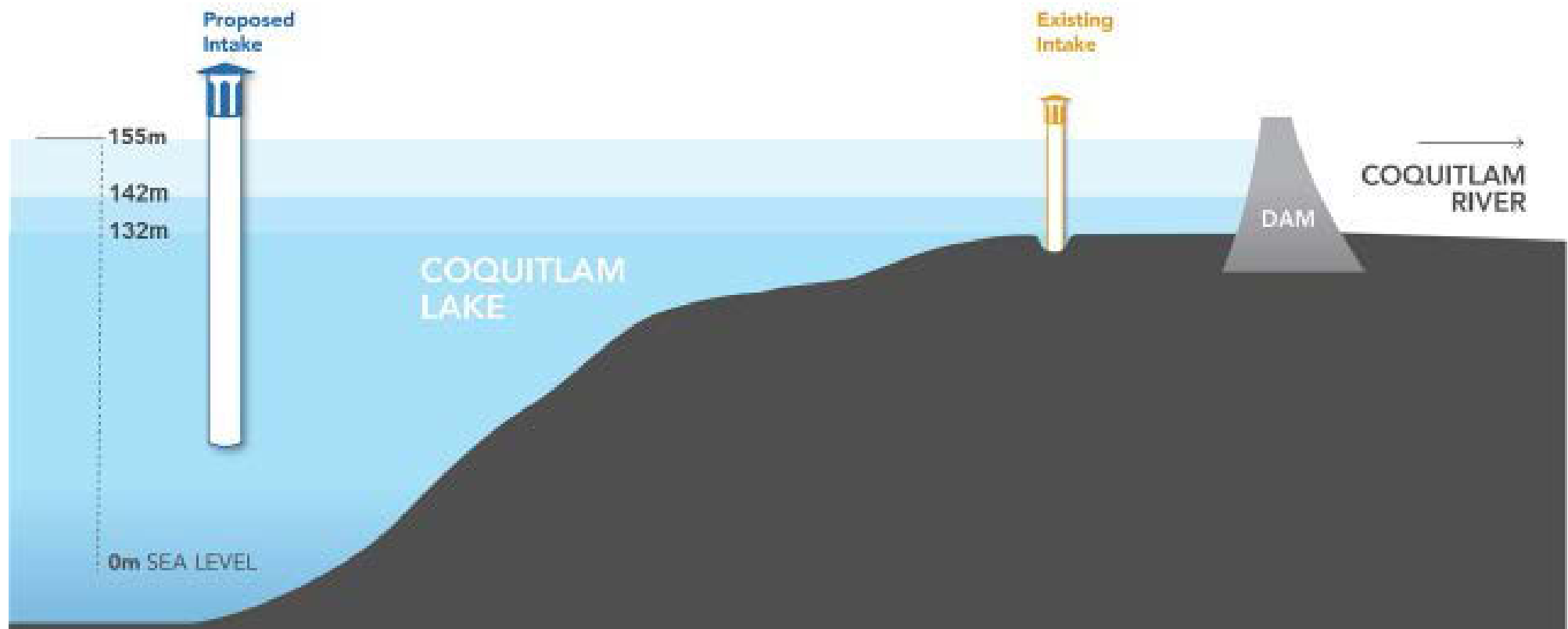
Attachments

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

46222014



Coquitlam Lake Water Supply – Cross Section



To: Finance and Intergovernment Committee

From: Joe Sass, Deputy CFO/Director of Financial Planning and Operations

Date: August 20, 2021 Meeting Date: September 8, 2021

Subject: **MVRD Banking Authority Bylaw 1324, 2021, GVWD Banking Authority Bylaw 255, 2021, GVS&DD Banking Authority Bylaw 349, 2021**

RECOMMENDATION

That the MVRD Board:

- a) give first, second and third reading to *Metro Vancouver Regional District Banking Authority Bylaw No. 1324, 2021*; and
- b) pass and finally adopt *Metro Vancouver Regional District Banking Authority Bylaw No. 1324, 2021*.

That the GVWD Board:

- a) give first, second and third reading to *Greater Vancouver Water District Banking Authority Bylaw No. 255, 2021*; and
- b) pass and finally adopt *Greater Vancouver Water District Banking Authority Bylaw No. 255, 2021*.

That the GVS&DD Board:

- a) give first, second and third reading to *Greater Vancouver Sewerage and Drainage District Banking Authority Bylaw No. 349, 2021*; and
- b) pass and finally adopt *Greater Vancouver Sewerage and Drainage District Banking Authority Bylaw No. 349, 2021*.

EXECUTIVE SUMMARY

Board approved bylaws for signing officers establish authority for the execution of Metro Vancouver Districts' banking and financial matters. The existing Signing Authority Bylaws require updating to accommodate the logistical challenges highlighted by the global pandemic and to improve efficiencies in handling the increased volume of requests. Designating the routine, lower risk matters to be handled by Class B and Class C signatories will reduce the burden on Class A signatories. The revised framework ensures there continues to be proper segregation of duty, sound internal controls, and strong governance structure for approvals, while improving the efficiency of the overall processes.

PURPOSE

To adopt the updated Banking Authority Bylaws that will allow routine banking and financial documents to be executed in a more efficient and timely manner by delegating the authority to the Financial Services management group.

BACKGROUND

Board approved Bylaws for signing officers establish the framework of authority for the execution of Metro Vancouver Districts' banking and financial matters dealing with banks, investment firms or brokers and lending institutions. The existing Bylaws require approval from one of the three senior management in Financial Services (Class B), together with a second approval from one of the four senior management or Board (Class A).

Due to the global pandemic and work-from-home policies, it has become increasingly challenging and time consuming to execute routine financial documents. Even though electronic signatures are gaining popularity, it is not yet widely adopted by organizations and in-person signatures continue to be required. As Metro Vancouver has grown in size and complexity, there is increased banking activity such as expanded online banking services and new investment accounts to serve the growing needs of the organization.

BYLAW UPDATES

The previous Signing Officer Bylaws:

- *Greater Vancouver Regional District Signing Officers Bylaw No. 1184, 2013 as amended;*
- *Greater Vancouver Sewerage and Drainage District Signing Officers Bylaw No. 279, 2013 as amended; and*
- *Greater Vancouver Water District Signing Officers Bylaw No. 246, 2013 as amended*

are repealed and replaced by the attached Bylaws:

- *Metro Vancouver Regional District Banking Authority Bylaw No. 1324, 2021;*
- *Greater Vancouver Sewerage and Drainage District Banking Authority Bylaw No. 349, 2021; and*
- *Greater Vancouver Water District Banking Authority Bylaw No. 255, 2021*

The following are the key changes proposed in the new Bylaws:

Introduction of a third-tier, Class C signatories

As outlined in Table 1 below, a new group of signatories referred to as "Class C" will be comprised of the Financial Services management group. The managers in Class C are well equipped to vet the requests given their financial background and expertise, and will provide the first of the two required signatures for certain financial matters as listed in Table 2. Class B signatories comprised of Financial Services senior management and General Managers remain unchanged, and will continue to serve as the secondary approver.

Table 1

Class A	Class B	Class C (new)
Board Chair	CFO/GM Financial Services	Treasury Manager
Board Vice Chair	Director Financial Planning & Operations/Deputy CFO	Division Manager Finance and Capital Planning
CAO/Commissioner	Director Purchasing & Risk Management	Division Manager Utility Client Support
GM Legal Services & Indigenous Relations		Division Manager Corporate Client Support

Risk based approach to designating authority

Class C will be limited to the general and operational banking matters with lower risk profile. Common examples of these tasks include adding new banking services such as electronic payments and opening/closing of investment or bank accounts. This will reduce the number of routine matters requiring signatures from Class A.

Class A combined with Class B will continue to have the authority to sign for all financial matters covered under these Bylaws with the exception of debt, should Class C signers not be available. This ensures there is sufficient coverage to minimize undue delays for items of urgent nature such as manual wire transfers in the event of major disruption to the online banking portals.

For any type of debt resulting in legal and major financial obligation to the organization, authorized signatories will be restricted to the Board appointed positions. One signature from either the Board Chair or CAO together with the Treasurer/CFO will be required to sign. This is consistent with the signing requirement by the Municipal Financing Authority. In most cases, debt is long-term and material in value, and therefore assumes a higher risk profile.

Table 2 below outlines the proposed rules of the amending bylaws and when they would be used.

Table 2

One Class A and One Class B Signing Officers	One Class B and One Class C Signing Officers
Any types of overdraft service, debt, borrowing and guarantee obligating the Districts – limited to Board Chair, CAO and Treasurer/CFO	Cheques, wires, pre-authorized debits and other orders for the payment of money
All tasks that can be approved by One Class B and One Class C as referred in the Bylaw	Foreign exchange or other hedging contracts and agreements
	Contracts for the issuance or acceptance of letters of credit
	Opening and closure documents and agreements for bank and investment accounts
	Request for draws under existing agreements relating to borrowing

The new Bylaws, as presented, will have no direct impact on financial operations, except to reduce administrative efforts. The revised framework ensures there continues to be proper segregation of duty and sound governance to mitigate risks.

Once approved, the above noted Banking Authority Bylaws, along with supporting documentation, will be forwarded to banks and investment institutions having dealings with Metro Vancouver's Districts.

ALTERNATIVES

1. That the MVRD Board:

- a) give first, second and third reading to *Metro Vancouver Regional District Banking Authority Bylaw No. 1324, 2021*; and
- b) pass and finally adopt *Metro Vancouver Regional District Banking Authority Amending Bylaw No. 1324, 2021*.

That the GVWD Board:

- a) give first, second and third reading to *Greater Vancouver Water District Banking Authority Bylaw No. 255, 2021*; and
- b) pass and finally adopt *Greater Vancouver Water District Banking Authority Bylaw No. 255, 2021*.

That the GVS&DD Board:

- a) give first, second and third reading to *Greater Vancouver Sewerage and Drainage District Banking Authority Bylaw No. 349, 2021*; and
- b) pass and finally adopt *Greater Vancouver Sewerage and Drainage District Banking Authority Bylaw No. 349, 2021*.

2. That the Finance and Intergovernment Committee receive for information the report dated August 20, 2021 titled "MVRD Banking Authority Bylaw 1324, 2021, GVWD Banking Authority Bylaw 255, 2021, GVS&DD Banking Authority Bylaw 349, 2021" and provide alternate direction.

FINANCIAL IMPLICATIONS

There are no direct financial impacts to Metro Vancouver with the adoption of these bylaws. Introduction of Class C Signing Officers to approve routine banking matters, which currently require Class A signatures, will reduce administrative efforts and ensure the continued smooth operation of Treasury activities.

CONCLUSION

The proposed amending Banking Authority Bylaws introduces a new tier of signing authorities, who can sign for routine and lower risk banking matters. This will reduce processing time while still maintaining proper segregation of duties and sound governance to mitigate financial risks.

Staff recommend adoption of the Banking Authority Bylaws as outlined in Alternative 1.

Attachments (Doc# 47359008)

- ~~1. Metro Vancouver Regional District Banking Authority Bylaw No. 1324, 2021,~~
- ~~2. Greater Vancouver Water District Banking Authority Bylaw No. 255, 2021~~
- ~~3. Greater Vancouver Sewerage and Drainage District Banking Authority Bylaw No. 349, 2021~~

**GREATER VANCOUVER WATER DISTRICT
BYLAW NO. 255, 2021
A Bylaw to Appoint Persons with Banking Authorities**

WHEREAS:

- A. Section 5 of the *Greater Vancouver Water District Act* (the “Act”) provides the Greater Vancouver Water District (the “District”) with all the rights of a corporation;
- B. The *Greater Vancouver Water District Signing Officers Bylaw No. 246, 2013* as amended, authorizes persons to sign cheques and promissory notes; and
- C. It is deemed expedient that the *Greater Vancouver Water District Signing Officers Bylaw No. 246, 2013* as amended, be repealed and that, pursuant to the Act, the persons set out below be authorized as signing officers of the District;

NOW THEREFORE the Board of the District enacts as follows:

- 1. The official citation of this bylaw is “Greater Vancouver Water District Banking Authority Bylaw No. 255, 2021”. This bylaw may be cited as “GVWD Banking Authority Bylaw”.
- 2. “Greater Vancouver Water District Signing Officers Bylaw No. 246, 2013” as amended, is hereby repealed.
- 3. Any one of the:
 - Treasurer/Chief Financial Officer
 - Director, Financial Planning and Operations/Deputy Chief Financial Officer
 - Director, Purchasing and Risk Management
 together with any one of the:
 - Treasury Manager
 - Division Manager, Finance and Capital Planning
 - Division Manager, Utility Client Support
 - Division Manager, Corporate Client Support

are hereby authorized on behalf of the District to sign, accept, endorse or approve, under seal if necessary or convenient:

- (i) instructions for the withdrawal of funds from accounts by way of cheque, wire payment instruction, pre-authorized debit authorization, or other orders for the payment of money from accounts;
- (ii) contracts for foreign exchange or hedging instruments;
- (iii) contracts for the issuance or acceptance of letters of credit;
- (iv) requests for draws, draw downs, or advances under any agreements relating to letters of credit, bonds, or other types of security, borrowing money, or otherwise obtaining credit;
- (v) opening and closing of accounts with banking and investment institutions; and
- (vi) agreements for accounts, cash management or investment products or services.

4. Any one of the:

Board Chair
Board Vice Chair
Commissioner
General Manager Legal Services & Indigenous Relations

together with any one of the:

Treasurer/Chief Financial Officer
Director, Financial Planning and Operations/Deputy Chief Financial Officer
Director, Purchasing and Risk Management

are hereby authorized on behalf of the District to sign, accept, endorse or approve, under seal if necessary or convenient:

- (i) all items listed under Section 3; and
- (ii) any other financial agreements or instruments not listed under Section 3 of this Bylaw with the exception of items relating to debt listed under Section 5.

5. Any one of the:

Board Chair
Commissioner

together with the:

Treasurer/Chief Financial Officer

are hereby authorized on behalf of the District to sign, accept, endorse or approve, under seal if necessary or convenient agreements, contracts or other authorizations for borrowing money or otherwise obtaining credit, issuance of debt, granting security, and/or providing guarantees.

Read a first, second and third time this _____ day of _____, _____

Passed and finally adopted this _____ day of _____, _____

Sav Dhaliwal, Chair

Chris Plagnol, Corporate Officer

COMMITTEE INFORMATION ITEMS AND DELEGATION SUMMARIES

Greater Vancouver Water District

Board Meeting Date – Friday, September 24, 2021

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 – September 9, 2021*Delegations:*

No delegations presented

Information Items:

5.4 Water Infrastructure Projects – Progress Update

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